TENDER DOCUMENT

FOR

Earthwork, Repair & Construction of Distribution Network of Nabinagar, Amba, Aurangabad, Madanpur and Gaya Divisions of Right Main Canal, Bihar and its Structures under North Koel Reservoir Project, Jharkhand and Bihar

TENDER NO: WAP/NK/RMC/DISTRIBUTION/BIHAR/2026

Price Schedule (Gaya Part 1 of 2)

WAPCOS

(भारत सरकार का उपक्रम–जल शक्ति मंत्रालय)

(A Government of India Undertaking-Ministry of Jal Shakti)

Preamble to the Price Schedule

1. In case of Percentage Rate Tenders, contractor shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Price Schedule; he will be willing to execute the work. The tender submitted shall be treated as invalid if :-
    - The contractor does not quote percentage above/below/ at per on the total amount of tender or any section/sub head of the tender.
    - The percentage above/below/ at per is not quoted in figures & words both on the total amount of tender or any section/sub head of the tender.
    - The percentage quoted above/below/ at per is different in figures & words on the total amount of tender or any section/sub head of the tender.
2. In case the lowest tendered amount (amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.
3. In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.
4. If the revised tendered amount of two more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of Evaluation Committee of the Employer and the lowest contractors those have quoted equal amount of their tenders.
5. In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each bidder.
6. Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.
7. Only percentage rate quoted tenders shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.
8. In Percentage Rate Tender, the tenderer shall quote percentage below/above (in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the word 'Rs.'

should be written before the figure of rupees and word ‘P’ after the decimal figures, e.g. ‘Rs. 2.15P and in case of words, the word ‘Rupees’ should precede and the word ‘Paisa’ should be written at the end.

9. Contractor should satisfy himself with the total amount of the contract (as worked out in the Price Schedule) for the execution of the complete work.
10. Any error, if any in the Price Schedule, Design, Drawings to be bought in the notice of WAPCOS on or before Pre-BID meeting.

Note:

1. The estimated amounts for items are given in the Estimate.
2. The tenderer has to quote their offer in percentage above/below/ at-par the estimated amount.
3. The percentage rate shall be quoted up to 2 decimals.
4. **The Percentage (%) rate quoted for the contract shall be inclusive of all charges, except GST @18% as indicated in the Price Schedule**. GST as applicable shall be paid on submission of proof and Bill shall be accepted only after Bill is uploaded at GST Portal, subject to receipt of the same by Employer on back to back terms.
5. **The rate for carriage of materials shall be on actual lead at site at the time of execution, if the lead is more than provided in the BOQ, nothing will be paid extra. However, if the lead is less than the BOQ, then a proportionate rate will be deducted.**
6. **The final rates on which the works is to be executed are to be approved by the competent authority based on the Financial Bids submitted by the Bidders. In case any item scheduled/non-scheduled whose rates have not been included in the BOQ, then the rate shall be decided by the competent authority for payment.**
7. The payment will be made as per the actual work done and item wise measurement basis.
8. Rate filled at any other place in the document shall not be considered.
9. Where there is a discrepancy between the words and figures, the lesser of the two will only be taken in to consideration.
10. Where there is an arithmetical discrepancy in the page total as well as grand total, the corrected total by the Employer will govern.
11. The rates quoted shall be for carrying out the work in conformity to the IS Standards and Technical Specifications and other Terms and Conditions set out in the Bid Document
12. All pages in the BOQ should be signed without omission. All corrections/over writing should be properly attested by the Bidder.
13. Change in the Quantities - If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item/items, the rates as in the agreement for the relevant items shall be paid.
14. The Method of measurement of completed work for payment shall be in accordance with the requirement as stated in the individual section of Technical Specifications or as per CPWD Specifications.
15. The contractor shall carry out the site establishment works/temporary works at his own cost. Nothing shall be paid over and above the contract amount.
16. **The rates quoted by the bidder shall be deemed to include all costs related to leads and lifts of disposal of earth work required for the proper execution of the work, as described in the BOQ. If the actual lead and lift is more than provided in the BOQ, nothing will be paid extra and No extra payment shall be made whatsoever admissible on these accounts.**
17. **The rates quoted by the bidder shall be deemed to include all costs related to dewatering (including above nominal) and shoring (including above nominal) that is necessary for the execution of works. No extra payment shall be made whatsoever admissible on these accounts.**

Bihar Distribution Network- Gaya Division
(Total Cost – Rs. 73.96 Crores)

SUMMARY OF COST

SR. NO.	NAME OF CANAL	COST (RS. IN CR.)	PAGE NO.
1	Bhartipur MR.	1.12	1 to 92
2	Angra Branch Canal	60.63	1 to 664
3	Mishrichak Minor	1.28	1 to 85
4	Konchi Sub DY.	10.93	1 to 195
TOTAL COST FOR GAYA DIVISION (In CR)		73.96	

Gaya Division – Bhartipur Minor
(Total Cost – Rs. 1.12 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (BHARTIPUR MINOR)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Page no.
1	Earthwork						
	BHARTIPUR MINOR	1	Job	3765031.09	0.00	₹ 37,65,031.09	9
2	Falls						
	0.914 m Fall at Ch. 1.383 Km	1	No.	672702.37	5718.29	₹ 6,78,420.66	14
3	*Pipe Culvert*						
	Culvert At Ch. 0.106	1	No.	813406.68	6919.87	₹ 8,20,326.55	20
	Culvert At Ch. 0.700	1	No.	717569.38	6287.07	₹ 7,23,856.45	22
	Culvert At Ch. 1.550	1	No.	717215.24	6287.07	₹ 7,23,502.32	24
	Culvert At Ch. 2.400	1	No.	620274.17	5375.43	₹ 6,25,649.59	26
	Culvert At Ch. 2.850	1	No.	620510.25	5375.43	₹ 6,25,885.68	28
4	*CD Work*						
	CD WORK At Ch. 2.462	1	No.	1341501.885	11298.12	₹ 13,52,800.00	50
5	*Brick Work*	1	No.	149951.0109	954.13	₹ 1,50,905.14	55
6	Outlets						
	BHARTIPUR MINOR	13	No.	127744.47	1100.17	₹ 16,74,980.33	60
7	Kilometer Stone	4	No.	3853.40	0.00	₹ 15,413.60	92
	TOTAL (In Rs.)					**11156771.40**	
	TOTAL (In Lacs)					**111.57**	

	Carriage of Materials Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	900/ 1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Cement & Steel (30 Kms)	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	Brick ($9^{3/4}x4^{3/4}x2^{3/4}$) (15 Kms)	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	R.C.C hume, A.C. pipe (30 Km)																
a	150 mm dia	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	500 mm & 600 mm dia	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	900mm & 1000 mm dia	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	1100 & 1200 m dia	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR EARTHWORK OF BHARTIPUR MINOR

Sr. No.	Particulars	Amount in Rs.	Reference
1	**Cost of Earthwork for Bhartipur minor**	₹ 37,65,031.09	AOC Earthwork

DETAIL QUANTITIES OF EARTHWORK

BHARTIPUR MINOR

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	6.789	3.395	339.450	2.227	1.114	111.350
200	100	4.333	5.561	556.100	1.669	1.948	194.800
300	100	7.029	5.681	568.100	1.672	1.671	167.050
400	100	6.553	6.791	679.100	2.715	2.194	219.350
500	100	8.266	7.410	740.950	1.894	2.305	230.450
600	100	7.841	8.054	805.350	1.559	1.727	172.650
700	100	6.892	7.367	736.650	1.080	1.320	131.950
800	100	5.662	6.277	627.700	0.932	1.006	100.600
900	100	4.544	5.103	510.300	1.572	1.252	125.200
1000	100	3.181	3.863	386.250	1.572	1.572	157.200
1100	100	2.188	2.685	268.450	2.778	2.175	217.500
1200	100	0.394	1.291	129.100	4.698	3.738	373.800
1300	100	0.020	0.207	20.700	7.285	5.992	599.150
1400	100	0.487	0.254	25.350	3.336	5.311	531.050
1500	100	0.108	0.298	29.750	9.410	6.373	637.300
1600	100	0.000	0.054	5.400	8.390	8.900	890.000
1700	100	0.000	0.000	0.000	7.724	8.057	805.700
1800	100	0.023	0.012	1.150	7.713	7.719	771.850
1900	100	0.179	0.101	10.100	6.199	6.956	695.600
2000	100	0.506	0.343	34.250	4.889	5.544	554.400
2100	100	1.742	1.124	112.400	3.471	4.180	418.000
2200	100	1.959	1.851	185.050	3.959	3.715	371.500
2300	100	1.365	1.662	166.200	3.665	3.812	381.200
2400	100	1.191	1.278	127.800	4.104	3.885	388.450
2500	100	0.741	0.966	96.600	4.044	4.074	407.400
2600	100	0.365	0.553	55.300	4.874	4.459	445.900
2700	100	0.605	0.485	48.500	3.526	4.200	420.000
2800	100	1.118	0.862	86.150	2.487	3.007	300.650
2900	100	2.450	1.784	178.400	1.392	1.940	193.950
3000	100	2.833	2.642	264.150	1.769	1.581	158.050
3100	100	1.546	2.190	218.950	1.679	1.724	172.400
3200	100	1.055	1.301	130.050	1.897	1.788	178.800
Total				**8143.750**			**11523.250**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**8143.750**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**11523.250**
NET QUANTITY OF EARTHWORK							**3379.50**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
BHARTIPUR MINOR (0.000 TO 3.200 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.150	150	2.920	438.00	Sqm
0.150 - 1.600	1450	2.650	3842.50	Sqm
1.600 - 3.100	1500	2.190	3285.00	Sqm
3.100 - 3.200	100	1.150	115.00	Sqm
	TOTAL		**7680.50**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.150	150	2.920	0.15	65.70	Cum
0.150 - 1.600	1450	2.650	0.15	576.38	Cum
1.600 - 3.100	1500	2.190	0.15	492.75	Cum
3.100 - 3.200	100	1.150	0.15	17.25	Cum
	TOTAL			**1152.08**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF COST OF EARTHWORK FOR BHARTIPUR MINOR						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	7680.50	Sqm	**11.80**	90663.61685
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	8143.75	Cum	**156.50**	1274496.875
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	3257.50	Cum	**17.22**	56086.05226
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	3379.50	Cum	**165.12**	558009.39
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1013.85	Cum	**174.89**	177312.23
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	844.88	Cum	**217.92**	184115.16
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1520.78	Cum	**319.14**	485340.13
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			1152.08	Cum	**196.10**	225921.91

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	11523.25	Cum	**61.88**	713085.73
TOTAL COST OF EARTHWORK (in Rs.)						**3765031.09**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**37.650**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR BHARTIPUR MINOR				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***7680.50***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	8143.750	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	3257.5	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	3379.500	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	1013.85	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	844.88	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	1520.78	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	1152.08	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	11523.25	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR FALL OF BHARTIPUR MINOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	1.383	0.914 M Fall	₹ 6,72,702.37
		Sub-Total	₹ 6,72,702.37
		Seigniorage charges	₹ 5,718.29
		Total (in Rs. Lakhs)	**₹ 6.78**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR BHARTIPUR MINOR								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
AOC OF SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.383 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	63.538	Cum	**195.20**	12402.65			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.65	Cum	**6381.70**	61599.78	3.13	4.34	8.69
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	42.89	Cum	**6914.20**	296560.00	17.69	18.44	36.89
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.59	Cum	**8151.40**	4829.09	0.34	0.23	0.47
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.01	MT	**73574.90**	74317.52			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	161.20	Sqm	**578.60**	93269.48			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.29	Sqm	**680.10**	6316.77			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.36	Cum	**694.61**	250.06			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.36	Cum	**1237.00**	445.32			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.36	Cum	**1377.70**	495.97			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.36	Cum	**516.50**	185.94			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.51	Sqm	**63.20**	600.94			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	16.78	Cum	**149.30**	2504.63			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	23.018	Cum	**1075.00**	24744.37			
	Coarse Aggregates (100 Km lead)	46.042	Cum	**1398.00**	64366.67			
	Cement (30 km lead)	21.156	MT	**742.00**	15697.79			
	Boulder (60 Km lead)	0.36	Cum	**1159.00**	417.24			
	Brick (15 km lead)	557.00	No.	**3.18**	1771.26			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Steel (30 Km lead)	1.01	MT	**742.00**	749.49			
	TOTAL (In Rs.)				**672702.37**			
	TOTAL (In Rs.)				**672702.37**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	23.02	Cum	**584.64**	13457.26	1345.73		
	Coarse Aggregate	46.04	Cum	**944.26**	43475.59	4347.56		
	Boulders	0.36	Cum	**694.61**	250.06	25.01		
	Total					5718.29		
	For 1 nos. fall, Total Seigniorage charges					**5718.29**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BHARTIPUR MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.383 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.10*	*1.809*	*1.648*	*6.577*	*Cum*
	Section 2-2	*2*	*3.00*	*1.260*	*1.648*	*12.459*	*Cum*
	Section 3-3	*2*	*1.70*	*1.140*	*1.448*	*5.612*	*Cum*
	Section 5-5	*2*	*2.71*	*1.959*	*1.648*	*17.466*	*Cum*
	Section 6-6	*2*	*1.14*	*1.140*	*1.448*	*3.747*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.200*	*0.850*	*0.638*	*Cum*
	U/S Floor	*1*	*2.25*	*1.200*	*1.815*	*4.901*	*Cum*
	D/S Floor	*1*	*3.00*	*1.200*	*0.850*	*3.060*	*Cum*
		1	*3.12*	*1.200*	*0.650*	*2.432*	*Cum*
	D/S Key Floor	*1*	*0.70*	*1.200*	*1.150*	*0.966*	*Cum*
	Toe Wall D/S Portion	*1*	*5.75*	*0.750*	*0.900*	*3.881*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						63.54	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*1.200*	*0.150*	*0.14*	*Cum*
		1	*0.17*	*1.200*	*0.150*	*0.03*	*Cum*
		1	*0.07*	*1.200*	*0.150*	*0.01*	*Cum*
		1	*4.64*	*1.200*	*0.150*	*0.84*	*Cum*
		1	*0.35*	*1.200*	*0.150*	*0.06*	*Cum*
		1	*0.20*	*1.200*	*0.150*	*0.04*	*Cum*
		1	*1.12*	*1.200*	*0.150*	*0.20*	*Cum*
		1	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.10*	*1.809*	*0.150*	*0.60*	*Cum*
	Section 2-2	*2*	*3.00*	*1.260*	*0.150*	*1.13*	*Cum*
	Section 3-3	*2*	*1.70*	*1.140*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*2.71*	*1.959*	*0.150*	*1.59*	*Cum*
	Section 6-6	*2*	*1.14*	*1.140*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*5.75*	*0.750*	*0.300*	*1.29*	*Cum*
	Toe Wall D/S Portion	*1*	*5.45*	*0.450*	*0.600*	*1.47*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**9.65**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.95*	*0.450*	*0.450*	*0.39*	*Cum*
		2	*0.95*	*0.980*	*1.765*	*3.30*	*Cum*
		2	*0.95*	*1.659*	*0.550*	*1.74*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.705*	*0.850*	*3.60*	*Cum*
		2	*3.00*	*1.110*	*0.550*	*3.66*	*Cum*
	Section 3-3	*2*	*1.36*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.36*	*0.645*	*0.650*	*1.14*	*Cum*
		2	*1.36*	*0.990*	*0.500*	*1.34*	*Cum*
	Section 5-5	*2*	*2.66*	*0.450*	*0.450*	*1.08*	*Cum*
		2	*2.66*	*0.980*	*1.765*	*9.20*	*Cum*
		2	*2.66*	*1.659*	*0.500*	*4.42*	*Cum*
	Section 6-6	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.645*	*0.650*	*1.43*	*Cum*
		2	*1.71*	*0.990*	*0.500*	*1.69*	*Cum*
	Floor	*1*	*0.63*	*1.200*	*0.700*	*0.53*	*Cum*
		1	*1.13*	*1.200*	*0.500*	*0.68*	*Cum*
		1	*0.05*	*1.200*	*0.525*	*0.03*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*4.07*	*1.200*	*0.550*	*2.69*	*Cum*
		1	*0.20*	*1.200*	*0.400*	*0.10*	*Cum*
		1	*0.57*	*1.200*	*0.250*	*0.17*	*Cum*
		1	*1.80*	*1.200*	*0.500*	*1.08*	*Cum*
		1	*0.70*	*1.200*	*1.000*	*0.84*	*Cum*
	Crest	*1*	*0.86*	*1.200*	*1.315*	*1.36*	*Cum*
	TOTAL					**42.89**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.200*	*0.150*	*0.12*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.57*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.57*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.59**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**42.89**	**0.00**	**0.129**	**7850.0**	**1010.09**	**Kg**
	Total Weight in Metric Tonne					**1.01**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.95*		*0.450*	*1.72*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.95*		*1.765*	*6.73*	*Sqm*
		4		*0.980*	*1.765*	*6.92*	*Sqm*
		4	*0.95*		*0.550*	*2.10*	*Sqm*
		4		*1.659*	*0.550*	*3.65*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.850*	*10.20*	*Sqm*
		4		*0.705*	*0.850*	*2.40*	*Sqm*
		4	*3.00*		*0.550*	*6.60*	*Sqm*
		4		*1.110*	*0.550*	*2.44*	*Sqm*
	Section 3-3	*4*	*1.36*		*0.450*	*2.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.36*		*0.650*	*3.52*	*Sqm*
		4		*0.645*	*0.650*	*1.68*	*Sqm*
		4	*1.36*		*0.500*	*2.71*	*Sqm*
		4		*0.990*	*0.500*	*1.98*	*Sqm*
	Section 5-5	*4*	*2.66*		*0.450*	*4.79*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.66*		*1.765*	*18.79*	*Sqm*
		4		*0.980*	*1.765*	*6.92*	*Sqm*
		4	*2.66*		*0.500*	*5.32*	*Sqm*
		4		*1.659*	*0.500*	*3.32*	*Sqm*
	Section 6-6	*4*	*1.71*		*0.450*	*3.07*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.650*	*4.43*	*Sqm*
		4		*0.645*	*0.650*	*1.68*	*Sqm*
		4	*1.71*		*0.500*	*3.41*	*Sqm*
		4		*0.990*	*0.500*	*1.98*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.200*	*0.700*	*1.68*	*Sqm*
		2	*1.13*		*0.500*	*1.13*	*Sqm*
		2		*1.200*	*0.500*	*1.20*	*Sqm*
		2	*4.07*		*0.550*	*4.48*	*Sqm*
		2		*1.200*	*0.550*	*1.32*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.200*	*0.400*	*0.96*	*Sqm*
		2	*0.57*		*0.250*	*0.29*	*Sqm*
		2		*1.200*	*0.250*	*0.60*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*1.200*	*0.500*	*1.20*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*1.200*	*1.000*	*2.40*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*0.86*		*1.315*	*2.26*	*Sqm*
		2		*1.200*	*1.315*	*3.16*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.75*		*0.300*	*3.45*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.45*		*0.600*	*6.54*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**161.20**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.322*		*9.29*	*Sqm*
	TOTAL					**9.29**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.600*	*0.300*	**0.36**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.600*	*0.150*	**0.36**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.57*	*0.450*		*4.75*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.57*	*0.450*		*4.75*	*Sqm*
	TOTAL					**9.51**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.203		3.20	**Cum**
	Abutment						
	Section 1-1	2	*1.10*	*0.593*		*1.308*	*Cum*
	Section 2-2	2	*3.00*	*0.593*		*3.558*	*Cum*
	Section 3-3	2	*1.70*	*0.602*		*2.047*	*Cum*
	Section 5-5	2	*2.71*	*0.593*		*3.208*	*Cum*
	Section 6-6	2	*1.14*	*0.602*		*1.367*	*Cum*
	Toe wall	2	*5.75*	*0.150*	*0.600*	*1.725*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**16.78**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR PIPE CULVERTOF BHARTIPUR MINOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	0.106	Pipe Culvert	₹ 8,13,406.68
2	0.700	Pipe Culvert	₹ 7,17,569.38
3	1.550	Pipe Culvert	₹ 7,17,215.24
4	2.400	Pipe Culvert	₹ 6,20,274.17
5	2.850	Pipe Culvert	₹ 6,20,510.25
		Sub-Total	₹ 34,88,975.72
		Seigniorage charges	₹ 30,244.87
		Total (in Rs. Lakhs)	**₹ 35.19**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.106 OF BHARTIPUR MINOR									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	5.1.8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	82.271	Cum	**156.50**	12875.41			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	23.40	Cum	**6381.70**	149336.46	7.58	10.53	21.06
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	39.043	Cum	**6914.20**	269947.68	16.11	16.79	33.58
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	153.705	Sqm	**578.60**	88933.44			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.77	MT	**73574.90**	56373.76			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.25	Cum	**694.61**	1562.87			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.25	Cum	**1237.00**	2783.25			
9	RCD M-150	Providing 900 mm dia RCC NP4 heavy duty pipe	7.50	Rm	**6002.82**	45021.15			
10	5.6.2.4	Labour for laying, fitting and fixing 900 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.33	Sqm	**499.80**	5662.73			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.500	Sqm	**340.20**	2891.70	0.441	0.124	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.500	Sqm	**63.20**	221.20	0.005		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	43.01	Cum	**149.30**	6421.55			
		Coarse Sand (60 Km lead)	27.443	Cum	**1075.00**	29500.91			
		Coarse Aggregates (100 Km lead)	54.637	Cum	**1398.00**	76382.82			
		Cement (30 km lead)	24.133	MT	**742.00**	17906.51			
		Steel (30 km lead)	0.766	MT	**742.00**	568.53			
		Boulder (60 km lead)	2.250	Cum	**1159.00**	2607.75			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
		Brick (15 km lead)	5665.00	No.	**3.18**	18014.70			
TOTAL (In Rs.)						**813406.68**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	27.44	Cum	**584.64**	16044.10	1604.41		
		Coarse Aggregate	54.64	Cum	**944.26**	51591.73	5159.17		
		Boulder (60 km lead)	2.25	Cum	**694.61**	1562.87	156.29		
		Total					**6919.87**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.700 OF BHARTIPUR MINOR									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.1.8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	74.465	Cum	**156.50**	11653.82			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	22.10	Cum	**6381.70**	141028.34	7.16	9.94	19.89
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.748	Cum	**6914.20**	240257.79	14.33	14.94	29.88
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	145.654	Sqm	**578.60**	84275.15			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.68	MT	**73574.90**	50173.56			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.80	Cum	**694.61**	1250.30			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.80	Cum	**1237.00**	2226.60			
9	RCD M-150	Providing 900 mm dia RCC NP4 heavy duty pipe	7.50	Rm	**1713.33**	12849.98			
10	5.6.2.4	Labour for laying, fitting and fixing 900 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.97	Sqm	**499.80**	5482.81			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.500	Sqm	**340.20**	2891.70	0.441	0.124	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.500	Sqm	**63.20**	221.20	0.005		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	39.15	Cum	**149.30**	5845.69			
		Coarse Sand (60 Km lead)	25.010	Cum	**1075.00**	26886.21			
		Coarse Aggregates (100 Km lead)	49.773	Cum	**1398.00**	69582.17			
		Cement (30 km lead)	21.940	MT	**742.00**	16279.23			
		Steel (30 km lead)	0.682	MT	**742.00**	506.00			
		Boulder (60 km lead)	1.800	Cum	**1159.00**	2086.20			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
		Brick (15 km lead)	5485.00	No.	**3.18**	17442.30			
TOTAL (In Rs.)						**717569.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	25.01	Cum	**584.64**	14622.10	1462.21		
		Coarse Aggregate	49.77	Cum	**944.26**	46998.33	4699.83		
		Boulder (60 km lead)	1.80	Cum	**694.61**	1250.30	125.03		
		Total					**6287.07**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 1.550 OF BHARTIPUR MINOR									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.1.8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	74.465	Cum	**156.50**	11653.82			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	22.10	Cum	**6381.70**	141028.34	7.16	9.94	19.89
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.748	Cum	**6914.20**	240257.79	14.33	14.94	29.88
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	145.654	Sqm	**578.60**	84275.15			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.68	MT	**73574.90**	50173.56			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.80	Cum	**694.61**	1250.30			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.80	Cum	**1237.00**	2226.60			
9	RCD M-150	Providing 900 mm dia RCC NP4 heavy duty pipe	7.50	Rm	**1713.33**	12849.98			
10	5.6.2.4	Labour for laying, fitting and fixing 900 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.97	Sqm	**499.80**	5482.81			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.500	Sqm	**340.20**	2891.70	0.441	0.124	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.500	Sqm	**63.20**	221.20	0.005		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	39.15	Cum	**149.30**	5845.69			
		Coarse Sand (60 Km lead)	25.010	Cum	**1075.00**	26886.21			
		Coarse Aggregates (100 Km lead)	49.773	Cum	**1398.00**	69582.17			
		Cement (30 km lead)	21.940	MT	**742.00**	16279.23			
		Steel (30 km lead)	0.682	MT	**742.00**	506.00			
		Boulder (60 km lead)	1.800	Cum	**1159.00**	2086.20			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
		Brick (15 km lead)	5485.00	No.	**3.18**	17442.30			
TOTAL (In Rs.)						**717215.24**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	25.01	Cum	**584.64**	14622.10	1462.21		
		Coarse Aggregate	49.77	Cum	**944.26**	46998.33	4699.83		
		Boulder (60 km lead)	1.80	Cum	**694.61**	1250.30	125.03		
		Total					**6287.07**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 2.400 OF BHARTIPUR MINOR									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.1.8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	66.530	Cum	**156.50**	10411.92			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.09	Cum	**6381.70**	121835.89	6.19	8.59	17.18
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	29.578	Cum	**6914.20**	204508.42	12.20	12.72	25.44
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	132.447	Sqm	**578.60**	76633.66			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.58	MT	**73574.90**	42707.94			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.41	Cum	**694.61**	979.40			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.41	Cum	**1237.00**	1744.17			
9	RCD M-151	Providing 600 mm dia RCC NP4 heavy duty pipe	7.50	Rm	**2532.61**	18994.58			
10	5.6.2.2	Labour for laying, fitting and fixing 600 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	7.50	Rm	**711.27**	5334.49			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.90	Sqm	**499.80**	4945.52			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.500	Sqm	**340.20**	2891.70	0.441	0.124	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.500	Sqm	**63.20**	221.20	0.005		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	34.44	Cum	**149.30**	5142.14			
		Coarse Sand (60 Km lead)	21.434	Cum	**1075.00**	23041.34			
		Coarse Aggregates (100 Km lead)	42.619	Cum	**1398.00**	59581.93			
		Cement (30 km lead)	18.832	MT	**742.00**	13973.68			
		Steel (30 km lead)	0.580	MT	**742.00**	430.71			
		Boulder (60 km lead)	1.410	Cum	**1159.00**	1634.19			
		Hume Pipe (30 Km Lead)	7.500	Rm	**919.00**	6892.50			
		Brick (15 km lead)	4947.00	No.	**3.18**	15731.46			
TOTAL (In Rs.)						**620274.17**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	21.43	Cum	**584.64**	12531.06	1253.11		
		Coarse Aggregate	42.62	Cum	**944.26**	40243.80	4024.38		
		Boulder (60 km lead)	1.41	Cum	**694.61**	979.40	97.94		
		Total					**5375.43**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 2.850 OF BHARTIPUR MINOR									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	140.000	Sqm	**11.80**	1652.61			
2	5.1.8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	66.530	Cum	**156.50**	10411.92			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.09	Cum	**6381.70**	121835.89	6.19	8.59	17.18
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	29.578	Cum	**6914.20**	204508.42	12.20	12.72	25.44
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	132.447	Sqm	**578.60**	76633.66			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.58	MT	**73574.90**	42707.94			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.41	Cum	**694.61**	979.40			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.41	Cum	**1237.00**	1744.17			
9	RCD M-151	Providing 600 mm dia RCC NP4 heavy duty pipe	7.50	Rm	**2532.61**	18994.58			
10	5.6.2.2	Labour for laying, fitting and fixing 600 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	7.50	Rm	**711.27**	5334.49			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.90	Sqm	**499.80**	4945.52			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.500	Sqm	**340.20**	2891.70	0.441	0.124	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.500	Sqm	**63.20**	221.20	0.005		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	34.44	Cum	**149.30**	5142.14			
		Coarse Sand (60 Km lead)	21.434	Cum	**1075.00**	23041.34			
		Coarse Aggregates (100 Km lead)	42.619	Cum	**1398.00**	59581.93			
		Cement (30 km lead)	18.832	MT	**742.00**	13973.68			
		Steel (30 km lead)	0.580	MT	**742.00**	430.71			
		Boulder (60 km lead)	1.410	Cum	**1159.00**	1634.19			
		Hume Pipe (30 Km Lead)	7.500	Rm	**919.00**	6892.50			
		Brick (15 km lead)	4947.00	No.	**3.18**	15731.46			
TOTAL (In Rs.)						**620510.25**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	21.43	Cum	**584.64**	12531.06	1253.11		
		Coarse Aggregate	42.62	Cum	**944.26**	40243.80	4024.38		
		Boulder (60 km lead)	1.41	Cum	**694.61**	979.40	97.94		
		Total					**5375.43**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.106 OF BHARTIPUR MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.31*	*0.85*	*1.20*	*1.34*	*Cum*
	D/S Toe Wall	*1*	*1.31*	*0.85*	*1.20*	*1.34*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*1.20*	*1.45*	*Cum*
		2	*2.83*	*2.06*	*1.20*	*14.00*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.83*	*1.20*	*2.40*	*16.31*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.59*	*1.00*	*1.20*	*1.42*	*Cum*
		2	*3.53*	*2.04*	*1.20*	*17.24*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.53*	*1.20*	*2.40*	*20.32*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*1.08*	*0.45*	*1.00*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*1.36*	*0.45*	*1.56*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.75*	*0.60*	*0.90*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.75*	*0.60*	*1.35*	*Cum*
	TOTAL					**82.27**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.31*	*0.85*	*0.30*	*0.33*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.31*	*0.45*	*0.90*	*0.53*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.31*	*0.85*	*0.30*	*0.33*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.31*	*0.45*	*0.90*	*0.53*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*1.08*	*0.45*	*1.00*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*1.36*	*0.45*	*1.56*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*0.30*	*0.36*	*Cum*
		2	*2.83*	*2.06*	*0.30*	*3.50*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.59*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*3.53*	*2.04*	*0.30*	*4.31*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.70*	*0.35*	*4.46*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.59*	*0.33*	*2.97*	*Cum*
	TOTAL					**23.40**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.61*	*0.60*	*0.90*	*0.65*	*Cum*
		2	*0.61*	*0.45*	*0.70*	*0.38*	*Cum*
		2	*0.61*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.83*	*1.77*	*0.90*	*9.00*	*Cum*
		2	*2.83*	*1.30*	*0.70*	*5.14*	*Cum*
		2	*2.83*	*0.76*	*0.50*	*2.14*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.59*	*0.60*	*0.90*	*0.64*	*Cum*
		2	*0.59*	*0.45*	*0.70*	*0.37*	*Cum*
		2	*0.59*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.53*	*1.64*	*0.90*	*10.39*	*Cum*
		2	*3.53*	*1.29*	*0.70*	*6.37*	*Cum*
		2	*3.53*	*0.74*	*0.50*	*2.62*	*Cum*
	Collar Joint	*2*	*1.70*	*0.30*	*1.60*	*1.63*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.66*		*-0.66*	*Cum*
	TOTAL					**39.04**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.31*		*0.90*	*2.36*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.31*		*0.90*	*2.36*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*1.08*	*0.45*	*0.98*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.36*	*0.45*	*1.22*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.61*		*0.30*	*0.73*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.83*		*0.30*	*3.40*	*Sqm*
		4		*2.06*	*0.30*	*2.47*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.59*		*0.30*	*0.71*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.53*		*0.30*	*4.23*	*Sqm*
		4		*2.04*	*0.30*	*2.44*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.61*		*0.90*	*2.18*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.61*		*0.70*	*1.70*	*Sqm*
		4		*0.45*	*0.70*	*1.26*	*Sqm*
		4	*0.61*		*0.50*	*1.21*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.83*		*0.90*	*10.19*	*Sqm*
		4		*1.77*	*0.90*	*6.36*	*Sqm*
		4	*2.83*		*0.70*	*7.93*	*Sqm*
		4		*1.30*	*0.70*	*3.63*	*Sqm*
		4	*2.83*		*0.50*	*5.66*	*Sqm*
		4		*0.76*	*0.50*	*1.51*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.59*		*0.90*	*2.12*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.59*		*0.70*	*1.65*	*Sqm*
		4		*0.45*	*0.70*	*1.26*	*Sqm*
		4	*0.59*		*0.50*	*1.18*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.53*		*0.90*	*12.70*	*Sqm*
		4		*1.64*	*0.90*	*5.89*	*Sqm*
		4	*3.53*		*0.70*	*9.88*	*Sqm*
		4		*1.29*	*0.70*	*3.61*	*Sqm*
		4	*3.53*		*0.50*	*7.05*	*Sqm*
		4		*0.74*	*0.50*	*1.49*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.70*	*0.35*	*1.19*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.33*	*9.99*	*Sqm*
		4		*0.59*	*0.33*	*0.79*	*Sqm*
	TOTAL					**153.70**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*39.04*	*0.25%*	*0.10*	*7850*	*766.21*	*Kg*
	TOTAL Weight of steel (in kg)					766.21	Kg
	TOTAL Weight of Steel (in Tonne)					**0.77**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.75*	*0.60*	*0.90*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.75*	*0.60*	*1.35*	*Cum*
	TOTAL					**2.25**	**Cum**
8	Providing 900 mm dia RCC NP4 heavy duty pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.97*	*2.00*		*3.93*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.97*	*3.00*		*5.90*	*Sqm*
	Parapet	2	2.5	0.5	0.6	*1.50*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**11.33**	**Sqm**
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	2.5		1.7	**8.50**	*Sqm*
	TOTAL					**8.50**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.5		0.7	**3.50**	*Sqm*
	TOTAL					**3.50**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.83*	*1.20*	*2.40*	*16.31*	*Cum*
	D/S Transitions Walls	*2*	*3.53*	*1.20*	*2.40*	*20.32*	*Cum*
	Above Hume Pipe	*1*		*6.39*		*6.39*	*Cum*
	TOTAL					**43.01**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.700 OF BHARTIPUR MINOR						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*130.00*			**130.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.17*	*0.85*	*1.20*	*1.20*	*Cum*
	D/S Toe Wall	*1*	*1.17*	*0.85*	*1.20*	*1.20*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.60*	*1.00*	*1.20*	*1.44*	*Cum*
		2	*2.75*	*2.01*	*1.20*	*13.28*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.75*	*1.18*	*2.35*	*15.19*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.40*	*Cum*
		2	*3.18*	*1.99*	*1.20*	*15.21*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.18*	*1.18*	*2.35*	*17.58*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*1.02*	*0.45*	*0.94*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*1.03*	*0.45*	*1.18*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**74.47**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.17*	*0.85*	*0.30*	*0.30*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.17*	*0.45*	*0.90*	*0.48*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.17*	*0.85*	*0.30*	*0.30*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.17*	*0.45*	*0.90*	*0.48*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*1.02*	*0.45*	*0.94*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*1.03*	*0.45*	*1.18*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.60*	*1.00*	*0.30*	*0.36*	*Cum*
		2	*2.75*	*2.01*	*0.30*	*3.32*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*3.18*	*1.99*	*0.30*	*3.80*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.70*	*0.35*	*4.46*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.60*	*0.33*	*2.98*	*Cum*
	TOTAL					**22.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.60*	*0.60*	*0.90*	*0.65*	*Cum*
		2	*0.60*	*0.45*	*0.65*	*0.35*	*Cum*
		2	*0.60*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.75*	*1.61*	*0.90*	*7.98*	*Cum*
		2	*2.75*	*1.28*	*0.65*	*4.56*	*Cum*
		2	*2.75*	*0.75*	*0.50*	*2.06*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.63*	*Cum*
		2	*0.58*	*0.45*	*0.65*	*0.34*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.18*	*1.61*	*0.90*	*9.24*	*Cum*
		2	*3.18*	*1.27*	*0.65*	*5.25*	*Cum*
		2	*3.18*	*0.74*	*0.50*	*2.35*	*Cum*
	Collar Joint	*2*	*1.70*	*0.30*	*1.60*	*1.63*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.66*		*-0.66*	*Cum*
	TOTAL					**34.75**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.17*		*0.90*	*2.11*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.17*		*0.90*	*2.11*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*1.02*	*0.45*	*0.92*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.03*	*0.45*	*0.92*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.60*		*0.30*	*0.72*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.75*		*0.30*	*3.30*	*Sqm*
		4		*2.01*	*0.30*	*2.42*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.70*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.18*		*0.30*	*3.82*	*Sqm*
		4		*1.99*	*0.30*	*2.39*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.60*		*0.90*	*2.16*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.60*		*0.65*	*1.56*	*Sqm*
		4		*0.45*	*0.65*	*1.17*	*Sqm*
		4	*0.60*		*0.50*	*1.20*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*2.75*		*0.90*	*9.90*	*Sqm*
		4		*1.61*	*0.90*	*5.81*	*Sqm*
		4	*2.75*		*0.65*	*7.15*	*Sqm*
		4		*1.28*	*0.65*	*3.32*	*Sqm*
		4	*2.75*		*0.50*	*5.50*	*Sqm*
		4		*0.75*	*0.50*	*1.50*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.10*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.65*	*1.52*	*Sqm*
		4		*0.45*	*0.65*	*1.17*	*Sqm*
		4	*0.58*		*0.50*	*1.17*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.18*		*0.90*	*11.46*	*Sqm*
		4		*1.61*	*0.90*	*5.81*	*Sqm*
		4	*3.18*		*0.65*	*8.28*	*Sqm*
		4		*1.27*	*0.65*	*3.30*	*Sqm*
		4	*3.18*		*0.50*	*6.37*	*Sqm*
		4		*0.74*	*0.50*	*1.48*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.70*	*0.35*	*1.19*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.33*	*9.99*	*Sqm*
		4		*0.60*	*0.33*	*0.80*	*Sqm*
	TOTAL					**145.65**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*34.75*	*0.25%*	*0.09*	*7850*	*681.94*	*Kg*
	TOTAL Weight of steel (in kg)					681.94	Kg
	TOTAL Weight of Steel (in Tonne)					**0.68**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**1.80**	**Cum**
8	Providing 900 mm dia RCC NP4 heavy duty pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.89*	*2.00*		*3.79*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.89*	*3.00*		*5.68*	*Sqm*
	Parapet	2	2.5	0.5	0.6	*1.50*	*Cum*
	TOTAL					**10.97**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	2.5		1.7	**8.50**	*Sqm*
	TOTAL					**8.50**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.5		0.7	**3.50**	*Sqm*
	TOTAL					**3.50**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.75*	*1.18*	*2.35*	*15.19*	*Cum*
	D/S Transitions Walls	*2*	*3.18*	*1.18*	*2.35*	*17.58*	*Cum*
	Above Hume Pipe	*1*	*6.39*			*6.39*	*Cum*
	TOTAL					**39.15**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 1.550 OF BHARTIPUR MINOR						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*		*100.00*		**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.17*	*0.85*	*1.20*	*1.20*	*Cum*
	D/S Toe Wall	*1*	*1.17*	*0.85*	*1.20*	*1.20*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.60*	*1.00*	*1.20*	*1.44*	*Cum*
		2	*2.75*	*2.01*	*1.20*	*13.28*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.75*	*1.18*	*2.35*	*15.19*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.40*	*Cum*
		2	*3.18*	*1.99*	*1.20*	*15.21*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.18*	*1.18*	*2.35*	*17.58*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*1.02*	*0.45*	*0.94*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*1.03*	*0.45*	*1.18*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**74.47**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.17*	*0.85*	*0.30*	*0.30*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.17*	*0.45*	*0.90*	*0.48*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.17*	*0.85*	*0.30*	*0.30*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.17*	*0.45*	*0.90*	*0.48*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*1.02*	*0.45*	*0.94*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*1.03*	*0.45*	*1.18*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.60*	*1.00*	*0.30*	*0.36*	*Cum*
		2	*2.75*	*2.01*	*0.30*	*3.32*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*3.18*	*1.99*	*0.30*	*3.80*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.70*	*0.35*	*4.46*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.60*	*0.33*	*2.98*	*Cum*
	TOTAL					**22.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.60*	*0.60*	*0.90*	*0.65*	*Cum*
		2	*0.60*	*0.45*	*0.65*	*0.35*	*Cum*
		2	*0.60*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.75*	*1.61*	*0.90*	*7.98*	*Cum*
		2	*2.75*	*1.28*	*0.65*	*4.56*	*Cum*
		2	*2.75*	*0.75*	*0.50*	*2.06*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.63*	*Cum*
		2	*0.58*	*0.45*	*0.65*	*0.34*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.18*	*1.61*	*0.90*	*9.24*	*Cum*
		2	*3.18*	*1.27*	*0.65*	*5.25*	*Cum*
		2	*3.18*	*0.74*	*0.50*	*2.35*	*Cum*
	Collar Joint	*2*	*1.70*	*0.30*	*1.60*	*1.63*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.66*		*-0.66*	*Cum*
	TOTAL					**34.75**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.17*		*0.90*	*2.11*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.17*		*0.90*	*2.11*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*1.02*	*0.45*	*0.92*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.03*	*0.45*	*0.92*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.60*		*0.30*	*0.72*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.75*		*0.30*	*3.30*	*Sqm*
		4		*2.01*	*0.30*	*2.42*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.70*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.18*		*0.30*	*3.82*	*Sqm*
		4		*1.99*	*0.30*	*2.39*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.60*		*0.90*	*2.16*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.60*		*0.65*	*1.56*	*Sqm*
		4		*0.45*	*0.65*	*1.17*	*Sqm*
		4	*0.60*		*0.50*	*1.20*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*2.75*		*0.90*	*9.90*	*Sqm*
		4		*1.61*	*0.90*	*5.81*	*Sqm*
		4	*2.75*		*0.65*	*7.15*	*Sqm*
		4		*1.28*	*0.65*	*3.32*	*Sqm*
		4	*2.75*		*0.50*	*5.50*	*Sqm*
		4		*0.75*	*0.50*	*1.50*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.10*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.65*	*1.52*	*Sqm*
		4		*0.45*	*0.65*	*1.17*	*Sqm*
		4	*0.58*		*0.50*	*1.17*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.18*		*0.90*	*11.46*	*Sqm*
		4		*1.61*	*0.90*	*5.81*	*Sqm*
		4	*3.18*		*0.65*	*8.28*	*Sqm*
		4		*1.27*	*0.65*	*3.30*	*Sqm*
		4	*3.18*		*0.50*	*6.37*	*Sqm*
		4		*0.74*	*0.50*	*1.48*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.70*	*0.35*	*1.19*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.33*	*9.99*	*Sqm*
		4		*0.60*	*0.33*	*0.80*	*Sqm*
	TOTAL					**145.65**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*34.75*	*0.25%*	*0.09*	*7850*	*681.94*	*Kg*
	TOTAL Weight of steel (in kg)					681.94	Kg
	TOTAL Weight of Steel (in Tonne)					**0.68**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**1.80**	**Cum**
8	Providing 900 mm dia RCC NP4 heavy duty pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.89*	*2.00*		*3.79*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.89*	*3.00*		*5.68*	*Sqm*
	Parapet	2	2.5	0.5	0.6	*1.50*	*Cum*
	TOTAL					**10.97**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	2.5		1.7	**8.50**	*Sqm*
	TOTAL					**8.50**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.5		0.7	**3.50**	*Sqm*
	TOTAL					**3.50**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.75*	*1.18*	*2.35*	*15.19*	*Cum*
	D/S Transitions Walls	*2*	*3.18*	*1.18*	*2.35*	*17.58*	*Cum*
	Above Hume Pipe	*1*	*6.39*			*6.39*	*Cum*
	TOTAL					**39.15**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 2.400 OF BHARTIPUR MINOR						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*		*120.00*		**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.03*	*0.85*	*1.20*	*1.05*	*Cum*
	D/S Toe Wall	*1*	*1.03*	*0.85*	*1.20*	*1.05*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.59*	*1.00*	*1.20*	*1.42*	*Cum*
		2	*2.68*	*1.89*	*1.20*	*12.14*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.68*	*1.10*	*2.20*	*12.96*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.38*	*Cum*
		2	*3.12*	*1.87*	*1.20*	*14.01*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.12*	*1.10*	*2.20*	*15.10*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*0.94*	*0.45*	*0.87*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*0.95*	*0.45*	*1.09*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.47*	*0.60*	*0.56*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.47*	*0.60*	*0.85*	*Cum*
	TOTAL					**66.53**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.03*	*0.85*	*0.30*	*0.26*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.03*	*0.45*	*0.90*	*0.42*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.03*	*0.85*	*0.30*	*0.26*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.03*	*0.45*	*0.90*	*0.42*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*0.94*	*0.45*	*0.87*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*0.95*	*0.45*	*1.09*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.59*	*1.00*	*0.30*	*0.36*	*Cum*
		2	*2.68*	*1.89*	*0.30*	*3.04*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*3.12*	*1.87*	*0.30*	*3.50*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.35*	*3.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	TOTAL					**19.09**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.59*	*0.60*	*0.90*	*0.64*	*Cum*
		2	*0.59*	*0.45*	*0.50*	*0.27*	*Cum*
		2	*0.59*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.68*	*1.49*	*0.90*	*7.18*	*Cum*
		2	*2.68*	*1.22*	*0.50*	*3.26*	*Cum*
		2	*2.68*	*0.75*	*0.50*	*1.99*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.62*	*Cum*
		2	*0.58*	*0.45*	*0.50*	*0.26*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.12*	*1.50*	*0.90*	*8.42*	*Cum*
		2	*3.12*	*1.21*	*0.50*	*3.78*	*Cum*
		2	*3.12*	*0.74*	*0.50*	*2.30*	*Cum*
	Collar Joint	*2*	*1.27*	*0.30*	*1.54*	*1.17*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.66*		*-0.66*	*Cum*
	TOTAL					**29.58**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.03*		*0.90*	*1.85*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.03*		*0.90*	*1.85*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*0.94*	*0.45*	*0.85*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.95*	*0.45*	*0.86*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.59*		*0.30*	*0.71*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.68*		*0.30*	*3.21*	*Sqm*
		4		*1.89*	*0.30*	*2.27*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.69*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.12*		*0.30*	*3.74*	*Sqm*
		4		*1.87*	*0.30*	*2.25*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.59*		*0.90*	*2.13*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.59*		*0.50*	*1.19*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*0.59*		*0.50*	*1.19*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*2.68*		*0.90*	*9.64*	*Sqm*
		4		*1.49*	*0.90*	*5.36*	*Sqm*
		4	*2.68*		*0.50*	*5.35*	*Sqm*
		4		*1.22*	*0.50*	*2.43*	*Sqm*
		4	*2.68*		*0.50*	*5.35*	*Sqm*
		4		*0.75*	*0.50*	*1.49*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.07*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.50*	*1.15*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*0.58*		*0.50*	*1.15*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.12*		*0.90*	*11.23*	*Sqm*
		4		*1.50*	*0.90*	*5.40*	*Sqm*
		4	*3.12*		*0.50*	*6.24*	*Sqm*
		4		*1.21*	*0.50*	*2.42*	*Sqm*
		4	*3.12*		*0.50*	*6.24*	*Sqm*
		4		*0.74*	*0.50*	*1.47*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.37*	*0.35*	*0.96*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	TOTAL					**132.45**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*29.58*	*0.25%*	*0.07*	*7850*	*580.47*	*Kg*
	TOTAL Weight of steel (in kg)					580.47	Kg
	TOTAL Weight of Steel (in Tonne)					**0.58**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.47*	*0.60*	*0.56*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.47*	*0.60*	*0.85*	*Cum*
	TOTAL					**1.41**	**Cum**
8	Providing 600 mm dia RCC NP4 heavy duty pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.68*	*2.00*		*3.36*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.68*	*3.00*		*5.04*	*Sqm*
	Parapet	2	2.5	0.5	0.6	*1.50*	*Cum*
	TOTAL					**9.90**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	2.5		1.7	**8.50**	*Sqm*
	TOTAL					**8.50**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.5		0.7	**3.50**	*Sqm*
	TOTAL					**3.50**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.68*	*1.10*	*2.20*	*12.96*	*Cum*
	D/S Transitions Walls	*2*	*3.12*	*1.10*	*2.20*	*15.10*	*Cum*
	Above Hume Pipe	*1*	*6.39*			*6.39*	*Cum*
	TOTAL					**34.44**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 2.850 OF BHARTIPUR MINOR						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*		*140.00*		**140.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.03*	*0.85*	*1.20*	*1.05*	*Cum*
	D/S Toe Wall	*1*	*1.03*	*0.85*	*1.20*	*1.05*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.59*	*1.00*	*1.20*	*1.42*	*Cum*
		2	*2.68*	*1.89*	*1.20*	*12.14*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.68*	*1.10*	*2.20*	*12.96*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.38*	*Cum*
		2	*3.12*	*1.87*	*1.20*	*14.01*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.12*	*1.10*	*2.20*	*15.10*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*0.94*	*0.45*	*0.87*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*0.95*	*0.45*	*1.09*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.47*	*0.60*	*0.56*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.47*	*0.60*	*0.85*	*Cum*
	TOTAL					**66.53**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.03*	*0.85*	*0.30*	*0.26*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.03*	*0.45*	*0.90*	*0.42*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.03*	*0.85*	*0.30*	*0.26*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.03*	*0.45*	*0.90*	*0.42*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*0.94*	*0.45*	*0.87*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*0.95*	*0.45*	*1.09*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.59*	*1.00*	*0.30*	*0.36*	*Cum*
		2	*2.68*	*1.89*	*0.30*	*3.04*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*3.12*	*1.87*	*0.30*	*3.50*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.35*	*3.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	TOTAL					**19.09**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.59*	*0.60*	*0.90*	*0.64*	*Cum*
		2	*0.59*	*0.45*	*0.50*	*0.27*	*Cum*
		2	*0.59*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.68*	*1.49*	*0.90*	*7.18*	*Cum*
		2	*2.68*	*1.22*	*0.50*	*3.26*	*Cum*
		2	*2.68*	*0.75*	*0.50*	*1.99*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.62*	*Cum*
		2	*0.58*	*0.45*	*0.50*	*0.26*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.12*	*1.50*	*0.90*	*8.42*	*Cum*
		2	*3.12*	*1.21*	*0.50*	*3.78*	*Cum*
		2	*3.12*	*0.74*	*0.50*	*2.30*	*Cum*
	Collar Joint	*2*	*1.27*	*0.30*	*1.54*	*1.17*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.66*		*-0.66*	*Cum*
	TOTAL					**29.58**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.03*		*0.90*	*1.85*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.03*		*0.90*	*1.85*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*0.94*	*0.45*	*0.85*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.95*	*0.45*	*0.86*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.59*		*0.30*	*0.71*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.68*		*0.30*	*3.21*	*Sqm*
		4		*1.89*	*0.30*	*2.27*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.69*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.12*		*0.30*	*3.74*	*Sqm*
		4		*1.87*	*0.30*	*2.25*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.59*		*0.90*	*2.13*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.59*		*0.50*	*1.19*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*0.59*		*0.50*	*1.19*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*2.68*		*0.90*	*9.64*	*Sqm*
		4		*1.49*	*0.90*	*5.36*	*Sqm*
		4	*2.68*		*0.50*	*5.35*	*Sqm*
		4		*1.22*	*0.50*	*2.43*	*Sqm*
		4	*2.68*		*0.50*	*5.35*	*Sqm*
		4		*0.75*	*0.50*	*1.49*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.07*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.50*	*1.15*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*0.58*		*0.50*	*1.15*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.12*		*0.90*	*11.23*	*Sqm*
		4		*1.50*	*0.90*	*5.40*	*Sqm*
		4	*3.12*		*0.50*	*6.24*	*Sqm*
		4		*1.21*	*0.50*	*2.42*	*Sqm*
		4	*3.12*		*0.50*	*6.24*	*Sqm*
		4		*0.74*	*0.50*	*1.47*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.37*	*0.35*	*0.96*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	TOTAL					**132.45**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*29.58*	*0.25%*	*0.07*	*7850*	*580.47*	*Kg*
	TOTAL Weight of steel (in kg)					580.47	Kg
	TOTAL Weight of Steel (in Tonne)					**0.58**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.47*	*0.60*	*0.56*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.47*	*0.60*	*0.85*	*Cum*
	TOTAL					**1.41**	**Cum**
8	Providing 600 mm dia RCC NP4 heavy duty pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.68*	*2.00*		*3.36*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.68*	*3.00*		*5.04*	*Sqm*
	Parapet	2	2.5	0.5	0.6	*1.50*	*Cum*
	TOTAL					**9.90**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	2.5		1.7	**8.50**	*Sqm*
	TOTAL					**8.50**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.5		0.7	**3.50**	*Sqm*
	TOTAL					**3.50**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.68*	*1.10*	*2.20*	*12.96*	*Cum*
	D/S Transitions Walls	*2*	*3.12*	*1.10*	*2.20*	*15.10*	*Cum*
	Above Hume Pipe	*1*	*6.39*			*6.39*	*Cum*
	TOTAL					**34.44**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR CD WORK OF BHARTIPUR MINOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	2.462	CD Work	₹ 13,41,501.88
		Sub-Total	₹ 13,41,501.88
		Seigniorage charges	₹ 11,298.12
		Total (in Rs. Lakhs)	**₹ 13.53**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF BHARTIPUR MR.									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
Cross Drainage at Ch. 2.462 K.M									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	39.06	Cum	**149.30**	5831.34			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	40.88	Cum	**6381.70**	260879.68	13.24	18.40	36.79
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	63.46	Cum	**6914.20**	438765.82	26.18	27.29	54.57
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	335.65	Sqm	**578.60**	194206.63			
5	**RCD M-150**	Providing 900 mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I	12.50	RM	**4849.67**	60620.88			
6	**WRD 5.6.2.4**	Labour for laying, fitting and fixing 900 mm NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	12.50	RM	**1713.33**	21416.63			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.25	MT	**73574.90**	91628.42			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	219.08	Cum	**195.20**	42763.99			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	45.68	Cum	**1075.00**	49109.14			
		Coarse Aggregates (100 Km lead)	91.37	Cum	**1398.00**	127729.46			
		Cement (30 km lead)	39.42	MT	**742.00**	29250.83			
		Steel (30 Km lead)	1.25	MT	**742.00**	924.07			
		Hume Pipe (60 Km)	12.50	RM	**1470.00**	18375.00			
TOTAL (In Rs.)						**₹ 13,41,501.88**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	45.68	Cum	**584.64**	26708.06	2670.81		
		Coarse Aggregate	91.37	Cum	**944.26**	86273.12	8627.31		
		Total					**11298.12**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF BHARTIPUR MR.							
Cross Drainage at Ch. 2.462 Km							
S. No.	**Item of Works**	**No.**		**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*9.43*	*0.68*		*6.37*	*Cum*
		1	*6.04*	*1.76*		*10.65*	*Cum*
	Middle Portion	*1*	*3.66*	*1.37*		*5.02*	*Cum*
	Right Portion	*1*	*9.43*	*0.68*		*6.37*	*Cum*
		1	*6.04*	*1.76*		*10.65*	*Cum*
	TOTAL					**39.06**	**Cum**
3	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*9.43*	*1.02*	*0.30*	*2.89*	*Cum*
		1	*5.55*	*3.55*	*0.30*	*5.91*	*Cum*
	300 mm Thick Right Abutment	*1*	*9.43*	*1.02*	*0.30*	*2.89*	*Cum*
		1	*5.55*	*3.55*	*0.30*	*5.91*	*Cum*
	Below Pipe Section	*1*	*12.50*	*1.70*	*0.30*	*6.38*	*Cum*
		1	*12.50*	*0.83*		*10.35*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.19*	*2.50*	*0.20*	*4.19*	*Cum*
	Pipe Section	*5*	*0.30*	*1.60*	*1.47*	*3.53*	*Cum*
	Deduct Area of Pipe	*4*	*0.30*	*0.97*		*-1.16*	*Cum*
	TOTAL					**40.88**	**Cum**
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*9.13*	*0.30*	*0.30*	*1.64*	*Cum*
		2	*9.13*	*0.51*	*1.40*	*13.04*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*2.20*	*0.30*	*0.50*	*0.66*	*Cum*
		2	*2.20*	*0.68*	*2.50*	*7.43*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.00*	*0.30*	*0.40*	*0.96*	*Cum*
		2	*4.00*	*0.59*	*1.95*	*9.25*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*9.13*	*0.30*	*0.30*	*1.64*	*Cum*
		2	*9.13*	*0.51*	*1.40*	*13.04*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*2.20*	*0.30*	*0.50*	*0.66*	*Cum*
		2	*2.20*	*0.68*	*2.50*	*7.43*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.00*	*0.59*	*1.95*	*9.25*	*Cum*
		2	*4.00*	*0.30*	*0.40*	*0.96*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*1.30*	*0.967*		*-2.51*	*Cum*
	TOTAL					**63.46**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
5	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
	300 mm Thick Left Abutment	2	*9.43*		*0.30*	5.66	*Sqm*
		2		*1.02*	*0.30*	0.61	*Sqm*
		2	5.55		0.30	3.33	*Sqm*
		2		3.55	0.30	2.13	*Sqm*
	300 mm Thick Right Abutment	2	*9.43*		*0.30*	5.66	*Sqm*
		2		*1.02*	*0.30*	0.61	*Sqm*
		2	5.55		0.30	3.33	*Sqm*
		2		3.55	0.30	2.13	*Sqm*
	200 mm Thick Left and Right Portion Well	4	4.19		0.20	3.36	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	10	0.30		1.47	4.41	*Sqm*
		8		1.60	1.47	18.82	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*9.13*		*0.30*	10.96	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*9.13*		*1.40*	51.15	*Sqm*
		4		0.51	1.40	2.86	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.20		0.50	4.40	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	2.20		2.50	22.00	*Sqm*
		4		0.68	2.50	6.75	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.00		0.40	6.40	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.00		1.95	31.22	*Sqm*
		4		0.59	1.95	4.62	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	2.20		2.50	22.00	*Sqm*
		4		0.68	2.50	6.75	*Sqm*
		4	2.20		0.50	4.40	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	9.13		1.40	51.15	*Sqm*
		4		0.51	1.40	2.86	*Sqm*
		4	9.13		0.30	10.96	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.00		1.95	31.22	*Sqm*
		4		0.59	1.95	4.62	*Sqm*
		4	4.00		0.40	6.40	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
	TOTAL					**335.65**	***Sqm***
6	Providing 900 mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	900 mm dia pipe	*5*	*2.50*			*12.50*	*RM*
	TOTAL					**12.50**	**RM**
7	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*63.46*	*0.0025*	*0.159*	*7850.00*	*1245.376*	*Kg*
	TOTAL					*1245.376*	*Kg*
	TOTAL					**1.25**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*9.43*	*1.02*	*2.76*	*26.54*	*Cum*
		1	*5.55*	*3.55*	*2.76*	*54.33*	*Cum*
	Middle Portion	*1*	*1.70*	*24.95*		*42.42*	*Cum*
	Right Portion	*1*	*9.43*	*1.02*	*3.27*	*31.44*	*Cum*
		1	*5.55*	*3.55*	*3.27*	*64.36*	*Cum*
	TOTAL					**219.08**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR BRICK SECTION OF BHARTIPUR MINOR

Sr. No.	Reach (m)	STRUCTURE	Amount in Rs.
1	3100-3200	Brick Section	₹ 1,49,951.01
		Sub-Total	₹ 1,49,951.01
		Seigniorage charges	₹ 954.13
		Total (in Rs. Lakhs)	**₹ 1.51**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF BRICK WORK OF CANAL

S.No.	Name of Canal	Reaches (m)	Length (m)	Area (m2)	Quantity (m3)	Unit	Rates (As per Bihar SOR 2025)	Amount	Cement (MT)	Coarse Sand (Cum)
1	Bhartipur Minor	3100-3200	100.000	0.510	51.000	Cum	**920.74**	₹ 46,957.61	5.88	16.32
	Total				***51.00***			***₹ 46,957.61***	***5.88***	***16.32***
2	**Carriage of materials**									
	Coarse Sand (60 Km lead)				16.320	Cum	**1075.00**	₹ 17,544.00		
	Cement (30 km lead)				5.875	MT	**742.00**	₹ 4,359.40		
	Brick (15 km lead)				25500	No.	**3.18**	₹ 81,090.00		
	Carriage of materials Total (In Rs.)							**₹ 1,02,993.40**		
	SUB TOTAL (In Rs.)							**₹ 1,49,951.01**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	16.32	Cum		**584.64**	9541.32	954.13			
	Total						**₹ 954.13**			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR OUTLET OF BHARTIPUR MINOR

Sr. No.	Qty	STRUCTURE			Amount in Rs.
1	1 No.	Outlet			₹ 1,27,744.47
	Total Outlets in Bhartipur minor		13	nos.	₹ 16,60,678.08
				Sub-Total	₹ 16,60,678.08
				Seigniorage charges	₹ 14,302.25
				Total (in Rs. Lakhs)	**₹ 16.75**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
		Total					1100.17			
		For 13 nos. outlet, Total Seigniorage charges					**14302.25**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	**PL MARCH 2025**
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					Total	₹ 2,751.32	A
	B	**Labour**					
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
22	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
23	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
24	**5.6.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.4	**900/ 1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.5	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
25	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
26	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
27	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
28	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	WRD SOR 2025 & PL MARCH 2025	WRD 5.1.3	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	Sqm	11.80
2	WRD SOR 2025 & PL MARCH 2025	WRD 5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	Cum	156.50
3	WRD SOR 2025 & PL MARCH 2025	WRD 5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	Cum	149.30
4	WRD SOR 2025 & PL MARCH 2025	5.1.21	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	Cum	196.10
5	WRD SOR 2025 & PL MARCH 2025	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.	Cum	17.22
6	WRD SOR 2025 & PL MARCH 2025	5.1.25	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	Cum	165.12
7	WRD SOR 2025 & PL MARCH 2025	WRD 5.1.39	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	Cum	61.88

8	**WRD SOR 2023 & PL JUNE 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2025 & PL MARCH 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Gaya Division – Angra Branch Canal
(Total Cost – Rs. 60.63 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST (ANGRA BRANCH CANAL)								
S. No.	Items	Qty.	Unit	Rate	Seigniorage Charge	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
1	Earthwork							
	ANGRA BRANCH CANAL	1	Job	115915565.58	0.00	₹ 11,59,15,565.58	AOC Earthwork Angra Branch Canal	35
	PALUA MINOR	1	Job	3669344.19	0.00	₹ 36,69,344.19	AOC Earthwork Palua Minor	37
	ASNI MINOR	1	Job	50855078.80	0.00	₹ 5,08,55,078.80	AOC Earthwork Asni Minor	39
	KAILASHPUR SUB DY	1	Job	20523958.64	0.00	₹ 2,05,23,958.64	AOC Earthwork Kailashpur Sub Dy	41
	BUDHAUL SUB DY	1	Job	34396567.33	0.00	₹ 3,43,96,567.33	AOC Earthwork Budhaul Sub Dy	43
	PATOI SUB DY	1	Job	37399047.23	0.00	₹ 3,73,99,047.23	AOC Earthwork Patoi Sub Dy	45
2	Head Regulators							
	PALUA MINOR (PIPE HR)	1	No.	438127.23	3727.84	₹ 4,41,855.07	HR (AOC) Palua Minor	86
	ASNI MINOR	1	No.	3139834.93	23790.97	₹ 31,63,625.89	HR (AOC) Asni Minor	73
	KAILASHPUR SUB DY	1	No.	2815643.81	21575.98	₹ 28,37,219.79	HR (AOC) kailashpur Sub Dy	75
	BUDHAUL SUB DY	1	No.	2629772.19	18974.93	₹ 26,48,747.12	HR (AOC) Budhaul Sub DY	74
	PATHARA MINOR	1	No.	1910238.71	13378.58	₹ 19,23,617.29	HR (AOC) Pathara minor	76
	DABUR MINOR	1	No.	2649645.42	19355.53	₹ 26,69,000.95	HR (AOC) Dabur Minor	77
	SADOPUR MINOR	1	No.	2517025.96	18272.50	₹ 25,35,298.46	HR (AOC) Sadopur Minor	78
	DHARAMPUR SUB DY	1	No.	2808224.32	19454.70	₹ 28,27,679.02	HR (AOC) Dharampur sub DY	79
	PATOI SUB DY	1	No.	3883361.67	25781.12	₹ 39,09,142.80	HR (AOC) Patoi Sub Dy	80
	ANTI MINOR	1	No.	2385115.24	16627.81	₹ 24,01,743.05	HR (AOC) Anti Minor	81
	MARUKA MINOR	1	No.	1881652.83	13394.53	₹ 18,95,047.35	HR (AOC) Maruka Minor	82
	RAMPUR MINOR	1	No.	1691376.94	12281.32	₹ 17,03,658.26	HR (AOC) Rampur Minor	83
	GULAB BIGHA MINOR (PIPE HR)	1	No.	438469.78	3733.26	₹ 4,42,203.04	HR (AOC) Gulab Bigha Minor	87
	MALHAD SUB DY.	1	No.	2333297.45	16337.17	₹ 23,49,634.62	HR (AOC) Malhad Sub Dy	84
	RAMPUR MINOR-2	1	No.	1876345.40	13560.42	₹ 18,89,905.82	HR (AOC) Rampur Minor -2	85
3	Falls							
	ANGRA BRANCH CANAL							
	2.440 m Fall at Ch. 1.676 Km	1	No.	7012920.39	65547.65	₹ 70,78,468.04	Fall (AOC) Anga branch Canal	175
	1.524 m Fall at Ch. 12.750 Km	1	No.	4724199.17	45477.81	₹ 47,69,676.98		176
	0.914 m Fall at Ch. 17.450 Km	1	No.	3092786.28	28719.09	₹ 31,21,505.37		177
	1.828 m Fall at Ch. 19.150 Km	1	No.	5225451.72	48800.45	₹ 52,74,252.17		178
	0.610 m Fall at Ch. 19.500 Km	1	No.	2840439.19	26262.34	₹ 28,66,701.52		179
	1.828 m Fall at Ch. 21.050 Km	1	No.	3077788.59	28470.79	₹ 31,06,259.39		180
	1.066 m Fall at Ch. 22.300 Km	1	No.	2180934.68	19631.71	₹ 22,00,566.39		181
	0.762 m Fall at Ch. 25.350 Km	1	No.	1560638.36	13904.12	₹ 15,74,542.48		182

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charge	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
	1.066 m Fall at Ch. 26.650 Km	1	No.	1920787.56	17116.26	₹ 19,37,903.82		183
	0.914 m Fall at Ch. 28.500 Km	1	No.	1239536.74	10864.17	₹ 12,50,400.91		184
	0.914 m Fall at Ch. 29.550 Km	1	No.	1180758.96	10326.21	₹ 11,91,085.17		186
	0.914 m Fall at Ch. 30.800 Km	1	No.	1184927.18	10395.00	₹ 11,95,322.19		187
	1.066 m Fall at Ch. 34.500 Km	1	No.	713331.44	6659.96	₹ 7,19,991.40		185
	PALUA MINOR							
	0.610 m Fall at Ch. 1.650 Km	1	No.	557723.91	4428.10	₹ 5,62,152.01		188
	1.372 m Fall/Culvert at Ch. 1.768 Km	1	No.	876762.79	7194.49	₹ 8,83,957.28	Fall (AOC) Palua Minor	189
	0.914 m Fall at Ch. 2.022 Km	1	No.	359684.69	2898.09	₹ 3,62,582.77		191
	1.524m Fall at Ch. 2.225 Km	1	No.	617334.33	5112.64	₹ 6,22,446.98		192
	ASNI MINOR							
	0.610 m Fall at Ch. 1.700 Km	1	No.	474227.96	3857.01	₹ 4,78,084.97	Fall (AOC) Asni Minor	193
	0.610 m Fall at Ch. 4.084 Km	1	No.	364083.42	2975.64	₹ 3,67,059.05		194
	KAILASHPUR SUB DY							
	0.457 m Fall at Ch. 1.575 Km	1	No.	642081.93	5462.96	₹ 6,47,544.89		195
	0.610 m Fall at Ch.2.250 Km	1	No.	608851.13	5257.26	₹ 6,14,108.38		196
	0.610 m Fall at Ch.5.400 Km	1	No.	502149.62	4277.73	₹ 5,06,427.35	Fall (AOC) Kailashpur Sub Dy	197
	0.610 m Fall at Ch.6.000 Km	1	No.	465201.72	3839.22	₹ 4,69,040.94		198
	1.524 m Fall/ Culvert at Ch.7.175 Km	1	No.	1167153.73	9788.53	₹ 11,76,942.26		199
	BUDHAUL SUB DY							
	1.219 m Fall at Ch. 1.260 Km	1	No.	1248005.83	10946.32	₹ 12,58,952.15		200
	1.066 m Fall at Ch. 1.700 Km	1	No.	1141730.94	9984.52	₹ 11,51,715.46		201
	0.914 m Fall at Ch. 3.500 Km	1	No.	1038394.22	9016.82	₹ 10,47,411.04		202
	0.305 m Fall at Ch. 3.800 Km	1	No.	778865.32	6694.56	₹ 7,85,559.88		203
	0.457 m Fall at Ch. 4.500 Km	1	No.	806699.75	6982.51	₹ 8,13,682.26		204
	0.457 m Fall at Ch. 5.060 Km	1	No.	748110.06	6562.54	₹ 7,54,672.61	Fall (AOC) Budhaul Sub Dy	205
	1.524 m Fall at Ch. 5.910 Km	1	No.	1417455.33	12307.58	₹ 14,29,762.91		206
	1.981 m Fall at Ch. 7.190 Km	1	No.	1923714.25	16887.25	₹ 19,40,601.50		207
	1.066 m Fall at Ch. 7.620 Km	1	No.	904259.31	7757.64	₹ 9,12,016.95		208
	1.066 m Fall at Ch. 8.100 Km	1	No.	904345.73	7757.64	₹ 9,12,103.37		209
	0.914 m Fall at Ch. 9.800 Km	1	No.	1010536.24	8430.96	₹ 10,18,967.21		210
	0.610 m Fall at Ch. 11.500 Km	1	No.	396230.31	3206.45	₹ 3,99,436.76		211
	PATOI SUB DY							
	0.305m Fall at Ch. 0.475 Km	1	No.	1327781.78	11795.31	₹ 13,39,577.09		222
	0.914 m Fall at Ch. 4.510 Km	1	No.	1519550.32	12646.47	₹ 15,32,196.78		223
	1.828 m Fall at Ch. 6.950 Km	1	No.	1427970.97	12622.37	₹ 14,40,593.34		224
	0.610 m Fall at Ch. 7.900 Km	1	No.	959023.88	8369.29	₹ 9,67,393.17		225
	1.828 m Fall at Ch. 8.382 Km	1	No.	1951983.48	14058.89	₹ 19,66,042.37		226
	0.610 m Fall at Ch. 9.240 Km	1	No.	844513.09	7316.85	₹ 8,51,829.93	Fall (AOC) Patoi Sub Dy	227
	1.524 m Fall at Ch. 10.025 Km	1	No.	1442842.94	12580.61	₹ 14,55,423.55		228
	0.914m Fall at Ch. 11.125 Km	1	No.	836743.34	7210.65	₹ 8,43,953.98		229
	1.220 m Fall at Ch. 12.000 Km	1	No.	863011.32	7393.07	₹ 8,70,404.39		230
	0.610 m Fall/ CULVERT at Ch. 12.689 Km	1	No.	882028.13	7275.77	₹ 8,89,303.90		231
	0.610 m Fall at Ch. 13.500 Km	1	No.	583370.17	4929.38	₹ 5,88,299.55		232
	0.610 m Fall at Ch. 15.000 Km	1	No.	235693.51	1861.73	₹ 2,37,555.24		233
4	*Aqueduct at 3.280 Km Angara Branch Canal*	1	No.	110695953.30	770905.90	₹ 11,14,66,859.20	Aqueduct (AOC) Angra Branch Canal	388
5	*Pipe Culvert*							
	ASNI MINOR							
	At Km 1.951	1	No.	677640.64	5549.49	₹ 6,83,190.13	Pipe Culvert (AOC)	394
	KAILASHPUR SUB DY							
	At Km 0.800	1	No.	915006.95	7891.61	₹ 9,22,898.56	Pipe Culvert (AOC)	396
	BUDHAUL SUB DY							
	At Km 8.250	1	No.	960683.00	8333.91	₹ 9,69,016.91	Pipe Culvert (AOC)	399

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charge	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
6	*Cross Drainage Works*							
	BUDHAUL SUB DY							
	At Km 0.800	1	No.	2058305.40	15610.75	₹ 20,73,916.15	CD Work (AOC) Budhaul Sub Dy	414
	At Km 0.950	1	No.	2253924.97	18188.69	₹ 22,72,113.66		415
	At Km 4.600	1	No.	2092628.26	17417.89	₹ 21,10,046.14		416
	PATOI SUB DY							
	At Km 12.482	1	No.	1787023.52	14034.50	₹ 18,01,058.02	CD Work (AOC) Patoi Sub Dy	417
	At Km 13.800	1	No.	2347412.17	18565.85	₹ 23,65,978.03		418
	At Km 14.865	1	No.	1640140.48	13842.74	₹ 16,53,983.22		419
7	*Slab Bridge*							
	ANGRA BRANCH CANAL							
	At Km 0.914	1	No.	3044013.82	17983.86	₹ 30,61,997.67	Slab (AOC) Angra Branch Canal	439
	At Km 2.925	1	No.	3777318.72	25572.64	₹ 38,02,891.36		441
	At Km 21.800	1	No.	2266291.58	12567.78	₹ 22,78,859.36		443
	At Km 22.500	1	No.	2142077.67	11655.95	₹ 21,53,733.62		445
	At Km 22.850	1	No.	2139938.27	11655.95	₹ 21,51,594.22		447
	At Km 23.400	1	No.	2207514.99	12293.10	₹ 22,19,808.09		449
	ASNI MINOR							
	At Km 0.155	1	No.	1823758.26	11490.93	₹ 18,35,249.19	Slab (AOC)	454
	KAILASHPUR SUB DY							
	At Km 0.600	1	No.	1670432.31	8678.04	₹ 16,79,110.34	Slab (AOC) Kailashpur Sub Dy	451
	At Km 1.690	1	No.	1763481.57	9699.15	₹ 17,73,180.72		453
	At Km 6.850	1	No.	1458524.16	7243.33	₹ 14,65,767.49		455
	BUDHAUL SUB DY							
	At Km 0.500	1	No.	1813267.13	9748.99	₹ 18,23,016.12	Slab (AOC) Budhaul Sub DY	456
	At Km 6.370	1	No.	1751676.49	9262.86	₹ 17,60,939.35		457
	PATOI SUB DY							
	At Km 0.460	1	No.	2172024.53	12541.39	₹ 21,84,565.93	Slab (AOC) Patoi Sub Dy	458
	At Km 2.045	1	No.	2054649.39	11392.84	₹ 20,66,042.23		459
	At Km 3.850	1	No.	1941216.50	10357.92	₹ 19,51,574.42		460
	At Km 5.005	1	No.	1888133.48	10093.79	₹ 18,98,227.27		461
	At Km 5.944	1	No.	1818453.35	9677.18	₹ 18,28,130.53		462
	At Km 6.750	1	No.	1743025.56	9167.33	₹ 17,52,192.89		463
	At Km 7.165	1	No.	1747647.52	9167.33	₹ 17,56,814.85		464
	At Km 7.405	1	No.	1737887.43	9167.33	₹ 17,47,054.75		465
	At Km 7.560	1	No.	1737504.85	9169.25	₹ 17,46,674.11		466
	At Km 8.030	1	No.	1740482.29	9169.25	₹ 17,49,651.55		467
	At Km 9.205	1	No.	2208004.92	11756.41	₹ 22,19,761.32		468
	At Km 9.632	1	No.	1726283.05	9113.56	₹ 17,35,396.61		469
	At Km 14.640	1	No.	1517241.32	7570.57	₹ 15,24,811.89		471
	At Km 15.179	1	No.	928105.72	2682.95	₹ 9,30,788.67		472
8	*Brick Section*	1	No.	35103778.87	76533.40	₹ 3,51,80,312.27	Brick Sec (AOC)	608
9	*Repair of Structures*							
	ANGRA BRANCH CANAL	1	No.	4334890.41	15252.50	₹ 43,50,142.91	Abstract (Repair Str.) Angra Branch Canal	530
	PALUA MINOR	1	No.	82458.65266	195.73	₹ 82,654.38	Abstract (Repair Str.) Palua Minor	531
	ASNI MINOR	1	No.	52058.43647	223.10	₹ 52,281.54	Abstract (Repair Str.) Asni Minor	532
	KAILASHPUR SUB DY	1	No.	417346.3538	779.71	₹ 4,18,126.07	Abstract (Repair Str.) Kailashpur Sub Dy	532
	BUDHAUL SUB DY	1	No.	1019269.351	4918.61	₹ 10,24,187.96	Abstract (Repair Str.) Bushaul Sub Dy	533
	PATOI SUB DY	1	No.	476907.6937	685.46	₹ 4,77,593.15	Abstract (Repair Str.) Patoi Sub DY	534

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charge	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
10	Outlets							
	ANGRA BRANCH CANAL	90	No.	127744.47	1100.17	₹ 1,15,96,017.66	Outlet-AOC	612
	PALUA MINOR	4	No.	127744.47	1100.17	₹ 5,15,378.56		
	ASNI MINOR	5	No.	127744.47	1100.17	₹ 6,44,223.20		
	KAILASHPUR SUB DY	16	No.	127744.47	1100.17	₹ 20,61,514.25		
	BUDHAUL SUB DY	32	No.	127744.47	1100.17	₹ 41,23,028.50		
	PATOI SUB DY	25	No.	127744.47	1100.17	₹ 32,21,116.02		
11	Kilometer Stone	85	No.	3853.40		₹ 3,27,539.00	Rates	644
	TOTAL (In Rs.)					**606273428.46**		
	TOTAL (In Lacs)					**6062.73**		

	Carriage of Materials Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_1	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

CONCRETE MIX RATIO TABLE

Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	0.108	0.015		
9	Cement Punning	1.00	0.0015			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR EARTHWORK

Sr. No.	Particulars	Amount in Rs.	Reference
1	*ANGRA BRANCH CANAL*	₹ 11,59,15,565.58	AOC Earthwork
2	*PALUA MINOR*	₹ 36,69,344.19	
3	*ASNI MINOR*	₹ 5,08,55,078.80	
4	*KAILASHPUR SUB DY*	₹ 2,05,23,958.64	
5	*BUDHAUL SUB DY*	₹ 3,43,96,567.33	
6	*PATOI SUB DY*	₹ 3,73,99,047.23	
	TOTAL	**₹ 26,27,59,561.76**	

DETAIL QUANTITIES OF EARTHWORK

ANGRA BRANCH CANAL (0.000 TO 35.341 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	72.226	36.113	3611.300	5.671	2.836	283.550
200	100	46.918	59.572	5957.200	7.265	6.468	646.800
300	100	33.985	40.452	4045.150	7.303	7.284	728.400
400	100	57.809	45.897	4589.700	8.881	8.092	809.200
500	100	52.984	55.397	5539.650	8.239	8.560	856.000
600	100	49.452	51.218	5121.800	10.031	9.135	913.500
700	100	52.314	50.883	5088.300	1.661	5.846	584.600
800	100	52.259	52.287	5228.650	8.853	5.257	525.700
900	100	56.573	54.416	5441.600	16.332	12.593	1259.250
1000	100	65.330	60.952	6095.150	4.949	10.641	1064.050
1100	100	54.712	60.021	6002.100	3.928	4.439	443.850
1200	100	46.044	50.378	5037.800	8.578	6.253	625.300
1300	100	79.774	62.909	6290.900	8.592	8.585	858.500
1400	100	39.996	59.885	5988.500	5.691	7.142	714.150
1500	100	37.457	38.727	3872.650	2.706	4.199	419.850
1600	100	29.443	33.450	3345.000	3.915	3.311	331.050
1700	100	82.075	55.759	5575.900	6.241	5.078	507.800
1800	100	71.142	76.609	7660.850	12.654	9.448	944.750
1900	100	44.007	57.575	5757.450	6.582	9.618	961.800
2000	100	45.674	44.841	4484.050	11.060	8.821	882.100
2100	100	36.772	41.223	4122.300	10.864	10.962	1096.200
2200	100	28.484	32.628	3262.800	9.740	10.302	1030.200
2300	100	17.750	23.117	2311.700	8.191	8.966	896.550
2400	100	9.760	13.755	1375.500	8.836	8.514	851.350
2500	100	4.438	7.099	709.900	12.165	10.501	1050.050
2600	100	0.664	2.551	255.100	26.254	19.210	1920.950
2700	100	15.532	8.098	809.800	8.069	17.162	1716.150
2800	100	0.225	7.879	787.850	14.296	11.183	1118.250
2900	100	0.689	0.457	45.700	25.658	19.977	1997.700
3000	100	0.478	0.584	58.350	29.557	27.608	2760.750
3100	100	9.162	4.820	482.000	13.659	21.608	2160.800
3200	100	0.000	4.581	458.100	0.000	6.830	682.950
3300	100	0.000	0.000	0.000	0.000	0.000	0.000
3400	100	6.315	3.158	315.750	22.190	11.095	1109.500
3500	100	5.501	5.908	590.800	25.553	23.872	2387.150
3600	100	3.284	4.393	439.250	26.918	26.236	2623.550
3700	100	2.642	2.963	296.300	24.419	25.669	2566.850
3800	100	12.288	7.465	746.500	28.341	26.380	2638.000
3900	100	0.860	6.574	657.400	19.524	23.933	2393.250
4000	100	0.616	0.738	73.800	17.878	18.701	1870.100
4100	100	11.281	5.949	594.850	16.649	17.264	1726.350
4200	100	12.466	11.874	1187.350	21.278	18.964	1896.350

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	10.166	11.316	1131.600	20.205	20.742	2074.150
4400	100	11.886	11.026	1102.600	9.864	15.035	1503.450
4500	100	16.929	14.408	1440.750	16.266	13.065	1306.500
4600	100	14.751	15.840	1584.000	4.080	10.173	1017.300
4700	100	10.488	12.620	1261.950	6.796	5.438	543.800
4800	100	9.134	9.811	981.100	11.687	9.242	924.150
4900	100	6.495	7.815	781.450	16.224	13.956	1395.550
5000	100	5.924	6.210	620.950	20.747	18.486	1848.550
5100	100	2.460	4.192	419.200	18.478	19.613	1961.250
5200	100	1.487	1.974	197.350	15.667	17.073	1707.250
5300	100	0.501	0.994	99.400	16.025	15.846	1584.600
5400	100	0.004	0.253	25.250	18.720	17.373	1737.250
5500	100	0.008	0.006	0.600	17.231	17.976	1797.550
5600	100	0.258	0.133	13.300	19.008	18.120	1811.950
5700	100	1.842	1.050	105.000	30.223	24.616	2461.550
5800	100	1.961	1.902	190.150	21.162	25.693	2569.250
5900	100	2.527	2.244	224.400	6.171	13.667	1366.650
6000	100	3.114	2.821	282.050	5.584	5.878	587.750
6100	100	0.665	1.890	188.950	14.356	9.970	997.000
6200	100	1.707	1.186	118.600	13.477	13.917	1391.650
6300	100	1.525	1.616	161.600	11.270	12.374	1237.350
6400	100	1.817	1.671	167.100	12.481	11.876	1187.550
6500	100	1.049	1.433	143.300	10.994	11.738	1173.750
6600	100	0.218	0.634	63.350	13.122	12.058	1205.800
6700	100	0.290	0.254	25.400	10.530	11.826	1182.600
6800	100	0.538	0.414	41.400	9.975	10.253	1025.250
6900	100	0.812	0.675	67.500	12.226	11.101	1110.050
7000	100	1.756	1.284	128.400	9.929	11.078	1107.750
7100	100	1.755	1.756	175.550	13.074	11.502	1150.150
7200	100	10.323	6.039	603.900	3.307	8.191	819.050
7300	100	23.851	17.087	1708.700	0.910	2.109	210.850
7400	100	13.397	18.624	1862.400	9.224	5.067	506.700
7500	100	26.459	19.928	1992.800	6.561	7.893	789.250
7600	100	19.820	23.140	2313.950	6.485	6.523	652.300
7700	100	20.924	20.372	2037.200	5.045	5.765	576.500
7800	100	16.527	18.726	1872.550	5.224	5.135	513.450
7900	100	11.995	14.261	1426.100	4.534	4.879	487.900
8000	100	11.809	11.902	1190.200	4.186	4.360	436.000
8100	100	10.318	11.064	1106.350	4.197	4.192	419.150
8200	100	13.437	11.878	1187.750	8.525	6.361	636.100
8300	100	10.433	11.935	1193.500	9.218	8.872	887.150
8400	100	8.186	9.310	930.950	11.103	10.161	1016.050
8500	100	5.522	6.854	685.400	14.212	12.658	1265.750
8600	100	2.611	4.067	406.650	15.295	14.754	1475.350
8700	100	49.550	26.081	2608.050	11.271	13.283	1328.300

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8800	100	45.384	47.467	4746.700	10.996	11.134	1113.350
8900	100	29.354	37.369	3736.900	7.999	9.498	949.750
9000	100	31.774	30.564	3056.400	7.048	7.524	752.350
9100	100	21.614	26.694	2669.400	6.861	6.955	695.450
9200	100	17.674	19.644	1964.400	6.274	6.568	656.750
9300	100	11.619	14.647	1464.650	8.674	7.474	747.400
9400	100	6.728	9.174	917.350	13.133	10.904	1090.350
9500	100	3.821	5.275	527.450	8.830	10.982	1098.150
9600	100	2.613	3.217	321.700	9.000	8.915	891.500
9700	100	0.302	1.458	145.750	13.183	11.092	1109.150
9800	100	34.732	17.517	1751.700	10.539	11.861	1186.100
9900	100	33.010	33.871	3387.100	9.014	9.777	977.650
10000	100	27.395	30.203	3020.250	8.566	8.790	879.000
10100	100	22.972	25.184	2518.350	8.690	8.628	862.800
10200	100	22.954	22.963	2296.300	11.782	10.236	1023.600
10300	100	22.259	22.607	2260.650	14.697	13.240	1323.950
10400	100	17.279	19.769	1976.900	3.597	9.147	914.700
10500	100	15.294	16.287	1628.650	4.495	4.046	404.600
10600	100	14.578	14.936	1493.600	1.846	3.171	317.050
10700	100	15.116	14.847	1484.700	5.136	3.491	349.100
10800	100	13.691	14.404	1440.350	4.330	4.733	473.300
10900	100	12.607	13.149	1314.900	4.801	4.566	456.550
11000	100	11.377	11.992	1199.200	5.446	5.124	512.350
11100	100	9.868	10.623	1062.250	6.624	6.035	603.500
11200	100	9.442	9.655	965.500	7.678	7.151	715.100
11300	100	9.916	9.679	967.900	8.384	8.031	803.100
11400	100	9.610	9.763	976.300	8.730	8.557	855.700
11500	100	9.312	9.461	946.100	9.078	8.904	890.400
11600	100	2.208	5.760	576.000	10.843	9.961	996.050
11700	100	0.895	1.552	155.150	12.335	11.589	1158.900
11800	100	39.469	20.182	2018.200	2.736	7.536	753.550
11900	100	40.145	39.807	3980.700	5.207	3.972	397.150
12000	100	38.789	39.467	3946.700	9.914	7.561	756.050
12100	100	32.862	35.826	3582.550	8.115	9.015	901.450
12200	100	27.496	30.179	3017.900	7.343	7.729	772.900
12300	100	18.338	22.917	2291.700	6.844	7.094	709.350
12400	100	7.132	12.735	1273.500	3.289	5.067	506.650
12500	100	5.121	6.127	612.650	2.849	3.069	306.900
12600	100	1.897	3.509	350.900	6.920	4.885	488.450
12700	100	0.562	1.230	122.950	12.480	9.700	970.000
12800	100	19.987	10.275	1027.450	9.902	11.191	1119.100
12900	100	17.310	18.649	1864.850	5.923	7.913	791.250
13000	100	16.188	16.749	1674.900	13.783	9.853	985.300
13100	100	14.267	15.228	1522.750	14.953	14.368	1436.800
13200	100	12.183	13.225	1322.500	16.311	15.632	1563.200

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
13300	100	6.847	9.515	951.500	19.260	17.786	1778.550
13400	100	4.061	5.454	545.400	20.247	19.754	1975.350
13500	100	4.958	4.510	450.950	18.640	19.444	1944.350
13600	100	7.588	6.273	627.300	10.233	14.437	1443.650
13700	100	17.205	12.397	1239.650	2.657	6.445	644.500
13800	100	17.482	17.344	1734.350	2.126	2.392	239.150
13900	100	16.211	16.847	1684.650	2.633	2.380	237.950
14000	100	10.628	13.420	1341.950	4.691	3.662	366.200
14100	100	36.339	23.484	2348.350	4.595	4.643	464.300
14200	100	31.512	33.926	3392.550	5.330	4.963	496.250
14300	100	30.966	31.239	3123.900	5.026	5.178	517.800
14400	100	24.963	27.965	2796.450	4.198	4.612	461.200
14500	100	19.480	22.222	2222.150	11.938	8.068	806.800
14600	100	16.861	18.171	1817.050	4.045	7.992	799.150
14700	100	11.975	14.418	1441.800	3.524	3.785	378.450
14800	100	8.906	10.441	1044.050	2.863	3.194	319.350
14900	100	6.150	7.528	752.800	5.329	4.096	409.600
15000	100	4.051	5.101	510.050	7.167	6.248	624.800
15100	100	4.366	4.209	420.850	8.107	7.637	763.700
15200	100	5.639	5.003	500.250	6.486	7.297	729.650
15300	100	5.408	5.524	552.350	5.988	6.237	623.700
15400	100	6.236	5.822	582.200	5.315	5.652	565.150
15500	100	7.329	6.783	678.250	8.665	6.990	699.000
15600	100	7.668	7.499	749.850	4.466	6.566	656.550
15700	100	7.308	7.488	748.800	4.058	4.262	426.200
15800	100	10.047	8.678	867.750	4.039	4.049	404.850
15900	100	7.591	8.819	881.900	4.766	4.403	440.250
16000	100	6.076	6.834	683.350	5.379	5.073	507.250
16100	100	26.859	16.468	1646.750	7.423	6.401	640.100
16200	100	27.354	27.107	2710.650	8.818	8.121	812.050
16300	100	21.638	24.496	2449.600	3.399	6.109	610.850
16400	100	20.048	20.843	2084.300	1.676	2.538	253.750
16500	100	18.480	19.264	1926.400	2.492	2.084	208.400
16600	100	14.032	16.256	1625.600	3.951	3.222	322.150
16700	100	7.219	10.626	1062.550	3.758	3.855	385.450
16800	100	7.225	7.222	722.200	3.758	3.758	375.800
16900	100	4.288	5.757	575.650	3.076	3.417	341.700
17000	100	3.453	3.871	387.050	2.966	3.021	302.100
17100	100	2.304	2.879	287.850	4.242	3.604	360.400
17200	100	2.781	2.543	254.250	2.478	3.360	336.000
17300	100	1.780	2.281	228.050	3.963	3.221	322.050
17400	100	0.617	1.199	119.850	6.682	5.323	532.250
17500	100	10.207	5.412	541.200	2.363	4.523	452.250
17600	100	6.313	8.260	826.000	4.779	3.571	357.100
17700	100	4.051	5.182	518.200	3.259	4.019	401.900

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
17800	100	17.302	10.677	1067.650	3.394	3.327	332.650
17900	100	13.827	15.565	1556.450	4.344	3.869	386.900
18000	100	13.418	13.623	1362.250	3.954	4.149	414.900
18100	100	10.975	12.197	1219.650	4.692	4.323	432.300
18200	100	16.995	13.985	1398.500	5.894	5.293	529.300
18300	100	7.635	12.315	1231.500	4.618	5.256	525.600
18400	100	5.608	6.622	662.150	5.503	5.061	506.050
18500	100	5.363	5.486	548.550	5.229	5.366	536.600
18600	100	2.846	4.105	410.450	7.067	6.148	614.800
18700	100	2.723	2.785	278.450	5.831	6.449	644.900
18800	100	1.118	1.921	192.050	8.278	7.055	705.450
18900	100	1.049	1.084	108.350	9.035	8.657	865.650
19000	100	0.181	0.615	61.500	13.757	11.396	1139.600
19100	100	0.759	0.470	47.000	12.200	12.979	1297.850
19200	100	19.508	10.134	1013.350	6.562	9.381	938.100
19300	100	14.195	16.852	1685.150	4.737	5.650	564.950
19400	100	8.199	11.197	1119.700	11.738	8.238	823.750
19500	100	18.457	13.328	1332.800	5.431	8.585	858.450
19600	100	17.635	18.046	1804.600	3.293	4.362	436.200
19700	100	14.294	15.965	1596.450	4.862	4.078	407.750
19800	100	11.961	13.128	1312.750	4.208	4.535	453.500
19900	100	10.318	11.140	1113.950	3.540	3.874	387.400
20000	100	4.235	7.277	727.650	5.482	4.511	451.100
20100	100	3.318	3.777	377.650	7.408	6.445	644.500
20200	100	2.445	2.882	288.150	9.393	8.401	840.050
20300	100	1.519	1.982	198.200	10.671	10.032	1003.200
20400	100	1.094	1.307	130.650	9.701	10.186	1018.600
20500	100	2.111	1.603	160.250	9.942	9.822	982.150
20600	100	1.794	1.953	195.250	5.822	7.882	788.200
20700	100	1.382	1.588	158.800	6.621	6.222	622.150
20800	100	1.582	1.482	148.200	5.704	6.163	616.250
20900	100	1.364	1.473	147.300	6.320	6.012	601.200
21000	100	1.911	1.638	163.750	3.307	4.814	481.350
21100	100	15.253	8.582	858.200	8.512	5.910	590.950
21200	100	14.087	14.670	1467.000	8.016	8.264	826.400
21300	100	11.950	13.019	1301.850	6.926	7.471	747.100
21400	100	9.497	10.724	1072.350	5.815	6.371	637.050
21500	100	6.938	8.218	821.750	4.111	4.963	496.300
21600	100	5.892	6.415	641.500	4.846	4.479	447.850
21700	100	4.502	5.197	519.700	3.776	4.311	431.100
21800	100	2.947	3.725	372.450	2.074	2.925	292.500
21900	100	3.038	2.993	299.250	2.496	2.285	228.500
22000	100	2.781	2.910	290.950	2.399	2.448	244.750
22100	100	2.718	2.750	274.950	3.592	2.996	299.550
22200	100	1.925	2.322	232.150	4.077	3.835	383.450

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
22300	100	15.377	8.651	865.100	3.397	3.737	373.700
22400	100	13.450	14.414	1441.350	3.216	3.307	330.650
22500	100	12.121	12.786	1278.550	3.571	3.394	339.350
22600	100	11.734	11.928	1192.750	3.622	3.597	359.650
22700	100	10.596	11.165	1116.500	2.346	2.984	298.400
22800	100	8.784	9.690	969.000	1.751	2.049	204.850
22900	100	5.651	7.218	721.750	2.777	2.264	226.400
23000	100	4.713	5.182	518.200	2.075	2.426	242.600
23100	100	4.377	4.545	454.500	1.121	1.598	159.800
23200	100	1.861	3.119	311.900	4.055	2.588	258.800
23300	100	1.157	1.509	150.900	8.973	6.514	651.400
23400	100	0.693	0.925	92.500	4.174	6.574	657.350
23500	100	0.549	0.621	62.100	5.643	4.909	490.850
23600	100	0.578	0.564	56.350	5.749	5.696	569.600
23700	100	0.916	0.747	74.700	6.444	6.097	609.650
23800	100	0.882	0.899	89.900	9.413	7.929	792.850
23900	100	0.551	0.717	71.650	8.953	9.183	918.300
24000	100	0.569	0.560	56.000	7.279	8.116	811.600
24100	100	13.158	6.864	686.350	8.231	7.755	775.500
24200	100	8.758	10.958	1095.800	4.819	6.525	652.500
24300	100	3.408	6.083	608.300	6.915	5.867	586.700
24400	100	2.907	3.158	315.750	3.925	5.420	542.000
24500	100	3.002	2.955	295.450	5.384	4.655	465.450
24600	100	2.355	2.679	267.850	6.444	5.914	591.400
24700	100	2.111	2.233	223.300	7.887	7.166	716.550
24800	100	0.961	1.536	153.600	5.327	6.607	660.700
24900	100	0.988	0.975	97.450	7.482	6.405	640.450
25000	100	0.447	0.718	71.750	6.868	7.175	717.500
25100	100	0.214	0.331	33.050	7.332	7.100	710.000
25200	100	0.009	0.112	11.150	8.798	8.065	806.500
25300	100	0.388	0.199	19.850	4.972	6.885	688.500
25400	100	3.806	2.097	209.700	5.190	5.081	508.100
25500	100	1.749	2.778	277.750	3.320	4.255	425.500
25600	100	2.182	1.966	196.550	25.461	14.391	1439.050
25700	100	2.577	2.380	237.950	3.918	14.690	1468.950
25800	100	0.557	1.567	156.700	8.228	6.073	607.300
25900	100	0.664	0.611	61.050	5.797	7.013	701.250
26000	100	0.801	0.733	73.250	8.903	7.350	735.000
26100	100	0.178	0.490	48.950	12.377	10.640	1064.000
26200	100	0.092	0.135	13.500	16.414	14.396	1439.550
26300	100	1.911	1.002	100.150	11.218	13.816	1381.600
26400	100	1.244	1.578	157.750	11.926	11.572	1157.200
26500	100	0.929	1.087	108.650	9.162	10.544	1054.400
26600	100	1.139	1.034	103.400	6.995	8.079	807.850
26700	100	10.723	5.931	593.100	3.530	5.263	526.250

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
26800	100	1.218	5.971	597.050	2.963	3.247	324.650
26900	100	0.735	0.977	97.650	6.031	4.497	449.700
27000	100	5.057	2.896	289.600	4.358	5.195	519.450
27100	100	4.431	4.744	474.400	3.932	4.145	414.500
27200	100	3.581	4.006	400.600	3.667	3.800	379.950
27300	100	1.792	2.687	268.650	3.863	3.765	376.500
27400	100	3.030	2.411	241.100	2.221	3.042	304.200
27500	100	5.703	4.367	436.650	2.509	2.365	236.500
27600	100	2.144	3.924	392.350	4.063	3.286	328.600
27700	100	0.226	1.185	118.500	6.470	5.267	526.650
27800	100	0.014	0.120	12.000	5.527	5.999	599.850
27900	100	6.864	3.439	343.900	2.797	4.162	416.200
28000	100	7.971	7.418	741.750	3.610	3.204	320.350
28100	100	7.138	7.555	755.450	4.411	4.011	401.050
28200	100	4.208	5.673	567.300	4.537	4.474	447.400
28300	100	3.004	3.606	360.600	6.527	5.532	553.200
28400	100	0.748	1.876	187.600	4.125	5.326	532.600
28500	100	0.108	0.428	42.800	4.866	4.496	449.550
28600	100	8.707	4.408	440.750	4.481	4.674	467.350
28700	100	8.916	8.812	881.150	5.288	4.885	488.450
28800	100	10.823	9.870	986.950	3.447	4.368	436.750
28900	100	0.741	5.782	578.200	4.916	4.182	418.150
29000	100	0.686	0.714	71.350	3.820	4.368	436.800
29100	100	0.483	0.585	58.450	4.275	4.048	404.750
29200	100	0.379	0.431	43.100	5.212	4.744	474.350
29300	100	0.527	0.453	45.300	2.243	3.728	372.750
29400	100	0.291	0.409	40.900	3.257	2.750	275.000
29500	100	0.512	0.402	40.150	4.055	3.656	365.600
29600	100	7.566	4.039	403.900	3.433	3.744	374.400
29700	100	6.137	6.852	685.150	1.495	2.464	246.400
29800	100	6.169	6.153	615.300	3.125	2.310	231.000
29900	100	3.329	4.749	474.900	3.107	3.116	311.600
30000	100	5.583	4.456	445.600	4.065	3.586	358.600
30100	100	6.381	5.982	598.200	3.759	3.912	391.200
30200	100	5.237	5.809	580.900	3.587	3.673	367.300
30300	100	4.162	4.700	469.950	3.851	3.719	371.900
30400	100	3.145	3.654	365.350	5.401	4.626	462.600
30500	100	3.110	3.128	312.750	4.844	5.123	512.250
30600	100	1.428	2.269	226.900	4.431	4.638	463.750
30700	100	0.423	0.926	92.550	5.099	4.765	476.500
30800	100	0.155	0.289	28.900	4.590	4.845	484.450
30900	100	9.326	4.741	474.050	4.594	4.592	459.200
31000	100	6.753	8.040	803.950	4.936	4.765	476.500
31100	100	6.567	6.660	666.000	3.550	4.243	424.300
31200	100	5.305	5.936	593.600	3.709	3.630	362.950

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
31300	100	4.308	4.807	480.650	4.146	3.928	392.750
31400	100	4.076	4.192	419.200	5.188	4.667	466.700
31500	100	3.772	3.924	392.400	5.172	5.180	518.000
31600	100	1.609	2.691	269.050	6.101	5.637	563.650
31700	100	1.306	1.458	145.750	6.909	6.505	650.500
31800	100	0.542	0.924	92.400	3.934	5.422	542.150
31900	100	6.459	3.501	350.050	3.780	3.857	385.700
32000	100	5.351	5.905	590.500	4.308	4.044	404.400
32100	100	4.003	4.677	467.700	6.409	5.359	535.850
32200	100	3.399	3.701	370.100	8.567	7.488	748.800
32300	100	2.860	3.130	312.950	3.740	6.154	615.350
32400	100	2.951	2.906	290.550	4.270	4.005	400.500
32500	100	2.676	2.814	281.350	7.107	5.689	568.850
32600	100	1.313	1.995	199.450	6.923	7.015	701.500
32700	100	1.436	1.375	137.450	6.811	6.867	686.700
32800	100	0.772	1.104	110.400	6.958	6.885	688.450
32900	100	1.359	1.066	106.550	5.767	6.363	636.250
33000	100	0.913	1.136	113.600	4.275	5.021	502.100
33100	100	0.250	0.582	58.150	4.445	4.360	436.000
33200	100	0.146	0.198	19.800	4.943	4.694	469.400
33300	100	0.000	0.073	7.300	6.000	5.472	547.150
33400	100	0.643	0.322	32.150	4.707	5.354	535.350
33500	100	0.000	0.322	32.150	9.831	7.269	726.900
33600	100	0.000	0.000	0.000	6.355	8.093	809.300
33700	100	2.575	1.288	128.750	5.160	5.758	575.750
33800	100	2.737	2.656	265.600	6.396	5.778	577.800
33900	100	2.806	2.772	277.150	5.449	5.923	592.250
34000	100	1.605	2.206	220.550	4.434	4.942	494.150
34100	100	1.889	1.747	174.700	3.498	3.966	396.600
34200	100	2.703	2.296	229.600	6.156	4.827	482.700
34300	100	0.000	1.352	135.150	12.087	9.122	912.150
34400	100	0.000	0.000	0.000	7.237	9.662	966.200
34500	100	0.616	0.308	30.800	6.169	6.703	670.300
34600	100	0.445	0.531	53.050	5.545	5.857	585.700
34700	100	0.326	0.386	38.550	5.656	5.601	560.050
34800	100	0.364	0.345	34.500	9.636	7.646	764.600
34900	100	0.255	0.310	30.950	14.079	11.858	1185.750

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
35000	100	0.170	0.213	21.250	10.095	12.087	1208.700
35100	100	0.122	0.146	14.600	11.973	11.034	1103.400
35200	100	0.087	0.105	10.450	13.353	12.663	1266.300
35300	100	0.002	0.045	4.450	7.145	10.249	1024.900
35341	41	0.109	0.056	2.276	5.857	6.501	266.541
Total				**363440.076**			**271148.591**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**363440.076**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**271148.591**
NET QUANTITY OF EARTHWORK							**92291.48**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK PALUA MR (0.000 TO 2.359 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	12.416	6.208	620.800	1.761	0.881	88.050
200	100	9.287	10.852	1085.150	1.796	1.779	177.850
300	100	9.691	9.489	948.900	1.763	1.780	177.950
400	100	9.870	9.781	978.050	4.163	2.963	296.300
500	100	12.314	11.092	1109.200	5.521	4.842	484.200
600	100	13.729	13.022	1302.150	5.116	5.319	531.850
700	100	13.720	13.725	1372.450	9.082	7.099	709.900
800	100	9.993	11.857	1185.650	5.380	7.231	723.100
900	100	9.101	9.547	954.700	3.370	4.375	437.500
1000	100	7.056	8.079	807.850	4.089	3.730	372.950
1100	100	4.253	5.655	565.450	3.623	3.856	385.600
1200	100	3.052	3.653	365.250	1.509	2.566	256.600
1300	100	1.095	2.074	207.350	3.645	2.577	257.700
1400	100	0.952	1.024	102.350	3.038	3.342	334.150
1500	100	0.829	0.891	89.050	2.292	2.665	266.500
1600	100	0.386	0.608	60.750	4.214	3.253	325.300
1700	100	0.369	0.378	37.750	4.451	4.333	433.250
1800	100	1.015	0.692	69.200	2.522	3.487	348.650
1900	100	0.382	0.699	69.850	3.121	2.822	282.150
2000	100	0.039	0.211	21.050	5.789	4.455	445.500
2100	100	0.170	0.105	10.450	6.354	6.072	607.150
2200	100	0.000	0.085	8.500	11.120	8.737	873.700
2300	100	0.682	0.341	34.100	3.409	7.265	726.450
2359	59	0.424	0.553	32.627	3.282	3.346	197.385
Total				**12038.627**			**9739.735**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**12038.627**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**9739.735**
NET QUANTITY OF EARTHWORK							**2298.89**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK ASNI MR (0.000 TO 4.58 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	13.182	6.591	659.100	2.132	1.066	106.600
200	100	11.247	12.215	1221.450	3.995	3.064	306.350
300	100	8.392	9.820	981.950	3.082	3.539	353.850
400	100	3.103	5.748	574.750	4.016	3.549	354.900
500	100	2.880	2.992	299.150	2.821	3.419	341.850
600	100	2.067	2.474	247.350	3.925	3.373	337.300
700	100	1.384	1.726	172.550	4.164	4.045	404.450
800	100	0.000	0.692	69.200	55.067	29.616	2961.550
900	100	0.000	0.000	0.000	55.394	55.231	5523.050
1000	100	0.000	0.000	0.000	50.086	52.740	5274.000
1100	100	0.000	0.000	0.000	45.606	47.846	4784.600
1200	100	0.000	0.000	0.000	44.942	45.274	4527.400
1300	100	0.000	0.000	0.000	36.943	40.943	4094.250
1400	100	0.000	0.000	0.000	34.424	35.684	3568.350
1500	100	0.000	0.000	0.000	37.526	35.975	3597.500
1600	100	0.000	0.000	0.000	38.393	37.960	3795.950
1700	100	0.000	0.000	0.000	26.050	32.222	3222.150
1800	100	0.000	0.000	0.000	27.696	26.873	2687.300
1900	100	0.000	0.000	0.000	24.829	26.263	2626.250
2000	100	0.000	0.000	0.000	27.340	26.085	2608.450
2100	100	0.000	0.000	0.000	26.987	27.164	2716.350
2200	100	0.000	0.000	0.000	25.216	26.102	2610.150
2300	100	0.000	0.000	0.000	29.832	27.524	2752.400
2400	100	0.000	0.000	0.000	12.077	20.955	2095.450
2500	100	0.000	0.000	0.000	29.273	20.675	2067.500
2600	100	0.000	0.000	0.000	29.207	29.240	2924.000
2700	100	0.000	0.000	0.000	28.636	28.922	2892.150
2800	100	0.000	0.000	0.000	24.428	26.532	2653.200
2900	100	0.000	0.000	0.000	22.560	23.494	2349.400
3000	100	0.000	0.000	0.000	21.434	21.997	2199.700
3100	100	0.000	0.000	0.000	23.243	22.339	2233.850
3200	100	0.000	0.000	0.000	21.882	22.563	2256.250
3300	100	0.000	0.000	0.000	20.208	21.045	2104.500
3400	100	0.000	0.000	0.000	16.075	18.142	1814.150
3500	100	0.000	0.000	0.000	13.546	14.811	1481.050
3600	100	0.000	0.000	0.000	13.462	13.504	1350.400
3700	100	0.000	0.000	0.000	17.320	15.391	1539.100
3800	100	0.000	0.000	0.000	18.958	18.139	1813.900
3900	100	0.000	0.000	0.000	21.363	20.161	2016.050
4000	100	0.000	0.000	0.000	27.763	24.563	2456.300
4100	100	0.000	0.000	0.000	17.993	22.878	2287.800
4200	100	0.000	0.000	0.000	16.216	17.105	1710.450

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	0.000	0.000	0.000	17.090	16.653	1665.300
4400	100	0.000	0.000	0.000	22.222	19.656	1965.600
4500	100	0.000	0.000	0.000	25.703	23.963	2396.250
4587.12	87.12	0.000	0.000	0.000	24.385	25.044	2181.833
Total				**4225.500**			**108009.183**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**4225.500**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**108009.183**
NET QUANTITY OF EARTHWORK (FILLING)							**103783.68**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK KAILASHPUR SUB DY. (0.000 TO 7.500 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	6.562	3.281	328.100	5.573	2.787	278.650
200	100	6.246	6.404	640.400	5.296	5.435	543.450
300	100	1.303	3.775	377.450	7.257	6.277	627.650
400	100	2.283	1.793	179.300	7.302	7.280	727.950
500	100	2.837	2.560	256.000	5.204	6.253	625.300
600	100	4.265	3.551	355.100	2.428	3.816	381.600
700	100	3.014	3.640	363.950	2.720	2.574	257.400
800	100	1.533	2.274	227.350	4.951	3.836	383.550
900	100	1.121	1.327	132.700	5.139	5.045	504.500
1000	100	0.022	0.572	57.150	6.580	5.860	585.950
1100	100	0.000	0.011	1.100	9.649	8.115	811.450
1200	100	0.000	0.000	0.000	11.617	10.633	1063.300
1300	100	0.000	0.000	0.000	12.566	12.092	1209.150
1400	100	0.000	0.000	0.000	11.419	11.993	1199.250
1500	100	0.000	0.000	0.000	12.287	11.853	1185.300
1600	100	0.086	0.043	4.300	8.012	10.150	1014.950
1700	100	0.132	0.109	10.900	7.252	7.632	763.200
1800	100	0.102	0.117	11.700	3.474	5.363	536.300
1900	100	0.105	0.104	10.350	4.549	4.012	401.150
2000	100	0.122	0.114	11.350	8.506	6.528	652.750
2100	100	0.000	0.061	6.100	5.956	7.231	723.100
2200	100	0.000	0.000	0.000	5.801	5.879	587.850
2300	100	1.020	0.510	51.000	4.839	5.320	532.000
2400	100	1.419	1.220	121.950	6.526	5.683	568.250
2500	100	1.513	1.466	146.600	4.444	5.485	548.500
2600	100	1.608	1.561	156.050	4.847	4.646	464.550
2700	100	1.017	1.313	131.250	4.838	4.843	484.250
2800	100	0.398	0.708	70.750	4.995	4.917	491.650
2900	100	0.170	0.284	28.400	7.090	6.043	604.250
3000	100	0.000	0.085	8.500	10.565	8.828	882.750
3100	100	0.782	0.391	39.100	4.171	7.368	736.800
3200	100	1.656	1.219	121.900	4.911	4.541	454.100
3300	100	1.771	1.714	171.350	4.649	4.780	478.000
3400	100	1.809	1.790	179.000	5.409	5.029	502.900
3500	100	1.900	1.855	185.450	5.238	5.324	532.350
3600	100	2.223	2.062	206.150	5.009	5.124	512.350
3700	100	2.478	2.351	235.050	5.369	5.189	518.900
3800	100	4.042	3.260	326.000	5.212	5.291	529.050
3900	100	3.113	3.578	357.750	5.983	5.598	559.750
4000	100	3.441	3.277	327.700	6.218	6.101	610.050
4100	100	3.793	3.617	361.700	5.314	5.766	576.600
4200	100	4.168	3.981	398.050	2.588	3.951	395.100

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	3.458	3.813	381.300	3.037	2.813	281.250
4400	100	2.069	2.764	276.350	3.999	3.518	351.800
4500	100	1.198	1.634	163.350	4.597	4.298	429.800
4600	100	0.547	0.873	87.250	5.444	5.021	502.050
4700	100	0.183	0.365	36.500	6.776	6.110	611.000
4800	100	0.231	0.207	20.700	4.935	5.856	585.550
4900	100	0.317	0.274	27.400	6.462	5.699	569.850
5000	100	0.485	0.401	40.100	4.252	5.357	535.700
5100	100	0.503	0.494	49.400	4.383	4.318	431.750
5200	100	0.542	0.523	52.250	2.659	3.521	352.100
5300	100	0.183	0.363	36.250	6.751	4.705	470.500
5400	100	0.000	0.092	9.150	4.931	5.841	584.100
5500	100	0.896	0.448	44.800	3.724	4.328	432.750
5600	100	0.366	0.631	63.100	4.858	4.291	429.100
5700	100	0.090	0.228	22.800	6.993	5.926	592.550
5800	100	0.000	0.045	4.500	5.228	6.111	611.050
5900	100	0.000	0.000	0.000	6.339	5.784	578.350
6000	100	0.000	0.000	0.000	6.908	6.624	662.350
6100	100	0.349	0.175	17.450	6.014	6.461	646.100
6200	100	0.126	0.238	23.750	6.799	6.407	640.650
6300	100	0.052	0.089	8.900	5.924	6.362	636.150
6400	100	0.116	0.084	8.400	6.052	5.988	598.800
6500	100	0.172	0.144	14.400	5.757	5.905	590.450
6600	100	0.023	0.098	9.750	5.648	5.703	570.250
6700	100	0.000	0.012	1.150	7.295	6.472	647.150
6800	100	0.000	0.000	0.000	6.581	6.938	693.800
6900	100	0.000	0.000	0.000	7.966	7.274	727.350
7000	100	0.000	0.000	0.000	11.560	9.763	976.300
7100	100	0.000	0.000	0.000	14.240	12.900	1290.000
7200	100	0.475	0.238	23.750	4.618	9.429	942.900
7300	100	0.222	0.349	34.850	5.004	4.811	481.100
7400	100	0.050	0.136	13.600	3.899	4.452	445.150
7500	100	0.000	0.025	2.500	6.259	5.079	507.900
Total				**8070.700**			**45451.550**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**8070.700**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**45451.550**
NET QUANTITY OF EARTHWORK							**37380.85**

Chainge	Length	Earthwork in Cutting			Earthwork in filling		
		Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK BUDHAUL SUB DY. (0.000 TO 12.750 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	1.609	0.805	80.450	2.699	1.350	134.950
200	100	1.474	1.542	154.150	3.335	3.017	301.700
300	100	2.685	2.080	207.950	2.686	3.011	301.050
400	100	1.758	2.222	222.150	4.749	3.718	371.750
500	100	1.586	1.672	167.200	5.389	5.069	506.900
600	100	2.116	1.851	185.100	4.236	4.813	481.250
700	100	1.771	1.944	194.350	3.539	3.888	388.750
800	100	3.202	2.487	248.650	4.174	3.857	385.650
900	100	1.428	2.315	231.500	6.278	5.226	522.600
1000	100	0.969	1.199	119.850	8.023	7.151	715.050
1100	100	0.038	0.504	50.350	20.069	14.046	1404.600
1200	100	0.000	0.019	1.900	15.245	17.657	1765.700
1300	100	2.265	1.133	113.250	3.818	9.532	953.150
1400	100	1.303	1.784	178.400	5.441	4.630	462.950
1500	100	0.725	1.014	101.400	3.104	4.273	427.250
1600	100	0.091	0.408	40.800	5.108	4.106	410.600
1700	100	0.001	0.046	4.600	6.128	5.618	561.800
1800	100	2.298	1.150	114.950	4.456	5.292	529.200
1900	100	2.551	2.425	242.450	3.032	3.744	374.400
2000	100	0.234	1.393	139.250	4.249	3.641	364.050
2100	100	0.644	0.439	43.900	7.790	6.020	601.950
2200	100	0.477	0.561	56.050	6.099	6.945	694.450
2300	100	0.528	0.503	50.250	6.492	6.296	629.550
2400	100	1.043	0.786	78.550	6.104	6.298	629.800
2500	100	1.131	1.087	108.700	5.354	5.729	572.900
2600	100	1.090	1.111	111.050	5.557	5.456	545.550
2700	100	0.647	0.869	86.850	5.769	5.663	566.300
2800	100	0.000	0.324	32.350	9.189	7.479	747.900
2900	100	0.064	0.032	3.200	6.843	8.016	801.600
3000	100	0.724	0.394	39.400	3.591	5.217	521.700
3100	100	1.188	0.956	95.600	4.219	3.905	390.500
3200	100	2.478	1.833	183.300	5.386	4.803	480.250
3300	100	1.212	1.845	184.500	6.123	5.755	575.450
3400	100	0.047	0.630	62.950	6.470	6.297	629.650
3500	100	3.133	1.590	159.000	3.439	4.955	495.450
3600	100	0.204	1.669	166.850	4.669	4.054	405.400
3700	100	0.009	0.107	10.650	7.300	5.985	598.450
3800	100	2.965	1.487	148.700	4.625	5.963	596.250
3900	100	0.436	1.701	170.050	7.366	5.996	599.550
4000	100	0.298	0.367	36.700	5.455	6.411	641.050
4100	100	0.173	0.236	23.550	5.066	5.261	526.050
4200	100	0.306	0.240	23.950	5.555	5.311	531.050

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	0.117	0.212	21.150	4.025	4.790	479.000
4400	100	0.013	0.065	6.500	5.905	4.965	496.500
4500	100	1.222	0.618	61.750	5.812	5.859	585.850
4600	100	1.107	1.165	116.450	4.838	5.325	532.500
4700	100	0.782	0.945	94.450	6.194	5.516	551.600
4800	100	0.188	0.485	48.500	3.764	4.979	497.900
4900	100	0.209	0.199	19.850	4.823	4.294	429.350
5000	100	0.000	0.105	10.450	7.902	6.363	636.250
5100	100	0.562	0.281	28.100	4.235	6.069	606.850
5200	100	0.741	0.652	65.150	6.237	5.236	523.600
5300	100	0.586	0.664	66.350	5.521	5.879	587.900
5400	100	0.248	0.417	41.700	5.780	5.651	565.050
5500	100	0.010	0.129	12.900	6.785	6.283	628.250
5600	100	0.000	0.005	0.500	7.357	7.071	707.100
5700	100	0.000	0.000	0.000	14.043	10.700	1070.000
5800	100	0.000	0.000	0.000	17.831	15.937	1593.700
5900	100	0.000	0.000	0.000	18.627	18.229	1822.900
6000	100	3.180	1.590	159.000	3.997	11.312	1131.200
6100	100	2.514	2.847	284.700	3.690	3.844	384.350
6200	100	2.592	2.553	255.300	4.025	3.858	385.750
6300	100	2.157	2.375	237.450	4.412	4.219	421.850
6400	100	1.675	1.916	191.600	4.123	4.268	426.750
6500	100	1.280	1.478	147.750	4.270	4.197	419.650
6600	100	0.186	0.733	73.300	4.863	4.567	456.650
6700	100	0.000	0.093	9.300	8.190	6.527	652.650
6800	100	0.000	0.000	0.000	10.103	9.147	914.650
6900	100	0.000	0.000	0.000	9.710	9.907	990.650
7000	100	0.000	0.000	0.000	10.418	10.064	1006.400
7100	100	0.000	0.000	0.000	12.223	11.321	1132.050
7200	100	1.405	0.703	70.250	4.308	8.266	826.550
7300	100	1.283	1.344	134.400	5.217	4.763	476.250
7400	100	0.578	0.931	93.050	3.271	4.244	424.400
7500	100	0.456	0.517	51.700	5.304	4.288	428.750
7600	100	0.014	0.235	23.500	7.199	6.252	625.150
7700	100	1.729	0.872	87.150	5.696	6.448	644.750
7800	100	1.025	1.377	137.700	3.344	4.520	452.000
7900	100	0.216	0.621	62.050	3.645	3.495	349.450
8000	100	0.512	0.364	36.400	4.047	3.846	384.600
8100	100	3.193	1.853	185.250	3.151	3.599	359.900
8200	100	0.791	1.992	199.200	4.442	3.797	379.650
8300	100	0.065	0.428	42.800	3.797	4.120	411.950
8400	100	0.000	0.033	3.250	4.495	4.146	414.600
8500	100	0.289	0.145	14.450	5.378	4.937	493.650
8600	100	0.481	0.385	38.500	4.169	4.774	477.350
8700	100	0.240	0.361	36.050	4.875	4.522	452.200

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8800	100	0.031	0.136	13.550	5.543	5.209	520.900
8900	100	4.896	2.464	246.350	4.257	4.900	490.000
9000	100	0.582	2.739	273.900	8.972	6.615	661.450
9100	100	0.978	0.780	78.000	3.953	6.463	646.250
9200	100	1.594	1.286	128.600	3.438	3.696	369.550
9300	100	0.772	1.183	118.300	6.658	5.048	504.800
9400	100	0.055	0.414	41.350	3.519	5.089	508.850
9500	100	0.000	0.028	2.750	6.151	4.835	483.500
9600	100	0.000	0.000	0.000	5.792	5.972	597.150
9700	100	0.000	0.000	0.000	5.278	5.535	553.500
9800	100	0.230	0.115	11.500	5.660	5.469	546.900
9900	100	0.000	0.115	11.500	6.325	5.993	599.250
10000	100	0.000	0.000	0.000	6.883	6.604	660.400
10100	100	0.000	0.000	0.000	4.387	5.635	563.500
10200	100	0.170	0.085	8.500	5.632	5.010	500.950
10300	100	0.296	0.233	23.300	3.152	4.392	439.200
10400	100	0.149	0.223	22.250	7.144	5.148	514.800
10500	100	0.000	0.075	7.450	7.716	7.430	743.000
10600	100	0.247	0.124	12.350	4.557	6.137	613.650
10700	100	0.000	0.124	12.350	4.570	4.564	456.350
10800	100	1.091	0.546	54.550	4.137	4.354	435.350
10900	100	0.780	0.936	93.550	2.747	3.442	344.200
11000	100	0.554	0.667	66.700	3.430	3.089	308.850
11100	100	0.550	0.552	55.200	3.658	3.544	354.400
11200	100	0.372	0.461	46.100	5.103	4.381	438.050
11300	100	0.712	0.542	54.200	2.459	3.781	378.100
11400	100	0.312	0.512	51.200	3.083	2.771	277.100
11500	100	0.675	0.494	49.350	6.888	4.986	498.550
11600	100	0.139	0.407	40.700	4.664	5.776	577.600
11700	100	0.000	0.070	6.950	8.630	6.647	664.700
11800	100	0.074	0.037	3.700	9.390	9.010	901.000
11900	100	0.008	0.041	4.100	3.842	6.616	661.600
12000	100	0.038	0.023	2.300	5.595	4.719	471.850
12100	100	0.325	0.182	18.150	5.546	5.571	557.050
12200	100	0.395	0.360	36.000	4.027	4.787	478.650
12300	100	0.555	0.475	47.500	4.222	4.125	412.450
12400	100	0.722	0.639	63.850	4.566	4.394	439.400
12500	100	0.807	0.765	76.450	5.642	5.104	510.400
12600	100	0.937	0.872	87.200	4.713	5.178	517.750
12700	100	1.028	0.983	98.250	3.842	4.278	427.750
12750	50	0.790	0.909	45.450	4.511	4.177	208.825
Total				**9856.150**			**73219.825**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**9856.150**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**73219.825**
NET QUANTITY OF EARTHWORK							**63363.68**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK							
PATOI DISTY (0.000 TO 15.400 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	2.189	1.095	109.450	4.588	2.294	229.400
200	100	1.338	1.764	176.350	4.665	4.627	462.650
300	100	1.015	1.177	117.650	3.032	3.849	384.850
400	100	0.298	0.657	65.650	5.675	4.354	435.350
500	100	1.128	0.713	71.300	2.748	4.212	421.150
600	100	1.135	1.132	113.150	2.705	2.727	272.650
700	100	1.243	1.189	118.900	2.931	2.818	281.800
800	100	1.144	1.194	119.350	3.099	3.015	301.500
900	100	1.382	1.263	126.300	3.313	3.206	320.600
1000	100	1.553	1.468	146.750	3.448	3.381	338.050
1100	100	1.771	1.662	166.200	3.920	3.684	368.400
1200	100	1.599	1.685	168.500	4.500	4.210	421.000
1300	100	1.282	1.441	144.050	5.192	4.846	484.600
1400	100	1.033	1.158	115.750	6.754	5.973	597.300
1500	100	0.866	0.950	94.950	8.437	7.596	759.550
1600	100	0.742	0.804	80.400	8.452	8.445	844.450
1700	100	0.503	0.623	62.250	8.137	8.295	829.450
1800	100	0.250	0.377	37.650	8.109	8.123	812.300
1900	100	0.098	0.174	17.400	7.445	7.777	777.700
2000	100	0.273	0.186	18.550	6.651	7.048	704.800
2100	100	2.377	1.325	132.500	3.356	5.004	500.350
2200	100	7.457	4.917	491.700	6.210	4.783	478.300
2300	100	8.714	8.086	808.550	3.384	4.797	479.700
2400	100	9.851	9.283	928.250	1.758	2.571	257.100
2500	100	8.598	9.225	922.450	1.978	1.868	186.800
2600	100	8.216	8.407	840.700	1.402	1.690	169.000
2700	100	7.925	8.071	807.050	1.393	1.398	139.750
2800	100	7.514	7.720	771.950	1.096	1.245	124.450
2900	100	6.884	7.199	719.900	2.356	1.726	172.600
3000	100	6.812	6.848	684.800	0.692	1.524	152.400
3100	100	5.559	6.186	618.550	1.911	1.302	130.150
3200	100	5.237	5.398	539.800	2.461	2.186	218.600
3300	100	4.832	5.035	503.450	3.299	2.880	288.000
3400	100	4.464	4.648	464.800	4.403	3.851	385.100
3500	100	4.083	4.274	427.350	6.007	5.205	520.500
3600	100	0.889	2.486	248.600	4.074	5.041	504.050
3700	100	0.479	0.684	68.400	3.849	3.962	396.150
3800	100	9.911	5.195	519.500	4.089	3.969	396.900
3900	100	4.964	7.438	743.750	4.911	4.500	450.000
4000	100	3.687	4.326	432.550	3.831	4.371	437.100
4100	100	2.364	3.026	302.550	3.962	3.897	389.650

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4200	100	0.455	1.410	140.950	6.315	5.139	513.850
4300	100	1.325	0.890	89.000	4.835	5.575	557.500
4400	100	0.135	0.730	73.000	7.389	6.112	611.200
4500	100	0.000	0.068	6.750	8.511	7.950	795.000
4600	100	3.887	1.944	194.350	4.938	6.725	672.450
4700	100	2.749	3.318	331.800	3.274	4.106	410.600
4800	100	1.405	2.077	207.700	4.241	3.758	375.750
4900	100	1.483	1.444	144.400	4.029	4.135	413.500
5000	100	1.794	1.639	163.850	3.218	3.624	362.350
5100	100	0.342	1.068	106.800	3.265	3.242	324.150
5200	100	2.785	1.564	156.350	2.419	2.842	284.200
5300	100	1.587	2.186	218.600	2.720	2.570	256.950
5400	100	1.364	1.476	147.550	2.534	2.627	262.700
5500	100	1.314	1.339	133.900	2.527	2.531	253.050
5600	100	1.314	1.314	131.400	3.073	2.800	280.000
5700	100	1.640	1.477	147.700	1.793	2.433	243.300
5800	100	0.146	0.893	89.300	4.910	3.352	335.150
5900	100	0.491	0.319	31.850	4.755	4.833	483.250
6000	100	0.079	0.285	28.500	2.685	3.720	372.000
6100	100	0.000	0.040	3.950	5.768	4.227	422.650
6200	100	1.794	0.897	89.700	8.003	6.886	688.550
6300	100	2.078	1.936	193.600	7.135	7.569	756.900
6400	100	1.309	1.694	169.350	9.578	8.357	835.650
6500	100	1.015	1.162	116.200	10.900	10.239	1023.900
6600	100	1.088	1.052	105.150	10.633	10.767	1076.650
6700	100	1.097	1.093	109.250	11.872	11.253	1125.250
6800	100	0.000	0.549	54.850	20.559	16.216	1621.550
6900	100	0.000	0.000	0.000	16.737	18.648	1864.800
7000	100	7.856	3.928	392.800	0.524	8.631	863.050
7100	100	6.026	6.941	694.100	2.459	1.492	149.150
7200	100	0.516	3.271	327.100	2.698	2.579	257.850
7300	100	1.691	1.104	110.350	2.143	2.421	242.050
7400	100	0.526	1.109	110.850	2.812	2.478	247.750
7500	100	0.242	0.384	38.400	5.482	4.147	414.700
7600	100	0.157	0.200	19.950	5.788	5.635	563.500
7700	100	0.053	0.105	10.500	6.186	5.987	598.700
7800	100	0.010	0.032	3.150	6.840	6.513	651.300
7900	100	1.884	0.947	94.700	4.222	5.531	553.100
8000	100	1.132	1.508	150.800	4.902	4.562	456.200
8100	100	0.945	1.039	103.850	4.670	4.786	478.600
8200	100	0.046	0.496	49.550	7.538	6.104	610.400
8300	100	0.131	0.089	8.850	7.122	7.330	733.000
8400	100	9.840	4.986	498.550	1.790	4.456	445.600
8500	100	6.815	8.328	832.750	1.878	1.834	183.400
8600	100	3.661	5.238	523.800	5.581	3.730	372.950

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8700	100	4.948	4.305	430.450	4.537	5.059	505.900
8800	100	3.326	4.137	413.700	4.867	4.702	470.200
8900	100	1.956	2.641	264.100	4.791	4.829	482.900
9000	100	0.850	1.403	140.300	4.396	4.594	459.350
9100	100	0.090	0.470	47.000	7.494	5.945	594.500
9200	100	0.000	0.045	4.500	10.229	8.862	886.150
9300	100	1.583	0.792	79.150	3.830	7.030	702.950
9400	100	0.101	0.842	84.200	7.996	5.913	591.300
9500	100	0.355	0.228	22.800	6.205	7.101	710.050
9600	100	0.342	0.349	34.850	5.938	6.072	607.150
9700	100	0.000	0.171	17.100	9.935	7.937	793.650
9800	100	0.000	0.000	0.000	9.944	9.940	993.950
9900	100	0.855	0.428	42.750	4.892	7.418	741.800
10000	100	0.000	0.428	42.750	23.828	14.360	1436.000
10100	100	3.382	1.691	169.100	3.421	13.625	1362.450
10200	100	0.863	2.123	212.250	4.839	4.130	413.000
10300	100	0.749	0.806	80.600	6.034	5.437	543.650
10400	100	0.182	0.466	46.550	8.553	7.294	729.350
10500	100	0.000	0.091	9.100	11.919	10.236	1023.600
10600	100	0.000	0.000	0.000	14.778	13.349	1334.850
10700	100	0.000	0.000	0.000	20.994	17.886	1788.600
10800	100	0.000	0.000	0.000	26.316	23.655	2365.500
10900	100	0.983	0.492	49.150	6.898	16.607	1660.700
11000	100	0.000	0.492	49.150	8.375	7.637	763.650
11100	100	0.040	0.020	2.000	3.176	5.776	577.550
11200	100	1.021	0.531	53.050	2.651	2.914	291.350
11300	100	9.259	5.140	514.000	3.450	3.051	305.050
11400	100	8.985	9.122	912.200	2.166	2.808	280.800
11500	100	5.811	7.398	739.800	1.898	2.032	203.200
11600	100	4.137	4.974	497.400	2.084	1.991	199.100
11700	100	2.303	3.220	322.000	1.062	1.573	157.300
11800	100	2.590	2.447	244.650	1.986	1.524	152.400
11900	100	0.117	1.354	135.350	3.544	2.765	276.500
12000	100	0.000	0.059	5.850	8.954	6.249	624.900
12100	100	1.378	0.689	68.900	2.360	5.657	565.700
12200	100	0.081	0.730	72.950	3.733	3.047	304.650
12300	100	0.003	0.042	4.200	5.432	4.583	458.250
12400	100	0.012	0.008	0.750	5.254	5.343	534.300
12500	100	0.028	0.020	2.000	5.084	5.169	516.900
12600	100	0.000	0.014	1.400	28.370	16.727	1672.700
12700	100	0.660	0.330	33.000	4.337	16.354	1635.350
12800	100	1.019	0.840	83.950	2.114	3.226	322.550
12900	100	0.851	0.935	93.500	4.392	3.253	325.300
13000	100	0.429	0.640	64.000	5.241	4.817	481.650
13100	100	0.185	0.307	30.700	5.654	5.448	544.750

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
13200	100	0.170	0.178	17.750	5.671	5.663	566.250
13300	100	0.068	0.119	11.900	5.763	5.717	571.700
13400	100	0.015	0.042	4.150	5.802	5.783	578.250
13500	100	0.000	0.008	0.750	5.945	5.874	587.350
13600	100	1.715	0.858	85.750	5.261	5.603	560.300
13700	100	1.246	1.481	148.050	5.240	5.251	525.050
13800	100	1.276	1.261	126.100	5.347	5.294	529.350
13900	100	1.031	1.154	115.350	5.379	5.363	536.300
14000	100	0.838	0.935	93.450	5.293	5.336	533.600
14100	100	0.393	0.616	61.550	5.565	5.429	542.900
14200	100	0.227	0.310	31.000	5.941	5.753	575.300
14300	100	0.181	0.204	20.400	5.623	5.782	578.200
14400	100	0.099	0.140	14.000	5.990	5.807	580.650
14500	100	0.135	0.117	11.700	5.701	5.846	584.550
14600	100	0.053	0.094	9.400	5.702	5.702	570.150
14700	100	0.000	0.027	2.650	6.239	5.971	597.050
14800	100	0.106	0.053	5.300	7.034	6.637	663.650
14900	100	0.229	0.168	16.750	3.687	5.361	536.050
15000	100	0.000	0.115	11.450	8.210	5.949	594.850
15100	100	0.222	0.111	11.100	2.763	5.487	548.650
15200	100	0.144	0.183	18.300	4.812	3.788	378.750
15300	100	0.217	0.181	18.050	8.319	6.566	656.550
15400	100	0.273	0.250	25.000	8.985	7.463	746.300
Total				**28384.650**			**87401.550**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**28384.650**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**87401.550**
NET QUANTITY OF EARTHWORK							**59016.90**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

ANGRA BRANCH CANAL (0.000 TO 35.341 KM)

JUNGLE CLEARANCE QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 9.050	9050	12.39	112129.50	Sqm
9.050 - 15.722	6672	11.010	73458.72	Sqm
15.722 - 19.980	4258	8.040	34234.32	Sqm
19.980 - 22.300	1150	8.040	9246.00	Sqm
22.300 - 23.750	1450	7.720	11194.00	Sqm
23.750 - 26.970	3220	7.580	24407.60	Sqm
26.970 - 28.880	1910	5.950	11364.50	Sqm
28.880 - 31.525	2645	5.480	14494.60	Sqm
31.525 - 31.530	5	4.920	24.60	Sqm
31.530 - 31.925	395	3.860	1524.70	Sqm
31.925 - 33.500	1575	3.570	5622.75	Sqm
33.500 - 34.747	1247	2.870	3578.89	Sqm
34.747 - 35.300	553	1.800	995.40	Sqm
	TOTAL		**302275.58**	**Sqm**

LIP CUTTING QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 9.050	9050	12.390	0.15	16819.43	Cum
9.050 - 15.722	6672	11.010	0.15	11018.81	Cum
15.722 - 19.980	4258	8.040	0.15	5135.15	Cum
19.980 - 22.300	1150	8.040	0.15	1386.90	Cum
22.300 - 23.750	1450	7.720	0.15	1679.10	Cum
23.750 - 26.970	3220	7.580	0.15	3661.14	Cum
26.970 - 28.880	1910	5.950	0.15	1704.68	Cum
28.880 - 31.525	2645	5.480	0.15	2174.19	Cum
31.525 - 31.530	5	4.920	0.15	3.69	Cum
31.530 - 31.925	395	3.860	0.15	228.71	Cum
31.925 - 33.500	1575	3.570	0.15	843.41	Cum
33.500 - 34.747	1247	2.870	0.15	536.83	Cum
34.747 - 35.300	553	1.800	0.15	149.31	Cum
	TOTAL			**45341.34**	**Cum**

PALUA MINOR				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.305	305	1.83	558.15	Sqm
0.305 - 0.762	457	1.43	653.51	Sqm
0.762 - 2.359	1597	1.43	2283.71	Sqm
	TOTAL		**3495.37**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.305	305	1.83	0.15	83.72	Cum
0.305 - 0.762	457	1.43	0.15	98.03	Cum
0.762 - 2.359	1597	1.43	0.15	342.56	Cum
	TOTAL			**524.31**	**Cum**

ASNI MINOR				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.731	731	2.060	1505.86	Sqm
0.731 - 2.600	2599.27	1.870	4860.63	Sqm
2.600 - 3.276	676	1.470	993.72	Sqm
3.276 - 3.352	76	1.190	90.44	Sqm
	TOTAL		**7450.65**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.731	731	2.06	0.15	225.88	Cum
0.731 - 2.600	2599.27	1.87	0.15	729.09	Cum
2.600 - 3.276	676	1.47	0.15	149.06	Cum
3.276 - 3.352	76	2.10	1.15	183.54	Cum
	TOTAL			**1287.57**	**Cum**

KAILASHPUR SUB DY.				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 2.026	2026	3.64	7374.64	Sqm
2.026 - 3.500	1474	3.28	4834.72	Sqm
3.500 - 4.300	800	2.96	2368.00	Sqm
4.300 - 5.029	729	2.64	1924.56	Sqm
5.029 - 5.669	670	2.33	1561.10	Sqm
5.669 - 6.300	631	1.94	1224.14	Sqm
6.300 - 7.162	862	1.67	1439.54	Sqm
	TOTAL		**20726.70**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 2.026	2026	3.64	0.15	1106.20	Cum
2.026 - 3.500	1474	3.28	0.15	725.21	Cum
3.500 - 4.300	800	2.96	0.15	355.20	Cum
4.300 - 5.029	729	2.64	0.15	288.68	Cum
5.029 - 5.669	670	2.33	0.15	234.17	Cum
5.669 - 6.300	631	1.94	0.15	183.62	Cum
6.300 - 7.162	862	1.67	0.15	215.93	Cum
	TOTAL			**3109.01**	**Cum**

BUDHAUL SUB DY.				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 4.815	4815	4.72	22726.80	Sqm
4.815 - 7.300	2485	4.30	10685.50	Sqm
7.300 - 8.450	1150	3.88	4462.00	Sqm
8.450 - 9.800	1350	3.11	4198.50	Sqm
9.800 - 10.058	258	2.80	722.40	Sqm
10.058 - 10.400	342	2.60	889.20	Sqm
10.400 - 10.650	250	2.38	595.00	Sqm
10.650 - 11.100	450	2.11	949.50	Sqm
11.100 - 11.500	400	1.78	712.00	Sqm
11.500 - 11.750	250	1.49	372.50	Sqm
11.750 - 11.900	150	1.20	180.00	Sqm
	TOTAL		**46493.40**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 4.815	4815	4.72	0.15	3409.02	Cum
4.815 - 7.300	2485	4.3	0.15	1602.83	Cum
7.300 - 8.450	1150	3.88	0.15	669.30	Cum
8.450 - 9.800	1350	3.11	0.15	629.78	Cum
9.800 - 10.058	258	2.80	0.15	108.36	Cum
10.058 - 10.400	342	2.60	0.15	133.38	Cum
10.400 - 10.650	250	2.38	0.15	89.25	Cum
10.650 - 11.100	450	2.11	0.15	142.43	Cum
11.100 - 11.500	400	1.78	0.15	106.80	Cum
11.500 - 11.750	250	1.49	0.15	55.88	Cum
11.750 - 11.900	150	1.20	0.15	27.00	Cum
	TOTAL			**6974.01**	**Cum**

PATOI DISTRIBUTARY				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 2.470	2470	6.85	16919.50	Sqm
2.470 - 5.730	3260	5.68	18516.80	Sqm
5.730 - 5.950	220	4.88	1073.60	Sqm
5.950 - 8.400	2450	4.48	10976.00	Sqm
8.400 - 10.250	1850	4.12	7622.00	Sqm
10.250 - 10.950	700	3.78	2646.00	Sqm
10.950 - 11.450	500	3.43	1715.00	Sqm
11.450 - 12.688	1238	3.11	3850.18	Sqm
12.688 -12.954	266	2.80	744.80	Sqm
12.954 - 14.100	1146	2.52	2887.92	Sqm
14.100 - 14.639	539	1.87	1007.93	Sqm
14.639- 14.850	211	1.47	310.17	Sqm
14.850 - 15.000	150	1.10	165.00	Sqm
	TOTAL		**68434.90**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 2.470	2470	6.850	0.15	2537.93	Cum
2.470 - 5.730	3260	5.680	0.15	2777.52	Cum
5.730 - 5.950	220	4.880	0.15	161.04	Cum
5.950 - 8.400	2450	4.480	0.15	1646.40	Cum
8.400 - 10.250	1850	4.120	0.15	1143.30	Cum
10.250 - 10.950	700	3.780	0.15	396.90	Cum
10.950 - 11.450	500	3.430	0.15	257.25	Cum
11.450 - 12.688	1238	3.110	0.15	577.53	Cum
12.688 -12.954	266	2.800	0.15	111.72	Cum
12.954 - 14.100	1146	2.520	0.15	433.19	Cum
14.100 - 14.639	539	1.870	0.15	151.19	Cum
14.639- 14.850	211	1.470	0.15	46.53	Cum
14.850 - 15.000	150	1.100	0.15	24.75	Cum
	TOTAL			**10265.24**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR ANGRA BRANCH CANAL						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	302275.58	Sqm	**11.80**	3568178.812
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	363440.08	Cum	**156.50**	56878371.82
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	145376.03	Cum	**17.22**	2503013.853
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	92291.48	Cum	**165.12**	15238797.10
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	27687.45	Cum	**174.89**	4842257.32
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	23072.87	Cum	**217.92**	5028040.08
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	41531.17	Cum	**319.14**	13254256.96
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			45341.34	Cum	**196.10**	8891436.19

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	92291.48	Cum	**61.88**	5711213.45
TOTAL COST OF EARTHWORK (in Rs.)						**115915565.58**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**1159.156**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
		ABSTRACT OF QUANTITY OF EARTHWORK FOR PALUA MINOR				
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	3495.37	Sqm	**11.80**	41260.71043
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	12038.63	Cum	**156.50**	1884045.126
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	4815.45	Cum	**17.22**	82910.09216
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	2298.89	Cum	**165.12**	379583.84
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	689.67	Cum	**174.89**	120615.99
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	574.72	Cum	**217.92**	125243.66
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1034.50	Cum	**319.14**	330150.85
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			524.31	Cum	**196.10**	102816.31

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	9739.73	Cum	**61.88**	602717.61
TOTAL COST OF EARTHWORK (in Rs.)						**3669344.19**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**36.693**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR ASNI MINOR						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	7450.65	Sqm	**11.80**	87950.41359
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	4225.50	Cum	**156.50**	661290.75
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1690.20	Cum	**17.22**	29101.04237
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	103783.68	Cum	**165.12**	17136342.54
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	31135.10	Cum	**174.89**	5445218.51
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	25945.92	Cum	**217.92**	5654135.07
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	46702.66	Cum	**319.14**	14904686.11
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			1287.57	Cum	**196.10**	252492.86

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	108009.18	Cum	**61.88**	6683861.50
TOTAL COST OF EARTHWORK (in Rs.)						**50855078.80**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**508.551**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR KAILASHPUR SUB DY.						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	20726.70	Sqm	**11.80**	244666.0487
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	8070.70	Cum	**156.50**	1263064.55
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	3228.28	Cum	**17.22**	55582.9565
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	37380.85	Cum	**165.12**	6172174.95
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	11214.26	Cum	**174.89**	1961261.06
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	9345.21	Cum	**217.92**	2036508.71
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	16821.38	Cum	**319.14**	5368376.01
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			3109.01	Cum	**196.10**	609675.88

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	45451.55	Cum	**61.88**	2812648.48
TOTAL COST OF EARTHWORK (in Rs.)						**20523958.64**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**205.240**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR BUDHAUL SUB DY.						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	46493.40	Sqm	**11.80**	548826.2227
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	9856.15	Cum	**156.50**	1542487.475
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	3942.46	Cum	**17.22**	67879.36073
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	63363.68	Cum	**165.12**	10462354.06
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	19009.10	Cum	**174.89**	3324501.94
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	15840.92	Cum	**217.92**	3452053.01
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	28513.65	Cum	**319.14**	9099847.46
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			6974.01	Cum	**196.10**	1367603.36

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	73219.83	Cum	**61.88**	4531014.44
TOTAL COST OF EARTHWORK (in Rs.)						**34396567.33**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**343.966**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR PATOI DY.						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	68434.90	Sqm	**11.80**	807832.2444
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	28384.65	Cum	**156.50**	4442197.725
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	11353.86	Cum	**17.22**	195485.2449
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	59016.90	Cum	**165.12**	9744632.13
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	17705.07	Cum	**174.89**	3096439.69
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	14754.23	Cum	**217.92**	3215240.71
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	26557.61	Cum	**319.14**	8475594.06
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			10265.24	Cum	**196.10**	2013012.58

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	87401.55	Cum	**61.88**	5408612.84
TOTAL COST OF EARTHWORK (in Rs.)						**37399047.23**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**373.990**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR ANGRA BRANCH CANAL				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***302275.58***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	363440.076	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	145376.0302	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	92291.485	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	27687.45	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	23072.87	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	41531.17	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	45341.34	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	271148.59	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR PALUA MR.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***3495.37***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	12038.627	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	4815.4508	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	2298.893	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	689.67	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	574.72	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	1034.50	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	524.31	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	9739.73	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR ASNI MR.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***7450.65***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	4225.500	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1690.2	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	103783.683	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	31135.10	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	25945.92	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	46702.66	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	1287.57	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	108009.18	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR KAILASHPUR SUB DY.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***20726.70***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	8070.700	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	3228.28	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	37380.850	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	11214.26	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	9345.21	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	16821.38	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	3109.01	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	45451.55	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR BUDHAUL SUB DY.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***46493.40***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	9856.150	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	3942.46	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	63363.675	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	19009.10	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	15840.92	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	28513.65	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	6974.01	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	73219.83	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR PATOI DY.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***68434.90***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	28384.650	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	11353.86	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	59016.900	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	17705.07	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	14754.23	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	26557.61	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	10265.24	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	87401.55	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR HEAD REGULATOR

Sr. No.	KM	HEAD REGULATOR	Amount in Rs.
1	0.350	*PALUA MINOR (PIPE HR)*	₹ 4,38,127.23
2	4.240	*ASNI MINOR*	₹ 31,39,834.93
3	9.050	*KAILASHPUR SUB DY*	₹ 28,15,643.81
4	9.050	*BUDHAUL SUB DY*	₹ 26,29,772.19
5	13.200	*PATHARA MINOR*	₹ 19,10,238.71
6	15.720	*DABUR MINOR*	₹ 26,49,645.42
7	16.000	*SADOPUR MINOR*	₹ 25,17,025.96
8	19.980	*DHARAMPUR SUB DY*	₹ 28,08,224.32
9	19.980	*PATOI SUB DY*	₹ 38,83,361.67
10	2.470	*ANTI MINOR*	₹ 23,85,115.24
11	5.730	*MARUKA MINOR*	₹ 18,81,652.83
12	5.950	*RAMPUR MINOR*	₹ 16,91,376.94
13	8.400	*GULAB BIGHA MINOR (PIPE HR)*	₹ 4,38,469.78
14	26.970	*MALHAD SUB DY.*	₹ 23,33,297.45
15	31.530	*RAMPUR MINOR-2*	₹ 18,76,345.40
		Sub-Total (in Rs.)	₹ 3,33,98,131.87
		Seigniorage charges	₹ 2,40,246.68
		Total (in Rs. Lakhs)	**₹ 336.38**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF ASHNI MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	0.900	0.500	**1.40**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	2.000	0.200	**2.20**
	(h) is head of water above sill of gate in m	2.000	0.3	**2.300**
	Weight of lift gate excluding embedded parts	**0.60**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.60	1.5
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.5	453.10
	Weight of screw hoist with all accessories	**0.45**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		2.300	400	920
	Columns with bracings/Anchors/Stiffeners	**0.92**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		2.3	400	920
	Beams with cross beams/stiffeners	**0.92**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.84	10%	0.184
	Railing/ Chequered plate/Ladder etc	**0.184**		**T**
Total Weight of One Gate		**3.08**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF BUDHAUL SUB DY.				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.930	0.500	**3.43**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.100	0.200	**1.30**
	(h) is head of water above sill of gate in m	1.100	0.3	**1.400**
	Weight of lift gate excluding embedded parts	**1.00**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	1.00	2.5
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2.5	752.44
	Weight of screw hoist with all accessories	**0.75**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.400	400	560
	Columns with bracings/Anchors/Stiffeners	**0.56**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.4	400	560
	Beams with cross beams/stiffeners	**0.56**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.12	10%	0.112
	Railing/ Chequered plate/Ladder etc	**0.112**		**T**
Total Weight of One Gate		**2.99**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF KAILASHPUR SUB DY.				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.300	0.500	**2.80**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.100	0.200	**1.30**
	(h) is head of water above sill of gate in m	1.100	0.3	**1.400**
	Weight of lift gate excluding embedded parts	**0.77**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.77	1.9
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.9	575.85
	Weight of screw hoist with all accessories	**0.58**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.400	400	560
	Columns with bracings/Anchors/Stiffeners	**0.56**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.4	400	560
	Beams with cross beams/stiffeners	**0.56**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.12	10%	0.112
	Railing/ Chequered plate/Ladder etc	**0.112**		**T**
Total Weight of One Gate		**2.58**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF PATHRA MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.170	0.500	**1.67**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.400	0.200	**1.60**
	(h) is head of water above sill of gate in m	1.400	0.3	**1.700**
	Weight of lift gate excluding embedded parts	**0.51**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.51	1.3
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	379.74
	Weight of screw hoist with all accessories	**0.38**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.700	400	680
	Columns with bracings/Anchors/Stiffeners	**0.68**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.7	400	680
	Beams with cross beams/stiffeners	**0.68**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.36	10%	0.136
	Railing/ Chequered plate/Ladder etc	**0.136**		**T**
Total Weight of One Gate		**2.38**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF DABUR MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.070	0.500	**1.57**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.830	0.200	**2.03**
	(h) is head of water above sill of gate in m	1.830	0.3	**2.130**
	Weight of lift gate excluding embedded parts	**0.63**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.63	1.6
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2	475.12
	Weight of screw hoist with all accessories	**0.48**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		2.130	400	852
	Columns with bracings/Anchors/Stiffeners	**0.852**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		2.13	400	852
	Beams with cross beams/stiffeners	**0.852**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.704	10%	0.1704
	Railing/ Chequered plate/Ladder etc	**0.1704**		**T**
Total Weight of One Gate		**2.98**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF SADOPUR MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.000	0.500	**1.50**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.780	0.200	**1.98**
	(h) is head of water above sill of gate in m	1.780	0.3	**2.080**
	Weight of lift gate excluding embedded parts	**0.58**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.58	1.4
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	433.27
	Weight of screw hoist with all accessories	**0.43**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		2.080	400	832
	Columns with bracings/Anchors/Stiffeners	**0.832**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		2.08	400	832
	Beams with cross beams/stiffeners	**0.832**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.664	10%	0.1664
	Railing/ Chequered plate/Ladder etc	**0.1664**		**T**
Total Weight of One Gate		**2.84**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF DHARAMPUR SUB DY				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	3.100	0.500	**3.60**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.400	0.200	**1.60**
	(h) is head of water above sill of gate in m	1.400	0.3	**1.700**
	Weight of lift gate excluding embedded parts	**1.39**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	1.39	3.5
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	3	1045.09
	Weight of screw hoist with all accessories	**1.05**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.700	400	680
	Columns with bracings/Anchors/Stiffeners	**0.68**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.7	400	680
	Beams with cross beams/stiffeners	**0.68**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.36	10%	0.136
	Railing/ Chequered plate/Ladder etc	**0.136**		**T**
Total Weight of One Gate		**3.93**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF PATOI DY				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.905	0.500	**2.41**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.550	0.200	**1.75**
	(h) is head of water above sill of gate in m	1.550	0.3	**1.850**
	Weight of lift gate excluding embedded parts	**0.92**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.92	2.3
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2	688.82
	Weight of screw hoist with all accessories	**0.69**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.850	400	740
	Columns with bracings/Anchors/Stiffeners	**0.74**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.85	400	740
	Beams with cross beams/stiffeners	**0.74**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.48	10%	0.148
	Railing/ Chequered plate/Ladder etc	**0.148**		**T**
Total Weight of One Gate		**3.24**		**T**
Total Weight of Two Gates		**6.47**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF ANTI MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.680	0.500	**3.18**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.260	0.200	**1.46**
	(h) is head of water above sill of gate in m	1.260	0.3	**1.560**
	Weight of lift gate excluding embedded parts	**1.05**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	1.05	2.6
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	3	789.48
	Weight of screw hoist with all accessories	**0.79**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.560	400	624
	Columns with bracings/Anchors/Stiffeners	**0.624**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.56	400	624
	Beams with cross beams/stiffeners	**0.624**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.248	10%	0.1248
	Railing/ Chequered plate/Ladder etc	**0.1248**		**T**
Total Weight of One Gate		**3.21**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF MARUKA MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.690	0.500	**2.19**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.100	0.200	**1.30**
	(h) is head of water above sill of gate in m	1.100	0.3	**1.400**
	Weight of lift gate excluding embedded parts	**0.56**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.56	1.4
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	416.54
	Weight of screw hoist with all accessories	**0.42**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.400	400	560
	Columns with bracings/Anchors/Stiffeners	**0.56**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.4	400	560
	Beams with cross beams/stiffeners	**0.56**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.12	10%	0.112
	Railing/ Chequered plate/Ladder etc	**0.112**		**T**
Total Weight of One Gate		**2.20**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF RAMPUR MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.280	0.500	**1.78**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	0.960	0.200	**1.16**
	(h) is head of water above sill of gate in m	0.960	0.3	**1.260**
	Weight of lift gate excluding embedded parts	**0.37**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.37	0.9
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	274.31
	Weight of screw hoist with all accessories	**0.27**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.260	400	504
	Columns with bracings/Anchors/Stiffeners	**0.504**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.26	400	504
	Beams with cross beams/stiffeners	**0.504**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.008	10%	0.1008
	Railing/ Chequered plate/Ladder etc	**0.1008**		**T**
Total Weight of One Gate		**1.75**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF MALHAD SUB DY				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.500	0.500	**3.00**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.240	0.200	**1.44**
	(h) is head of water above sill of gate in m	1.240	0.3	**1.540**
	Weight of lift gate excluding embedded parts	**0.96**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.96	2.4
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2	718.37
	Weight of screw hoist with all accessories	**0.72**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.540	400	616
	Columns with bracings/Anchors/Stiffeners	**0.616**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.54	400	616
	Beams with cross beams/stiffeners	**0.616**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.232	10%	0.1232
	Railing/ Chequered plate/Ladder etc	**0.1232**		**T**
Total Weight of One Gate		**3.03**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF RAMPUR MR-2				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.960	0.500	**2.46**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	0.940	0.200	**1.14**
	(h) is head of water above sill of gate in m	0.940	0.3	**1.240**
	Weight of lift gate excluding embedded parts	**0.55**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.55	1.4
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	411.04
	Weight of screw hoist with all accessories	**0.41**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.240	400	496
	Columns with bracings/Anchors/Stiffeners	**0.496**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.24	400	496
	Beams with cross beams/stiffeners	**0.496**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		0.992	10%	0.0992
	Railing/ Chequered plate/Ladder etc	**0.0992**		**T**
Total Weight of One Gate		**2.05**		**T**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST HR FOR ASHNI MINOR OFFTAKING FROM RD-4+240 KM ANGRA BRANCH CANAL								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	284.245	Cum	**195.20**	55484.67			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	26.27	Cum	**6381.70**	167655.74	8.51	11.82	23.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	182.00	Cum	**6914.20**	1258414.27	75.08	78.26	156.52
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	14.75	Cum	**8151.40**	120258.96	8.37	5.75	11.66
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.00	MT	**73574.90**	294169.53			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.08	MT	**160035.11**	493106.83			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	471.93	Sqm	**578.60**	273061.14			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.45	Sqm	**680.10**	8467.25			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	0.27	Cum	**694.61**	187.54			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.27	Cum	**1237.00**	333.99			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.59	Cum	**1377.70**	818.35			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.59	Cum	**516.50**	306.80			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.70	Sqm	**63.20**	423.19			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	Cum	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully	30.97	Cum	**149.30**	4624.24			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	95.838	Cum	**1075.00**	103025.52			
	Coarse Aggregates (100 Km lead)	192.417	Cum	**1398.00**	268998.84			
	Cement (30 km lead)	91.954	MT	**742.00**	68229.67			
	Boulder (60 Km lead)	0.27	Cum	**1159.00**	312.93			
	Steel (30 Km lead)	7.08	MT	**742.00**	5252.97			
	TOTAL (In Rs.)				**3139834.93**			
	TOTAL (In Rs.)				**₹ 31,39,834.93**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	95.84	Cum	**584.64**	56030.55	5603.05		
	Coarse Aggregate	192.42	Cum	**944.26**	181691.59	18169.16		
	Boulders	0.27	Cum	**694.61**	187.54	18.75		
	Total					23790.97		
	For 1 nos. HR, Total Seigniorage charges					**23790.97**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR BUDHAUL SUB DY OFFTAKING FROM RD-9+050 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	205.180	Cum	**195.20**	40051.23			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	27.33	Cum	**6381.70**	174423.91	8.86	12.30	24.60
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	119.31	Cum	**6914.20**	824950.59	49.22	51.30	102.61
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	26.95	Cum	**8151.40**	219702.88	15.28	10.51	21.29
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.40	MT	**73574.90**	249826.32			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.99	MT	**160035.11**	478134.74			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	352.74	Sqm	**578.60**	204097.90			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	15.48	Sqm	**680.10**	10527.95			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	6.29	Cum	**694.61**	4369.79			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	6.29	Cum	**1237.00**	7781.97			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.93	Cum	**1377.70**	2664.20			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.93	Cum	**516.50**	998.81			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.19	Sqm	**63.20**	264.84			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	8.00	Cum	**5588.70**	44709.60			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	35.53	Cum	**149.30**	5305.32			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	74.115	Cum	**1075.00**	79673.96			
	Coarse Aggregates (100 Km lead)	150.434	Cum	**1398.00**	210306.67			
	Cement (30 km lead)	73.354	MT	**742.00**	54428.79			
	Boulder (60 Km lead)	6.29	Cum	**1159.00**	7291.27			
	Steel (30 Km lead)	6.38	MT	**742.00**	4736.35			
	TOTAL (In Rs.)				**2629772.19**			
	TOTAL (In Rs.)				**2629772.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	74.12	Cum	**584.64**	43330.78	4333.08		
	Coarse Aggregate	150.43	Cum	**944.26**	142048.77	14204.88		
	Boulders	6.29	Cum	**694.61**	4369.79	436.98		
	Total					18974.93		
	For 1 nos. HR, Total Seigniorage charges					**18974.93**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR KAILASHPUR SUB DY. OFFTAKING FROM RD-9+050 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	211.986	Cum	**195.20**	41379.69			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	27.20	Cum	**6381.70**	173568.36	8.81	12.24	24.48
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	144.84	Cum	**6914.20**	1001472.06	59.75	62.28	124.56
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.55	Cum	**8151.40**	224585.80	15.62	10.75	21.77
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.64	MT	**73574.90**	267455.10			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.58	MT	**160035.11**	412193.17			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	423.47	Sqm	**578.60**	245022.18			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	13.31	Sqm	**680.10**	9054.85			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	4.59	Cum	**694.61**	3188.26			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.59	Cum	**1237.00**	5677.83			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.52	Cum	**1377.70**	2091.35			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.52	Cum	**516.50**	784.05			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.19	Sqm	**63.20**	264.49			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	48.48	Cum	**149.30**	7238.70			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	85.267	Cum	**1075.00**	91661.63			
	Coarse Aggregates (100 Km lead)	172.327	Cum	**1398.00**	240912.83			
	Cement (30 km lead)	84.182	MT	**742.00**	62462.76			
	Boulder (60 Km lead)	4.59	Cum	**1159.00**	5319.81			
	Steel (30 Km lead)	6.21	MT	**742.00**	4608.40			
	TOTAL (In Rs.)				**2815643.81**			
	TOTAL (In Rs.)				**2815643.81**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	85.27	Cum	**584.64**	49850.28	4985.03		
	Coarse Aggregate	172.33	Cum	**944.26**	162721.28	16272.13		
	Boulders	4.59	Cum	**694.61**	3188.26	318.83		
	Total					21575.98		
	For 1 nos. HR, Total Seigniorage charges					**21575.98**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR PATHRA MINOR OFFTAKING FROM RD-13+200 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	146.404	Cum	**195.20**	28577.97			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.78	Cum	**6381.70**	119865.28	6.09	8.45	16.90
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	88.46	Cum	**6914.20**	611631.20	36.49	38.04	76.08
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	17.46	Cum	**8151.40**	142362.91	9.90	6.81	13.80
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.31	MT	**73574.90**	170235.05			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.38	MT	**160035.11**	381213.35			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	295.80	Sqm	**578.60**	171149.72			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.13	Sqm	**680.10**	8246.89			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.54	Cum	**694.61**	1069.00			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.54	Cum	**1237.00**	1903.74			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.77	Cum	**1377.70**	1063.86			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.77	Cum	**516.50**	398.84			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.33	Sqm	**63.20**	273.90			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	24.68	Cum	**149.30**	3684.62			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	53.301	Cum	**1075.00**	57298.95			
	Coarse Aggregates (100 Km lead)	107.550	Cum	**1398.00**	150354.27			
	Cement (30 km lead)	52.478	MT	**742.00**	38938.65			
	Boulder (60 Km lead)	1.54	Cum	**1159.00**	1783.70			
	Steel (30 Km lead)	4.70	MT	**742.00**	3484.30			
	TOTAL (In Rs.)				**1910238.71**			
	TOTAL (In Rs.)				**1910238.71**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	53.30	Cum	**584.64**	31162.10	3116.21		
	Coarse Aggregate	107.55	Cum	**944.26**	101554.74	10155.47		
	Boulders	1.54	Cum	**694.61**	1069.00	106.90		
	Total					13378.58		
	For 1 nos. HR, Total Seigniorage charges					**13378.58**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR DABUR MINOR OFFTAKING FROM RD-15+722 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	219.275	Cum	**195.20**	42802.52			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	24.13	Cum	**6381.70**	153997.39	7.82	10.86	21.72
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	138.56	Cum	**6914.20**	958044.62	57.16	59.58	119.16
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	18.27	Cum	**8151.40**	148939.11	10.36	7.13	14.43
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.27	MT	**73574.90**	240522.70			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.98	MT	**160035.11**	477386.85			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	400.60	Sqm	**578.60**	231785.06			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.59	Sqm	**680.10**	7879.64			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.27	Cum	**694.61**	881.46			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.27	Cum	**1237.00**	1569.75			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.71	Cum	**1377.70**	972.93			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.71	Cum	**516.50**	364.75			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.52	Sqm	**63.20**	349.13			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and	26.36	Cum	**149.30**	3935.69			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	77.567	Cum	**1075.00**	83384.02			
	Coarse Aggregates (100 Km lead)	156.022	Cum	**1398.00**	218118.71			
	Cement (30 km lead)	75.335	MT	**742.00**	55898.76			
	Boulder (60 Km lead)	1.27	Cum	**1159.00**	1470.77			
	Steel (30 Km lead)	6.25	MT	**742.00**	4639.06			
	TOTAL (In Rs.)				**2649645.42**			
	TOTAL (In Rs.)				**2649645.42**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	77.57	Cum	**584.64**	45348.49	4534.85		
	Coarse Aggregate	156.02	Cum	**944.26**	147325.31	14732.53		
	Boulders	1.27	Cum	**694.61**	881.46	88.15		
	Total					19355.53		
	For 1 nos. HR, Total Seigniorage charges					**19355.53**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR SADOPUR MINOR OFFTAKING FROM RD-16+000 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	218.642	Cum	**195.20**	42678.85			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	22.19	Cum	**6381.70**	141641.58	7.19	9.99	19.98
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	133.92	Cum	**6914.20**	925968.66	55.24	57.59	115.17
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	14.61	Cum	**8151.40**	119086.01	8.28	5.70	11.54
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.16	MT	**73574.90**	232182.57			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.84	MT	**160035.11**	454718.36			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	390.26	Sqm	**578.60**	225805.20			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.80	Sqm	**680.10**	8026.54			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.08	Cum	**694.61**	750.18			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.08	Cum	**1237.00**	1335.96			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.66	Cum	**1377.70**	909.28			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.66	Cum	**516.50**	340.89			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.52	Sqm	**63.20**	349.13			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	24.06	Cum	**149.30**	3592.78			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	73.272	Cum	**1075.00**	78767.54			
	Coarse Aggregates (100 Km lead)	147.350	Cum	**1398.00**	205995.79			
	Cement (30 km lead)	70.718	MT	**742.00**	52472.58			
	Boulder (60 Km lead)	1.08	Cum	**1159.00**	1251.72			
	Steel (30 Km lead)	6.00	MT	**742.00**	4449.85			
	TOTAL (In Rs.)				**2517025.96**			
	TOTAL (In Rs.)				**2517025.96**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	73.27	Cum	**584.64**	42837.82	4283.78		
	Coarse Aggregate	147.35	Cum	**944.26**	139137.04	13913.70		
	Boulders	1.08	Cum	**694.61**	750.18	75.02		
	Total					18272.50		
	For 1 nos. HR, Total Seigniorage charges					**18272.50**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR DHARAMPUR SUB DY OFFTAKING FROM RD-19+980 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	205.957	Cum	**195.20**	40202.78			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	26.72	Cum	**6381.70**	170542.46	8.66	12.03	24.05
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	123.94	Cum	**6914.20**	856956.94	51.13	53.29	106.59
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.08	Cum	**8151.40**	220765.56	15.36	10.56	21.40
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.51	MT	**73574.90**	258146.51			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.93	MT	**160035.11**	629664.53			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	375.25	Sqm	**578.60**	217119.76			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	14.89	Sqm	**680.10**	10123.97			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	6.75	Cum	**694.61**	4688.62			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	6.75	Cum	**1237.00**	8349.75			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	2.05	Cum	**1377.70**	2818.77			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.05	Cum	**516.50**	1056.76			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.31	Sqm	**63.20**	272.49			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	31.69	Cum	**149.30**	4730.71			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	75.883	Cum	**1075.00**	81574.18			
	Coarse Aggregates (100 Km lead)	154.083	Cum	**1398.00**	215407.69			
	Cement (30 km lead)	75.141	MT	**742.00**	55754.27			
	Boulder (60 Km lead)	6.75	Cum	**1159.00**	7823.25			
	Steel (30 Km lead)	7.44	MT	**742.00**	5522.83			
	TOTAL (In Rs.)				**2808224.32**			
	TOTAL (In Rs.)				**2808224.32**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	75.88	Cum	**584.64**	44364.22	4436.42		
	Coarse Aggregate	154.08	Cum	**944.26**	145494.18	14549.42		
	Boulders	6.75	Cum	**694.61**	4688.62	468.86		
	Total					19454.70		
	For 1 nos. HR, Total Seigniorage charges					**19454.70**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR PATOI DY OFFTAKING FROM RD-19+980 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	261.730	Cum	**195.20**	51089.70			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	33.96	Cum	**6381.70**	216694.08	11.00	15.28	30.56
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	165.31	Cum	**6914.20**	1143015.21	68.19	71.09	142.17
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.73	Cum	**8151.40**	283071.63	19.69	13.54	27.43
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.61	MT	**73574.90**	339379.93			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	6.47	MT	**160035.11**	1035503.34			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	461.66	Sqm	**578.60**	267115.37			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	17.65	Sqm	**680.10**	12001.04			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	10.83	Cum	**694.61**	7520.54			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	10.83	Cum	**1237.00**	13393.00			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	3.04	Cum	**1377.70**	4191.79			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	3.04	Cum	**516.50**	1571.50			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.74	Sqm	**63.20**	299.76			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	41.42	Cum	**149.30**	6183.41			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	99.909	Cum	**1075.00**	107401.66			
	Coarse Aggregates (100 Km lead)	203.207	Cum	**1398.00**	284083.25			
	Cement (30 km lead)	98.884	MT	**742.00**	73371.75			
	Boulder (60 Km lead)	10.83	Cum	**1159.00**	12548.49			
	Steel (30 Km lead)	11.08	MT	**742.00**	8223.73			
	TOTAL (In Rs.)				**3883361.67**			
	TOTAL (In Rs.)				**3883361.67**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	99.91	Cum	**584.64**	58410.52	5841.05		
	Coarse Aggregate	203.21	Cum	**944.26**	191880.15	19188.02		
	Boulders	10.83	Cum	**694.61**	7520.54	752.05		
	Total					25781.12		
	For 1 nos. HR, Total Seigniorage charges					**25781.12**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR ANTI MINOR OFFTAKING FROM RD-2+470KM AT PATOI DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	175.191	Cum	**195.20**	34197.20			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	24.52	Cum	**6381.70**	156493.97	7.95	11.04	22.07
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	103.65	Cum	**6914.20**	716648.76	42.76	44.57	89.14
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.81	Cum	**8151.40**	194075.73	13.50	9.29	18.81
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.00	MT	**73574.90**	220386.28			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.21	MT	**160035.11**	514500.71			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	329.17	Sqm	**578.60**	190457.46			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	15.05	Sqm	**680.10**	10238.23			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	5.62	Cum	**694.61**	3900.93			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	5.62	Cum	**1237.00**	6946.99			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.77	Cum	**1377.70**	2436.88			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.77	Cum	**516.50**	913.59			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.93	Sqm	**63.20**	248.62			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	28.27	Cum	**149.30**	4221.11			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	64.889	Cum	**1075.00**	69756.21			
	Coarse Aggregates (100 Km lead)	131.786	Cum	**1398.00**	184236.67			
	Cement (30 km lead)	64.200	MT	**742.00**	47636.40			
	Boulder (60 Km lead)	5.62	Cum	**1159.00**	6508.94			
	Steel (30 Km lead)	6.21	MT	**742.00**	4608.06			
	TOTAL (In Rs.)				**2385115.24**			
	TOTAL (In Rs.)				**2385115.24**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	64.89	Cum	**584.64**	37937.00	3793.70		
	Coarse Aggregate	131.79	Cum	**944.26**	124440.14	12444.01		
	Boulders	5.62	Cum	**694.61**	3900.93	390.09		
	Total					16627.81		
	For 1 nos. HR, Total Seigniorage charges					**16627.81**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR MARUKA MINOR OFFTAKING FROM RD-5+730 KM AT PATOI DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	140.572	Cum	**195.20**	27439.62			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.97	Cum	**6381.70**	127425.92	6.47	8.99	17.97
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	85.16	Cum	**6914.20**	588835.02	35.13	36.62	73.24
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	18.54	Cum	**8151.40**	151132.59	10.51	7.23	14.65
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.41	MT	**73574.90**	177388.88			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.20	MT	**160035.11**	352706.06			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	290.76	Sqm	**578.60**	168232.92			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.48	Sqm	**680.10**	8487.65			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	2.94	Cum	**694.61**	2044.24			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.94	Cum	**1237.00**	3640.49			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.12	Cum	**1377.70**	1536.69			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.12	Cum	**516.50**	576.10			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.49	Sqm	**63.20**	220.76			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	23.00	Cum	**149.30**	3433.17			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	52.836	Cum	**1075.00**	56799.08			
	Coarse Aggregates (100 Km lead)	106.974	Cum	**1398.00**	149548.96			
	Cement (30 km lead)	52.112	MT	**742.00**	38666.96			
	Boulder (60 Km lead)	2.94	Cum	**1159.00**	3410.94			
	Steel (30 Km lead)	4.61	MT	**742.00**	3424.28			
	TOTAL (In Rs.)				**1881652.83**			
	TOTAL (In Rs.)				**1881652.83**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	52.84	Cum	**584.64**	30890.24	3089.02		
	Coarse Aggregate	106.97	Cum	**944.26**	101010.80	10101.08		
	Boulders	2.94	Cum	**694.61**	2044.24	204.42		
	Total					13394.53		
	For 1 nos. HR, Total Seigniorage charges					**13394.53**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR RAMPUR MINOR OFFTAKING FROM RD-5+950 KM AT PATOI DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	129.427	Cum	**195.20**	25264.19			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.28	Cum	**6381.70**	116681.56	5.92	8.23	16.46
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	79.05	Cum	**6914.20**	546575.93	32.61	33.99	67.98
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	16.76	Cum	**8151.40**	136619.85	9.50	6.54	13.24
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.19	MT	**73574.90**	161361.91			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.75	MT	**160035.11**	279878.33			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	278.03	Sqm	**578.60**	160867.49			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.81	Sqm	**680.10**	8030.62			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.84	Cum	**694.61**	1275.30			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.84	Cum	**1237.00**	2271.13			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.84	Cum	**1377.70**	1163.88			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.84	Cum	**516.50**	436.34			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.10	Sqm	**63.20**	195.72			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	21.47	Cum	**149.30**	3206.08			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	48.756	Cum	**1075.00**	52412.95			
	Coarse Aggregates (100 Km lead)	98.525	Cum	**1398.00**	137737.78			
	Cement (30 km lead)	48.036	MT	**742.00**	35642.46			
	Boulder (60 Km lead)	1.84	Cum	**1159.00**	2127.92			
	Steel (30 Km lead)	3.94	MT	**742.00**	2924.98			
	TOTAL (In Rs.)				**1691376.94**			
	TOTAL (In Rs.)				**1691376.94**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	48.76	Cum	**584.64**	28504.85	2850.48		
	Coarse Aggregate	98.52	Cum	**944.26**	93033.10	9303.31		
	Boulders	1.84	Cum	**694.61**	1275.30	127.53		
	Total					12281.32		
	For 1 nos. HR, Total Seigniorage charges					**12281.32**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR MALHAD SUB DY OFFTAKING FROM RD-26+970 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	172.388	Cum	**195.20**	33650.12			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	23.27	Cum	**6381.70**	148522.17	7.54	10.47	20.95
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	103.29	Cum	**6914.20**	714136.45	42.61	44.41	88.83
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.11	Cum	**8151.40**	188384.93	13.10	9.01	18.26
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.99	MT	**73574.90**	220208.05			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.03	MT	**160035.11**	485129.99			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	332.60	Sqm	**578.60**	192443.65			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	13.97	Sqm	**680.10**	9499.64			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	5.13	Cum	**694.61**	3563.35			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	5.13	Cum	**1237.00**	6345.81			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.65	Cum	**1377.70**	2273.21			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.65	Cum	**516.50**	852.23			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.19	Sqm	**63.20**	327.97			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	26.31	Cum	**149.30**	3928.18			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	63.899	Cum	**1075.00**	68691.27			
	Coarse Aggregates (100 Km lead)	129.679	Cum	**1398.00**	181290.99			
	Cement (30 km lead)	63.250	MT	**742.00**	46931.17			
	Boulder (60 Km lead)	5.13	Cum	**1159.00**	5945.67			
	Steel (30 Km lead)	6.02	MT	**742.00**	4470.09			
	TOTAL (In Rs.)				**2333297.45**			
	TOTAL (In Rs.)				**2333297.45**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	63.90	Cum	**584.64**	37357.83	3735.78		
	Coarse Aggregate	129.68	Cum	**944.26**	122450.53	12245.05		
	Boulders	5.13	Cum	**694.61**	3563.35	356.33		
	Total					16337.17		
	For 1 nos. HR, Total Seigniorage charges					**16337.17**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR RAMPUR MINOR-II OFFTAKING FROM RD-31+530 KM AT ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	139.703	Cum	**195.20**	27270.07			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	20.35	Cum	**6381.70**	129882.22	6.59	9.16	18.32
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	84.01	Cum	**6914.20**	580851.17	34.65	36.12	72.25
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	20.37	Cum	**8151.40**	166062.60	11.55	7.95	16.09
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.49	MT	**73574.90**	183195.10			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.05	MT	**160035.11**	328118.59			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	289.12	Sqm	**578.60**	167283.14			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.78	Sqm	**680.10**	8691.68			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.67	Cum	**694.61**	2550.61			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.67	Cum	**1237.00**	4542.26			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.29	Cum	**1377.70**	1782.19			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.29	Cum	**516.50**	668.14			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.19	Sqm	**63.20**	327.97			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	23.31	Cum	**149.30**	3479.51			
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	53.227	Cum	**1075.00**	57219.40			
	Coarse Aggregates (100 Km lead)	107.952	Cum	**1398.00**	150916.93			
	Cement (30 km lead)	52.799	MT	**742.00**	39176.64			
	Boulder (60 Km lead)	3.67	Cum	**1159.00**	4255.85			
	Steel (30 Km lead)	4.54	MT	**742.00**	3368.83			
	TOTAL (In Rs.)				**1876345.40**			
	TOTAL (In Rs.)				**1876345.40**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	53.23	Cum	**584.64**	31118.84	3111.88		
	Coarse Aggregate	107.95	Cum	**944.26**	101934.78	10193.48		
	Boulders	3.67	Cum	**694.61**	2550.61	255.06		
	Total					13560.42		
	For 1 nos. HR, Total Seigniorage charges					**13560.42**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	DETAILS OF QUANTITIES OF PIPE HR OF PALUA MR OFFTAKING FROM RD-0.350 KM ANGRA BRANCH CANAL							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	37.515	Cum	**195.20**	7322.92			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.71	Cum	**6381.70**	68352.65	3.47	4.82	9.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.85	Cum	**6914.20**	164869.33	9.84	10.25	20.51
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	85.21	Sqm	**578.60**	49301.75			
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.47	MT	**73574.90**	34430.02			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.07	MT	**160035.11**	11574.24			
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**2532.61**	18994.58			
8	Labour for laying 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**711.27**	5334.49			
9	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)	1.16	Cum	**339.90**	394.79			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	13.65	Cum	**149.30**	2037.45			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.073	Cum	**1075.00**	16203.68			
	Coarse Aggregates (100 Km lead)	30.146	Cum	**1398.00**	42144.64			
	Cement (30 km lead)	13.306	MT	**742.00**	9873.31			
	Steel (30 Km lead)	0.54	MT	**742.00**	400.89			
	Hume Pipe (30 km Lead)	7.50	RM	**919.00**	6892.50			
	TOTAL (In Rs.)				**438127.23**			
	TOTAL (In Rs.)				**438127.23**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.07	Cum	**584.64**	8812.39	881.24		
	Coarse Aggregate	30.15	Cum	**944.26**	28466.02	2846.60		
	Total					3727.84		
	For 1 nos. HR, Total Seigniorage charges					**3727.84**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	DETAILS OF QUANTITIES OF PIPE HR OF GULAB BIGHA MR OFFTAKING FROM RD-8.400 KM PATOI DY.							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	35.512	Cum	**195.20**	6931.85			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.17	Cum	**6381.70**	64915.27	3.30	4.58	9.15
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	24.46	Cum	**6914.20**	169119.32	10.09	10.52	21.04
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	84.09	Sqm	**578.60**	48652.31			
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.48	MT	**73574.90**	35317.55			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.07	MT	**160035.11**	11574.24			
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**2532.61**	18994.58			
8	Labour for laying 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**711.27**	5334.49			
9	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)	1.07	Cum	**339.90**	364.26			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	10.71	Cum	**149.30**	1598.42			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.095	Cum	**1075.00**	16227.25			
	Coarse Aggregates (100 Km lead)	30.190	Cum	**1398.00**	42205.95			
	Cement (30 km lead)	13.385	MT	**742.00**	9931.96			
	Steel (30 Km lead)	0.55	MT	**742.00**	409.84			
	Hume Pipe (30 km Lead)	7.50	RM	**919.00**	6892.50			
	TOTAL (In Rs.)				**438469.78**			
	TOTAL (In Rs.)				**438469.78**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.10	Cum	**584.64**	8825.21	882.52		
	Coarse Aggregate	30.19	Cum	**944.26**	28507.43	2850.74		
	Total					3733.26		
	For 1 nos. HR, Total Seigniorage charges					**3733.26**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF HR FOR ASHNI MINOR OFFTAKING FROM RD-4+240 KM ANGRA BRANCH CANAL

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*4.85*	*1.90*	*4.930*	*90.860*	*Cum*
	Section B-B	*2*	*2.91*	*1.71*	*2.470*	*24.602*	*Cum*
	Section C-C	*2*	*2.84*	*1.53*	*2.470*	*21.508*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.67*	*1.99*	*4.133*	*38.413*	*Cum*
	Left Bank Sec a to d	1	4.08	4.66	3.250	*61.818*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*2.220*	*2.427*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.66*	*1.92*	*2.220*	*22.622*	*Cum*
	Floor						
	U/S key	*1*	*7.7565*		*0.850*	*6.593*	*Cum*
	Floor	*1*	*11.67*		*0.650*	*7.586*	*Cum*
		1	*1.3905*	*0.900*	*0.650*	*0.813*	*Cum*
		1	*1.57*	*0.000*	*1.050*	*0.000*	*Cum*
		1	*1.135*	*0.900*	*0.900*	*1.022*	*Cum*
		1	*0.6525*	*0.900*	*0.750*	*0.440*	*Cum*
		1	*0.255*	*0.900*	*0.950*	*0.218*	*Cum*
		1	*1.450*	*0.900*	*0.950*	*1.240*	*Cum*
		1	*1.025*	*0.900*	*1.850*	*1.707*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*0.900*	*0.600*	*1.188*	*Cum*
	Toe Wall Base D/S Portion	*1*	*0.900*	*0.850*	*1.200*	*0.918*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.300*	*0.300*	*0.270*	*Cum*
	TOTAL					**284.25**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*6.607*	*0.150*	*0.62*	*Cum*
		1	*3.585*	*3.007*	*0.150*	*1.62*	*Cum*
		1	*1.751*	*0.900*	*0.150*	*0.24*	*Cum*
		1	*2.464*	*0.900*	*0.150*	*0.33*	*Cum*
		1	*4.757*	*0.900*	*0.150*	*0.64*	*Cum*
		1	*1.241*	*0.900*	*0.150*	*0.17*	*Cum*
		1	*0.138*	*0.900*	*0.150*	*0.02*	*Cum*
		1	*1.900*	*0.900*	*0.150*	*0.26*	*Cum*
		1	*0.692*	*0.900*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*4.850*	*1.900*	*0.300*	*5.53*	*Cum*
	Section B-B	*2*	*2.909*	*1.712*	*0.300*	*2.99*	*Cum*
	Section C-C	*2*	*2.842*	*1.532*	*0.300*	*2.61*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.671*	*1.990*	*0.300*	*2.79*	*Cum*
	Left Bank Sec a to d	*1*	*4.080*	*4.662*	*0.150*	*2.85*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.497*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.655*	*1.919*	*0.300*	*3.06*	*Cum*
	Toe Wall Base D/S Portion	*1*	*0.900*	*0.850*	*0.300*	*0.23*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem D/S Portion	*1*	*0.900*	*0.450*	*0.900*	*0.36*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*3*	*0.600*	*0.600*	*0.300*	*0.32*	*Cum*
	TOTAL					**26.27**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*4.85*	*0.45*	*0.50*	*2.18*	*Cum*
		2	*4.85*	*0.98*	*1.75*	*16.55*	*Cum*
		2	*4.85*	*1.50*	*2.38*	*34.63*	*Cum*
	Section B-B	*2*	*2.91*	*1.07*	*0.82*	*5.09*	*Cum*
		2	*2.91*	*1.31*	*1.35*	*10.30*	*Cum*
	Section C-C	*2*	*2.84*	*0.98*	*0.52*	*2.88*	*Cum*
		2	*2.84*	*1.13*	*1.65*	*10.62*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.67*	*0.45*	*0.50*	*1.05*	*Cum*
		1	*4.67*	*1.02*	*0.95*	*4.54*	*Cum*
		1	*4.67*	*1.59*	*2.38*	*17.67*	*Cum*
	Left Bank						
	Section a-a	*1*		*4.38*	*0.50*	*2.19*	*Sqm*
		1		*4.38*	*0.20*	*0.88*	*Sqm*
		1		*2.19*	*2.40*	*5.26*	*Sqm*
						8.32	***Sqm***
	Section b-b	*1*		*4.38*	*0.50*	*2.19*	*Sqm*
		1		*3.87*	*0.20*	*0.77*	*Sqm*
		1		*2.18*	*2.40*	*5.22*	*Sqm*
						8.19	***Sqm***
	Section c-c	*1*		*4.38*	*0.50*	*2.19*	*Sqm*
		1		*3.16*	*0.20*	*0.63*	*Sqm*
		1		*1.82*	*2.40*	*4.37*	*Sqm*
						7.19	***Sqm***
	Section d-d	*1*		*4.38*	*0.50*	*2.19*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*2.40*	*1.15*	*Sqm*
						3.44	***Sqm***
	Bottom Key	*1*	*4.08*	*2.25*	*1.40*	*12.85*	*Cum*
	Top Stem Area	*1*	*4.08*	*6.79*		*27.69*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*0.90*	*0.63*	*Cum*
		2	*0.50*	*0.53*	*0.52*	*0.27*	*Cum*
		2	*0.50*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.66*	*1.52*	*0.90*	*7.26*	*Cum*
		2	*2.66*	*1.22*	*0.52*	*3.38*	*Cum*
		2	*2.66*	*0.74*	*0.50*	*1.96*	*Cum*
	TOTAL					**159.73**	**Cum**
	Floor						
	U/S key	*1*	*7.76*		*0.70*	*5.43*	*Cum*
	Floor	*1*	*11.67*		*0.50*	*5.84*	*Cum*
		1	*1.39*	*0.90*	*0.50*	*0.63*	*Cum*
		1	*1.57*		*0.90*	*1.41*	*Cum*
		1	*4.53*	*0.90*	*1.15*	*4.68*	*Cum*
		1	*1.14*	*0.90*	*0.90*	*1.02*	*Cum*
		1	*0.65*	*0.90*	*0.30*	*0.18*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.26*	*0.90*	*0.95*	*0.22*	*Cum*
		1	*1.45*	*0.90*	*0.95*	*1.31*	*Cum*
	D/S key	*1*	*1.03*	*0.90*	*1.70*	*1.57*	*Cum*
	TOTAL					**182.00**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*4.38*	*0.00*	*0.20*	*0.00*	*Cum*
		1	*1.50*	*0.90*	*0.20*	*0.27*	*Cum*
	crest	*1*	*1.23*	*0.90*	*0.15*	*0.17*	*Cum*
		1	*1.97*	*0.90*	*0.20*	*0.35*	*Cum*
		1	*4.50*	*0.90*	*0.20*	*0.81*	*Cum*
		1	*8.74*	*0.90*	*0.20*	*1.57*	*Cum*
	Top Slab	*1*	*5.25*	*1.70*	*0.33*	*2.91*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*1.70*	*0.08*	*0.54*	*Cum*
	Dirt wall	*2*	*5.75*	*0.82*	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*2.54*	*0.45*	*0.18*	*0.40*	*Cum*
		2	*2.54*	*0.35*	*0.25*	*0.45*	*Cum*
		2	*2.54*	*0.22*	*0.55*	*0.61*	*Cum*
	TOTAL					**14.75**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*2.120*	*29*		*1.578*	*97.024*	*Kg*
a2	*10*	*5.630*	*9*		*0.616*	*31.236*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.080*	*18*		*0.616*	*23.080*	*Kg*
a5	*10*	*5.550*	*6*		*0.616*	*20.528*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.472*	*28*		*0.888*	*61.443*	*Kg*
x2	*16*	*1.294*	*28*		*1.578*	*57.179*	*Kg*
x3	*10*	*1.600*	*24*		*0.616*	*23.672*	*Kg*
	Floor R/F						
	U/S Key						
	12	*11.383*	*4*		*0.888*	*40.419*	*Kg*
	12	*1.600*	*44*		*0.888*	*62.494*	*Kg*
	floor raft						
	12	*11.566*	*4*		*0.888*	*41.069*	*Kg*
	12	*11.857*	*4*		*0.888*	*42.102*	*Kg*
	12	*7.714*	*4*		*0.888*	*27.391*	*Kg*
	12	*1.600*	*111*		*0.888*	*157.656*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*159.73*	*0.25%*	*0.40*	*7850*	*3134.68*	*Kg*
	TOTAL Weight of steel (in kg)					3998.23	Kg
	TOTAL Weight of Steel (in Tonne)					**4.00**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		3.08		**3.08**	**MT**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*4.85*		*0.50*	*9.70*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*4.85*		*1.75*	*33.95*	*Sqm*
		4		*0.98*	*1.75*	*6.83*	*Sqm*
		4	*4.85*		*2.38*	*46.17*	*Sqm*
		4		*1.50*	*2.38*	*14.28*	*Sqm*
	Section B-B	*4*	*2.91*		*0.82*	*9.54*	*Sqm*
		4		*1.07*	*0.82*	*3.50*	*Sqm*
		4	*2.91*		*1.35*	*15.71*	*Sqm*
		4		*1.31*	*1.35*	*7.08*	*Sqm*
	Section C-C	*4*	*2.84*		*0.52*	*5.91*	*Sqm*
		4		*0.98*	*0.52*	*2.03*	*Sqm*
		4	*2.84*		*1.65*	*18.76*	*Sqm*
		4		*1.13*	*1.65*	*7.47*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*4.67*		*0.50*	*4.67*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*4.67*		*0.95*	*8.90*	*Sqm*
		2		*1.02*	*0.95*	*1.94*	*Sqm*
		2	*4.67*		*2.38*	*22.23*	*Sqm*
		2		*1.59*	*2.38*	*7.57*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*4.08*		*1.40*	*11.42*	*Sqm*
		2		*2.25*	*1.40*	*6.30*	*Sqm*
	Section a-a	*2*	*1.36*		*0.50*	*1.36*	*Sqm*
		2		*4.38*	*0.50*	*4.38*	*Sqm*
		2	*1.36*		*0.20*	*0.54*	*Sqm*
		2		*4.38*	*0.20*	*1.75*	*Sqm*
		2	*1.36*		*2.40*	*6.53*	*Sqm*
		2		*2.19*	*2.40*	*10.51*	*Sqm*
	Section b-b	*2*	*1.36*		*0.50*	*1.36*	*Sqm*
		2		*4.38*	*0.50*	*4.38*	*Sqm*
		2	*1.36*		*0.20*	*0.54*	*Sqm*
		2		*3.87*	*0.20*	*1.55*	*Sqm*
		2	*1.36*		*2.40*	*6.53*	*Sqm*
		2		*2.18*	*2.40*	*10.45*	*Sqm*
	Section c-c	*2*	*1.36*		*0.50*	*1.36*	*Sqm*
		2		*4.38*	*0.50*	*4.38*	*Sqm*
		2	*1.36*		*0.20*	*0.54*	*Sqm*
		2		*3.16*	*0.20*	*1.27*	*Sqm*
		2	*1.36*		*2.40*	*6.53*	*Sqm*
		2		*1.82*	*2.40*	*8.74*	*Sqm*
	Section d-d	*2*	*1.36*		*0.50*	*1.36*	*Sqm*
		2		*4.38*	*0.50*	*4.38*	*Sqm*
		2	*1.36*		*0.20*	*0.54*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.36*		*2.40*	*6.53*	*Sqm*
		2		*0.48*	*2.40*	*2.30*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.50*		*0.90*	*1.79*	*Sqm*
		4		*0.70*	*0.90*	*2.52*	*Sqm*
		4	*0.50*		*0.52*	*1.03*	*Sqm*
		4		*0.53*	*0.52*	*1.09*	*Sqm*
		4	*0.50*		*0.50*	*0.99*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.66*		*0.90*	*9.56*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.52*	*0.90*	*5.47*	*Sqm*
		4	*2.66*		*0.52*	*5.52*	*Sqm*
		4		*1.22*	*0.52*	*2.54*	*Sqm*
		4	*2.66*		*0.50*	*5.31*	*Sqm*
		4		*0.74*	*0.50*	*1.48*	*Sqm*
	Floor						
	U/S key	*2*	*7.76*		*0.70*	*10.86*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*11.67*		*0.50*	*11.67*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*1.57*		*0.90*	*2.83*	*Sqm*
		2	*4.53*		*1.15*	*10.41*	*Sqm*
		2		*0.90*	*1.15*	*2.07*	*Sqm*
		2	*1.14*		*0.90*	*2.04*	*Sqm*
		2		*0.90*	*0.90*	*1.62*	*Sqm*
		2	*0.65*		*0.30*	*0.39*	*Sqm*
		2		*0.90*	*0.30*	*0.54*	*Sqm*
		2	*0.26*		*0.95*	*0.48*	*Sqm*
		2		*0.90*	*0.95*	*1.71*	*Sqm*
		2	*1.45*		*0.95*	*2.76*	*Sqm*
		2		*0.90*	*0.95*	*1.71*	*Sqm*
	D/S key	*2*	*1.03*		*1.70*	*3.49*	*Sqm*
		2		*0.90*	*1.70*	*3.06*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*0.90*		*0.30*	*0.54*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*0.90*		*0.90*	*1.62*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*1.70*	*0.33*	*1.11*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*2.54*		*0.18*	*1.78*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*2.54*		*0.25*	*2.54*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*2.54*		*0.55*	*5.59*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**471.93**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.08*		*12.45*	*Sqm*
	TOTAL					**12.45**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.30*	*0.30*	*0.27*	***Cum***
	TOTAL					**0.27**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*0.90*	*0.15*	*0.30*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*0.90*	*0.15*	*0.30*	*Cum*
	TOTAL					**0.59**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S transition	*2*	*3.60*	*0.48*		*3.46*	*Sqm*
	On Abutment Top	*2*	*5.60*	*0.45*		*3.24*	*Sqm*
	TOTAL					**6.70**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*4.85*	*0.78*		*7.518*	*Cum*
	Section B-B	2	*2.91*	*1.28*		*7.447*	*Cum*
	Section C-C	2	*2.84*	*1.00*		*5.684*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*4.67*	*0.85*		*3.970*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.65*		*0.646*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.66*	*1.08*		*5.708*	*Cum*
	TOTAL					**30.97**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR BUDHAUL SUB DY OFFTAKING FROM RD-9+050 KM AT ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*1.73*	*3.002*	*10.393*	*Cum*
	Section B-B	*2*	*3.20*	*1.88*	*2.300*	*27.674*	*Cum*
	Section C-C	*2*	*3.70*	*1.70*	*2.300*	*28.911*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.21*	*1.85*	*3.002*	*28.969*	*Cum*
	Left Bank Sec a to d	1	4.02	3.18	2.352	*30.012*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*1.10*	*2.500*	*2.871*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.86*	*2.16*	*2.500*	*30.834*	*Cum*
	Floor						
	U/S key	*1*	*1.5765*	*4.091*	*0.850*	*5.482*	*Cum*
	Floor	*1*	*3.033*	*4.091*	*0.650*	*8.065*	*Cum*
		1	*1.394*	*2.930*	*0.650*	*2.655*	*Cum*
		1	*2.5235*	*2.930*	*0.650*	*4.806*	*Cum*
		1	*0.352*	*2.930*	*1.181*	*1.031*	*Cum*
		1	*0.932*	*2.930*	*1.150*	*3.140*	*Cum*
		1	*0.9*	*2.930*	*0.300*	*0.791*	*Cum*
		1	*2.635*	*2.930*	*0.650*	*5.018*	*Cum*
		1	*0.725*	*2.930*	*0.650*	*1.381*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.930*	*0.600*	*3.868*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.930*	*0.850*	*1.200*	*2.989*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*2.330*	*0.900*	*6.291*	*Cum*
	TOTAL					**205.18**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*5.225*	*0.150*	*0.49*	*Cum*
		1	*2.075*	*4.064*	*0.150*	*1.26*	*Cum*
		1	*1.774*	*2.930*	*0.150*	*0.78*	*Cum*
		1	*0.821*	*2.930*	*0.150*	*0.36*	*Cum*
		1	*2.559*	*2.930*	*0.150*	*1.12*	*Cum*
		1	*0.948*	*2.930*	*0.150*	*0.42*	*Cum*
		1	*1.430*	*2.930*	*0.150*	*0.63*	*Cum*
		1	*0.560*	*2.930*	*0.150*	*0.25*	*Cum*
		1	*0.692*	*2.930*	*0.150*	*0.30*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.731*	*0.300*	*1.04*	*Cum*
	Section B-B	*2*	*3.200*	*1.880*	*0.300*	*3.61*	*Cum*
	Section C-C	*2*	*3.697*	*1.700*	*0.300*	*3.77*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.211*	*1.852*	*0.300*	*2.89*	*Cum*
	Left Bank Sec a to d	*1*	*4.019*	*3.175*	*0.150*	*1.91*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.522*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.855*	*2.160*	*0.300*	*3.70*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.930*	*0.850*	*0.300*	*0.75*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.930*	*0.450*	*0.900*	*1.19*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*12*	*0.600*	*0.600*	*0.300*	*1.30*	*Cum*
	TOTAL					**27.33**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.08*	*0.85*	*1.83*	*Cum*
		2	*1.00*	*1.33*	*1.35*	*3.59*	*Cum*
	Section B-B	*2*	*3.20*	*1.15*	*1.10*	*8.10*	*Cum*
		2	*3.20*	*1.48*	*0.90*	*8.52*	*Cum*
	Section C-C	*2*	*3.70*	*1.06*	*0.80*	*6.27*	*Cum*
		2	*3.70*	*1.30*	*1.20*	*11.53*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.21*	*0.45*	*0.50*	*1.17*	*Cum*
		1	*5.21*	*0.95*	*1.00*	*4.97*	*Cum*
		1	*5.21*	*1.45*	*1.20*	*9.08*	*Cum*
	Left Bank						
	Section a-a	*1*		3.033	*0.50*	*1.52*	*Sqm*
		1		*2.88*	*0.20*	*0.58*	*Sqm*
		1		*1.61*	*1.50*	*2.41*	*Sqm*
						4.51	***Sqm***
	Section b-b	*1*		*3.03*	*0.50*	*1.52*	*Sqm*
		1		*2.61*	*0.20*	*0.52*	*Sqm*
		1		*1.54*	*1.50*	*2.32*	*Sqm*
						4.35	***Sqm***
	Section c-c	*1*		*3.03*	*0.50*	*1.52*	*Sqm*
		1		*2.16*	*0.20*	*0.43*	*Sqm*
		1		*1.32*	*1.50*	*1.98*	*Sqm*
						3.93	***Sqm***
	Section d-d	*1*		*3.03*	*0.50*	*1.52*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.50*	*0.72*	*Sqm*
						2.33	***Sqm***
	Bottom Key	*1*	*4.02*	*1.58*	*0.70*	*4.44*	*Cum*
	Top Stem Area	*1*	*4.02*	*3.78*		*15.19*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*0.70*	*0.90*	*0.66*	*Cum*
		2	*0.52*	*0.53*	*0.80*	*0.44*	*Cum*
		2	*0.52*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.86*	*1.76*	*0.90*	*9.04*	*Cum*
		2	*2.86*	*1.35*	*0.80*	*6.17*	*Cum*
		2	*2.86*	*0.77*	*0.50*	*2.18*	*Cum*
	TOTAL					**94.20**	**Cum**
	Floor						
	U/S key	*1*	*1.58*	*4.09*	*0.70*	*4.51*	*Cum*
	Floor	*1*	*3.03*	*4.09*	*0.50*	*6.20*	*Cum*
		1	*1.39*	*2.93*	*0.50*	*2.04*	*Cum*
		1	*0.35*		*2.93*	*1.03*	*Cum*
		1	*2.52*	*2.93*	*0.50*	*3.70*	*Cum*
		1	*0.93*	*2.93*	*0.70*	*1.91*	*Cum*
		1	*0.90*	*2.93*	*0.30*	*0.79*	*Cum*
		1	*2.64*	*2.93*	*0.50*	*3.86*	*Cum*
	D/S key	*1*	*0.73*	*2.93*	*0.50*	*1.06*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**119.31**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*2.75*	*4.09*	*0.20*	*2.25*	*Cum*
		1	*1.50*	*2.93*	*0.20*	*0.88*	*Cum*
	crest	*1*	*1.23*	*2.93*	*0.15*	*0.54*	*Cum*
		1	*0.67*	*2.93*	*0.20*	*0.39*	*Cum*
		1	*2.50*	*2.93*	*0.20*	*1.47*	*Cum*
		1	*3.35*	*2.93*	*0.20*	*1.96*	*Cum*
	Top Slab	*1*	*5.25*	*3.73*	*0.38*	*7.37*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.73*	*0.08*	*1.19*	*Cum*
	Dirt wall	*2*	*6.90*	0.82	*0.50*	*5.66*	*Cum*
		2	*6.90*	*0.40*	*0.48*	*2.63*	*Cum*
	Parapet	*2*	*4.57*	*0.45*	*0.18*	*0.71*	*Cum*
		2	*4.57*	*0.35*	*0.25*	*0.80*	*Cum*
		2	*4.57*	*0.22*	*0.55*	*1.10*	*Cum*
	TOTAL					**26.95**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*4.150*	*37*		*1.578*	*242.323*	*Kg*
a2	*10*	*5.630*	*19*		*0.616*	*65.943*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*4.110*	*21*		*0.616*	*53.207*	*Kg*
a5	*10*	*5.550*	*15*		*0.616*	*51.320*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.521*	*62*		*0.888*	*138.750*	*Kg*
x2	*16*	*1.344*	*62*		*1.578*	*131.503*	*Kg*
x3	*10*	*3.630*	*24*		*0.616*	*53.706*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.826*	*12*		*0.888*	*83.366*	*Kg*
	12	*3.629*	*30*		*0.888*	*96.644*	*Kg*
	floor raft						
	12	*8.526*	*12*		*0.888*	*90.823*	*Kg*
	12	*8.422*	*12*		*0.888*	*89.715*	*Kg*
	12	*3.395*	*12*		*0.888*	*36.165*	*Kg*
	12	*3.629*	*73*		*0.888*	*235.168*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*94.20*	*0.25%*	*0.24*	*7850*	*1848.64*	*Kg*
	TOTAL Weight of steel (in kg)					3395.54	Kg
	TOTAL Weight of Steel (in Tonne)					**3.40**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.99		**2.99**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*0.85*	*3.41*	*Sqm*
		4		*1.08*	*0.85*	*3.67*	*Sqm*
		4	*1.00*		*1.35*	*5.40*	*Sqm*
		4		*1.33*	*1.35*	*7.19*	*Sqm*
	Section B-B	*4*	*3.20*		*1.10*	*14.08*	*Sqm*
		4		*1.15*	*1.10*	*5.06*	*Sqm*
		4	*3.20*		*0.90*	*11.52*	*Sqm*
		4		*1.48*	*0.90*	*5.33*	*Sqm*
	Section C-C	*4*	*3.70*		*0.80*	*11.83*	*Sqm*
		4		*1.06*	*0.80*	*3.39*	*Sqm*
		4	*3.70*		*1.20*	*17.75*	*Sqm*
		4		*1.30*	*1.20*	*6.24*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*5.21*		*0.50*	*5.21*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*5.21*		*1.00*	*10.44*	*Sqm*
		2		*0.95*	*1.00*	*1.91*	*Sqm*
		2	*5.21*		*1.20*	*12.51*	*Sqm*
		2		*1.45*	*1.20*	*3.48*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*4.02*		*0.70*	*5.63*	*Sqm*
		2		*1.58*	*0.70*	*2.21*	*Sqm*
	Section a-a	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*2.88*	*0.20*	*1.15*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*1.61*	*1.50*	*4.83*	*Sqm*
	Section b-b	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*2.61*	*0.20*	*1.04*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*1.54*	*1.50*	*4.63*	*Sqm*
	Section c-c	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*2.16*	*0.20*	*0.86*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*1.32*	*1.50*	*3.96*	*Sqm*
	Section d-d	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*0.48*	*1.50*	*1.44*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.52*		*0.90*	*1.88*	*Sqm*
		4		*0.70*	*0.90*	*2.52*	*Sqm*
		4	*0.52*		*0.80*	*1.67*	*Sqm*
		4		*0.53*	*0.80*	*1.68*	*Sqm*
		4	*0.52*		*0.50*	*1.04*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.86*		*0.90*	*10.28*	*Sqm*
		4		*1.76*	*0.90*	*6.34*	*Sqm*
		4	*2.86*		*0.80*	*9.14*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.35*	*0.80*	*4.32*	*Sqm*
		4	*2.86*		*0.50*	*5.71*	*Sqm*
		4		*0.77*	*0.50*	*1.53*	*Sqm*
	Floor						
	U/S key	*2*	*1.58*		*0.70*	*2.21*	*Sqm*
		2		*4.09*	*0.70*	*5.73*	*Sqm*
	Floor	*2*	*3.03*		*0.50*	*3.03*	*Sqm*
		2		*4.09*	*0.50*	*4.09*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*2.93*	*0.50*	*2.93*	*Sqm*
		2	*2.52*		*0.50*	*2.52*	*Sqm*
		2		*2.93*	*0.50*	*2.93*	*Sqm*
		2	*0.35*			*0.70*	*Sqm*
		2		*2.93*		*5.86*	*Sqm*
		2	*0.93*		*0.70*	*1.30*	*Sqm*
		2		*2.93*	*0.70*	*4.10*	*Sqm*
		2	*0.90*		*0.30*	*0.54*	*Sqm*
		2		*2.93*	*0.30*	*1.76*	*Sqm*
		2	*2.64*		*0.50*	*2.64*	*Sqm*
		2		*2.93*	*0.50*	*2.93*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*2.93*	*0.50*	*2.93*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.93*		*0.30*	*1.76*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.93*		*0.90*	*5.27*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*3.73*	*0.38*	*2.81*	*Sqm*
	Dirt wall	*4*	*6.90*		*0.50*	*13.79*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.90*		*0.48*	*13.16*	*Sqm*
		4		*0.40*	*0.48*	*0.76*	*Sqm*
	Parapet	*4*	*4.57*		*0.18*	*3.20*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*4.57*		*0.25*	*4.57*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*4.57*		*0.55*	*10.05*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**352.74**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.58*		*15.48*	*Sqm*
	TOTAL					**15.48**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*2.33*	*0.90*	*6.29*	***Cum***
	TOTAL					**6.29**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.93*	*0.15*	*0.97*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.93*	*0.15*	*0.97*	*Cum*
	TOTAL					**1.93**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.25*	*0.48*		*2.16*	*Sqm*
	On Abutment Top	*2*	*2.90*	*0.45*		*2.03*	*Sqm*
	TOTAL					**4.19**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	4			**8.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.00*	*1.02*		*2.040*	*Cum*
	Section B-B	2	*3.20*	*1.60*		*10.240*	*Cum*
	Section C-C	2	*3.70*	*1.25*		*9.243*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*5.21*	*1.14*		*5.961*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.52*	*0.76*		*0.788*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.86*	*1.27*		*7.263*	*Cum*
	TOTAL					**35.53**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR KAILASHPUR SUB DY. OFFTAKING FROM RD-9+050 KM AT ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*1*	*1.00*	*1.73*	*3.000*	*5.190*	*Cum*
	Section B-B	*2*	*6.68*	*1.98*	*2.464*	*65.133*	*Cum*
	Section C-C	*1*	*2.72*	*1.80*	*2.464*	*12.046*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.21*	*1.45*	*3.000*	*22.661*	*Cum*
	Left Bank Sec a to d	1	4.02	3.15	2.350	*29.683*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.792*	*3.108*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.71*	*1.99*	*2.792*	*30.057*	*Cum*
	Floor						
	U/S key	*1*	*1.575*	*3.459*	*0.850*	*4.631*	*Cum*
	Floor	*1*	*3.03*	*3.459*	*0.650*	*6.813*	*Cum*
		1	*1.394*	*2.300*	*0.650*	*2.084*	*Cum*
		1	*3.5235*	*2.300*	*1.000*	*8.104*	*Cum*
		1	*1.014*	*2.300*	*0.625*	*2.332*	*Cum*
		1	*0.531*	*2.300*	*0.750*	*0.916*	*Cum*
		1	*1.655*	*2.300*	*0.700*	*2.665*	*Cum*
		1	*1.990*	*2.300*	*0.700*	*3.204*	*Cum*
		1	*0.95*	*2.300*	*1.550*	*3.387*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.300*	*0.600*	*3.036*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.300*	*0.850*	*1.200*	*2.346*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*1.700*	*0.900*	*4.590*	*Cum*
	TOTAL					**211.99**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*4.591*	*0.150*	*0.43*	*Cum*
		1	*2.072*	*3.432*	*0.150*	*1.07*	*Cum*
		1	*1.765*	*2.300*	*0.150*	*0.61*	*Cum*
		1	*3.311*	*2.300*	*0.150*	*1.14*	*Cum*
		1	*3.636*	*2.300*	*0.150*	*1.25*	*Cum*
		1	*1.109*	*2.300*	*0.150*	*0.38*	*Cum*
		1	*0.236*	*2.300*	*0.150*	*0.08*	*Cum*
		1	*1.565*	*2.300*	*0.150*	*0.54*	*Cum*
		1	*0.692*	*2.300*	*0.150*	*0.24*	*Cum*
	PCC Below Abutment						
	Section A-A	*1*	*1.000*	*1.730*	*0.300*	*0.52*	*Cum*
	Section B-B	*2*	*6.682*	*1.978*	*0.300*	*7.93*	*Cum*
	Section C-C	*1*	*2.719*	*1.798*	*0.300*	*1.47*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.210*	*1.450*	*0.300*	*2.27*	*Cum*
	Left Bank Sec a to d	*1*	*4.015*	*3.146*	*0.150*	*1.89*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.506*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.709*	*1.987*	*0.300*	*3.23*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.300*	*0.850*	*0.300*	*0.59*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.300*	*0.450*	*0.900*	*0.93*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*10*	*0.600*	*0.600*	*0.300*	*1.08*	*Cum*
	TOTAL					**27.20**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.08*	*0.85*	*1.83*	*Cum*
		2	*1.00*	*1.33*	*1.35*	*3.59*	*Cum*
	Section B-B	*2*	*6.68*	*1.20*	*1.26*	*20.25*	*Cum*
		2	*6.68*	*1.58*	*0.90*	*18.98*	*Cum*
	Section C-C	*2*	*2.72*	*0.82*	*0.96*	*4.30*	*Cum*
		2	*2.72*	*1.11*	*1.20*	*7.24*	*Cum*
		2	*2.72*	*1.40*	*1.20*	*9.12*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.21*	*0.45*	*0.50*	*1.17*	*Cum*
		1	*5.21*	*0.75*	*1.00*	*3.91*	*Cum*
		1	*5.21*	*1.05*	*1.20*	*6.56*	*Cum*
	Left Bank						
	Section a-a	*1*		3.03	*0.50*	*1.52*	*Sqm*
		1		*2.88*	*0.20*	*0.58*	*Sqm*
		1		*1.61*	*1.50*	*2.41*	*Sqm*
						4.50	***Sqm***
	Section b-b	*1*		*3.03*	*0.50*	*1.52*	*Sqm*
		1		*2.56*	*0.20*	*0.51*	*Sqm*
		1		*1.52*	*1.50*	*2.28*	*Sqm*
						4.30	***Sqm***
	Section c-c	*1*		*3.03*	*0.50*	*1.52*	*Sqm*
		1		*1.94*	*0.20*	*0.39*	*Sqm*
		1		*1.21*	*1.50*	*1.81*	*Sqm*
						3.71	***Sqm***
	Section d-d	*1*		*3.03*	*0.50*	*1.52*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.50*	*0.72*	*Sqm*
						2.33	***Sqm***
	Bottom Key	*1*	*4.02*	*1.58*	*0.70*	*4.43*	*Cum*
	Top Stem Area	*1*	*4.02*	*3.71*		*14.90*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.90*	*0.64*	*Cum*
		2	*0.51*	*0.53*	*1.09*	*0.58*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.71*	*1.59*	*0.90*	*7.74*	*Cum*
		2	*2.71*	*1.20*	*1.09*	*7.09*	*Cum*
		2	*2.71*	*0.68*	*0.50*	*1.85*	*Cum*
	TOTAL					**115.17**	**Cum**
	Floor						
	U/S key	*1*	*1.58*	*3.46*	*0.70*	*3.81*	*Cum*
	Floor	*1*	*3.03*	*3.46*	*0.50*	*5.24*	*Cum*
		1	*1.39*	*2.30*	*0.50*	*1.60*	*Cum*
		1	*1.99*		*2.30*	*4.58*	*Cum*
		1	*3.52*	*2.30*	*0.85*	*6.89*	*Cum*
		1	*1.01*	*2.30*	*0.63*	*1.46*	*Cum*
		1	*0.53*	*2.30*	*0.30*	*0.37*	*Cum*
		1	*1.66*	*2.30*	*0.70*	*2.66*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S key	*1*	*0.95*	*2.30*	*1.40*	*3.06*	*Cum*
	TOTAL					**144.84**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.03*	*3.46*	*0.20*	*2.10*	*Cum*
		1	*1.48*	*2.30*	*0.20*	*0.68*	*Cum*
	crest	*1*	*1.25*	*2.30*	*0.15*	*0.43*	*Cum*
		1	*3.55*	*2.30*	*0.20*	*1.63*	*Cum*
		1	*3.50*	*2.30*	*0.20*	*1.61*	*Cum*
		1	*0.95*	*2.30*	*0.20*	*0.44*	*Cum*
		1	*1.77*	*2.30*	*0.20*	*0.81*	*Cum*
	Top Slab	*1*	*5.25*	*3.10*	*0.33*	*5.31*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.10*	*0.08*	*0.99*	*Cum*
	Dirt wall	*2*	*9.40*	0.82	*0.50*	*7.71*	*Cum*
		2	*9.40*	*0.40*	*0.48*	*3.59*	*Cum*
	Parapet	*2*	*3.94*	*0.45*	*0.18*	*0.61*	*Cum*
		2	*3.94*	*0.35*	*0.25*	*0.69*	*Cum*
		2	*3.94*	*0.22*	*0.55*	*0.95*	*Cum*
	TOTAL					**27.55**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.520*	*29*		*1.578*	*161.096*	*Kg*
a2	*10*	*5.630*	*16*		*0.616*	*55.531*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.410*	*21*		*0.616*	*44.145*	*Kg*
a5	*10*	*5.550*	*11*		*0.616*	*37.635*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.472*	*52*		*0.888*	*114.109*	*Kg*
x2	*16*	*1.294*	*52*		*1.578*	*106.190*	*Kg*
x3	*10*	*1.600*	*24*		*0.616*	*23.672*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.822*	*9*		*0.888*	*62.493*	*Kg*
	12	*3.000*	*29*		*0.888*	*77.230*	*Kg*
	floor raft						
	12	*11.521*	*9*		*0.888*	*92.045*	*Kg*
	12	*11.604*	*9*		*0.888*	*92.708*	*Kg*
	12	*6.275*	*9*		*0.888*	*50.133*	*Kg*
	12	*3.000*	*105*		*0.888*	*279.626*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*115.17*	*0.25%*	*0.29*	*7850*	*2260.27*	*Kg*
	TOTAL Weight of steel (in kg)					3635.14	Kg
	TOTAL Weight of Steel (in Tonne)					**3.64**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.58		**2.58**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*0.85*	*3.40*	*Sqm*
		4		*1.08*	*0.85*	*3.66*	*Sqm*
		4	*1.00*		*1.35*	*5.40*	*Sqm*
		4		*1.33*	*1.35*	*7.18*	*Sqm*
	Section B-B	*4*	*6.68*		*1.26*	*33.78*	*Sqm*
		4		*1.20*	*1.26*	*6.06*	*Sqm*
		4	*6.68*		*0.90*	*24.06*	*Sqm*
		4		*1.58*	*0.90*	*5.68*	*Sqm*
	Section C-C	*4*	*2.72*		*0.96*	*10.48*	*Sqm*
		4		*0.82*	*0.96*	*3.16*	*Sqm*
		4	*2.72*		*1.20*	*13.05*	*Sqm*
		4		*1.11*	*1.20*	*5.32*	*Sqm*
		4	*2.72*		*1.20*	*13.05*	*Sqm*
		4		*1.40*	*1.20*	*6.71*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*5.21*		*0.50*	*5.21*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*5.21*		*1.00*	*10.42*	*Sqm*
		2		*0.75*	*1.00*	*1.50*	*Sqm*
		2	*5.21*		*1.20*	*12.50*	*Sqm*
		2		*1.05*	*1.20*	*2.52*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*4.02*		*0.70*	*5.62*	*Sqm*
		2		*1.58*	*0.70*	*2.21*	*Sqm*
	Section a-a	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*2.88*	*0.20*	*1.15*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*1.61*	*1.50*	*4.82*	*Sqm*
	Section b-b	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*2.56*	*0.20*	*1.02*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*1.52*	*1.50*	*4.55*	*Sqm*
	Section c-c	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*1.94*	*0.20*	*0.77*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*1.21*	*1.50*	*3.62*	*Sqm*
	Section d-d	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.03*	*0.50*	*3.03*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.34*		*1.50*	*4.02*	*Sqm*
		2		*0.48*	*1.50*	*1.44*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.51*		*0.90*	*1.82*	*Sqm*
		4		*0.70*	*0.90*	*2.52*	*Sqm*
		4	*0.51*		*1.09*	*2.21*	*Sqm*
		4		*0.53*	*1.09*	*2.29*	*Sqm*
		4	*0.51*		*0.50*	*1.01*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Avg. of Sec 1-1 & 3-3	*4*	*2.71*		*0.90*	*9.75*	*Sqm*
		4		*1.59*	*0.90*	*5.71*	*Sqm*
		4	*2.71*		*1.09*	*11.83*	*Sqm*
		4		*1.20*	*1.09*	*5.23*	*Sqm*
		4	*2.71*		*0.50*	*5.42*	*Sqm*
		4		*0.68*	*0.50*	*1.37*	*Sqm*
	Floor						
	U/S key	*2*	*1.58*		*0.70*	*2.21*	*Sqm*
		2		*3.46*	*0.70*	*4.84*	*Sqm*
	Floor	*2*	*3.03*		*0.50*	*3.03*	*Sqm*
		2		*3.46*	*0.50*	*3.46*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*2.30*	*0.50*	*2.30*	*Sqm*
		2	*3.52*		*0.85*	*5.99*	*Sqm*
		2		*2.30*	*0.85*	*3.91*	*Sqm*
		2	*1.01*		*0.63*	*1.27*	*Sqm*
		2		*2.30*	*0.63*	*2.88*	*Sqm*
		2	*0.53*		*0.30*	*0.32*	*Sqm*
		2		*2.30*	*0.30*	*1.38*	*Sqm*
		2	*1.66*		*0.70*	*2.32*	*Sqm*
		2		*2.30*	*0.70*	*3.22*	*Sqm*
		2	*1.99*		*2.30*	*9.15*	*Sqm*
		2		*2.30*	*2.30*	*10.58*	*Sqm*
	D/S key	*2*	*0.95*		*1.40*	*2.66*	*Sqm*
		2		*2.30*	*1.40*	*6.44*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.30*		*0.30*	*1.38*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.30*		*0.90*	*4.14*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*3.10*	*0.33*	*2.02*	*Sqm*
	Dirt wall	*4*	*9.40*		*0.50*	*18.80*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*9.40*		*0.48*	*17.94*	*Sqm*
		4		*0.40*	*0.48*	*0.76*	*Sqm*
	Parapet	*4*	*3.94*		*0.18*	*2.76*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.94*		*0.25*	*3.94*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.94*		*0.55*	*8.67*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**423.47**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.22*		*13.31*	*Sqm*
	TOTAL					**13.31**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.70*	*0.90*	*4.59*	***Cum***
	TOTAL					**4.59**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.30*	*0.15*	*0.76*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.30*	*0.15*	*0.76*	*Cum*
	TOTAL					**1.52**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S transition	*2*	*2.25*	*0.48*		*2.16*	*Sqm*
	On Abutment Top	*2*	*5.65*	*0.45*		*2.03*	*Sqm*
	TOTAL					**4.19**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.00*	*1.02*		*2.040*	*Cum*
	Section B-B	2	*6.68*	*1.80*		*24.055*	*Cum*
	Section C-C	2	*2.72*	*1.44*		*7.831*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*5.21*	*1.14*		*5.939*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.87*		*0.880*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.71*	*1.43*		*7.739*	*Cum*
	TOTAL					**48.48**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PATHRA MINOR OFFTAKING FROM RD-13+200 KM AT ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*1.76*	*3.290*	*11.594*	*Cum*
	Section B-B	*2*	*4.10*	*1.69*	*2.190*	*30.421*	*Cum*
	Section C-C	*2*	*2.77*	*1.51*	*2.190*	*18.362*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.95*	*1.48*	*3.254*	*19.053*	*Cum*
	Left Bank Sec a to d	1	4.14	3.22	2.404	*32.093*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*2.190*	*2.385*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*1.29*	*1.89*	*2.190*	*10.690*	*Cum*
	Floor						
	U/S key	*1*	*1.616*	*2.8955*	*0.850*	*3.976*	*Cum*
	Floor	*1*	*3.131*	*2.8955*	*0.650*	*5.893*	*Cum*
		1	*1.394*	*1.170*	*0.650*	*1.060*	*Cum*
		1	*3.052*	*1.170*	*0.750*	*2.678*	*Cum*
		1	*0.932*	*1.170*	*0.400*	*1.090*	*Cum*
		1	*0.450*	*1.170*	*0.750*	*0.395*	*Cum*
		1	*0.383*	*1.170*	*0.598*	*0.268*	*Cum*
		1	*1.838*	*1.170*	*0.650*	*1.398*	*Cum*
		1	*0.775*	*1.170*	*0.850*	*0.771*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.170*	*0.600*	*1.544*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.170*	*0.850*	*1.200*	*1.193*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.570*	*0.900*	*1.539*	*Cum*
	TOTAL					**146.40**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*4.425*	*0.150*	*0.41*	*Cum*
		1	*2.148*	*2.699*	*0.150*	*0.87*	*Cum*
		1	*1.775*	*1.170*	*0.150*	*0.31*	*Cum*
		1	*0.813*	*1.170*	*0.150*	*0.14*	*Cum*
		1	*3.124*	*1.170*	*0.150*	*0.55*	*Cum*
		1	*0.985*	*1.170*	*0.150*	*0.17*	*Cum*
		1	*0.795*	*1.170*	*0.150*	*0.14*	*Cum*
		1	*0.783*	*1.170*	*0.150*	*0.14*	*Cum*
		1	*0.692*	*1.170*	*0.150*	*0.12*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.762*	*0.300*	*1.06*	*Cum*
	Section B-B	*2*	*4.100*	*1.694*	*0.300*	*4.17*	*Cum*
	Section C-C	*2*	*2.769*	*1.514*	*0.300*	*2.52*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.951*	*1.482*	*0.300*	*1.76*	*Cum*
	Left Bank Sec a to d	*1*	*4.142*	*3.223*	*0.150*	*2.00*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.495*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*1.289*	*1.894*	*0.300*	*1.46*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.170*	*0.850*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.170*	*0.450*	*0.900*	*0.47*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*6*	*0.600*	*0.600*	*0.300*	*0.65*	*Cum*
	TOTAL					**18.78**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.09*	*0.94*	*2.05*	*Cum*
		2	*1.00*	*1.36*	*1.55*	*4.22*	*Cum*
	Section B-B	*2*	*4.10*	*1.06*	*0.79*	*6.85*	*Cum*
		2	*4.10*	*1.29*	*1.10*	*11.67*	*Cum*
	Section C-C	*2*	*2.77*	*0.97*	*0.49*	*2.62*	*Cum*
		2	*2.77*	*1.11*	*1.40*	*8.64*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.95*	*0.45*	*0.50*	*0.89*	*Cum*
		1	*3.95*	*0.77*	*1.05*	*3.19*	*Cum*
		1	*3.95*	*1.08*	*1.40*	*5.98*	*Cum*
	Left Bank						
	Section a-a	*1*		3.111	*0.50*	*1.56*	*Sqm*
		1		*2.96*	*0.20*	*0.59*	*Sqm*
		1		*1.65*	*1.55*	*2.56*	*Sqm*
						4.70	***Sqm***
	Section b-b	*1*		*3.11*	*0.50*	*1.56*	*Sqm*
		1		*2.68*	*0.20*	*0.54*	*Sqm*
		1		*1.58*	*1.55*	*2.46*	*Sqm*
						4.55	***Sqm***
	Section c-c	*1*		*3.11*	*0.50*	*1.56*	*Sqm*
		1		*2.24*	*0.20*	*0.45*	*Sqm*
		1		*1.36*	*1.55*	*2.11*	*Sqm*
						4.11	***Sqm***
	Section d-d	*1*		*3.11*	*0.50*	*1.56*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.55*	*0.75*	*Sqm*
						2.40	***Sqm***
	Bottom Key	*1*	*4.14*	*1.62*	*0.70*	*4.68*	*Cum*
	Top Stem Area	*1*	*4.14*	*3.94*		*16.33*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*0.90*	*0.62*	*Cum*
		2	*0.50*	*0.53*	*0.49*	*0.25*	*Cum*
		2	*0.50*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*1.29*	*1.49*	*0.90*	*3.47*	*Cum*
		2	*1.29*	*1.21*	*0.49*	*1.53*	*Cum*
		2	*1.29*	*0.74*	*0.50*	*0.95*	*Cum*
	TOTAL					**74.94**	**Cum**
	Floor						
	U/S key	*1*	*1.62*	*2.90*	*0.70*	*3.27*	*Cum*
	Floor	*1*	*3.13*	*2.90*	*0.50*	*4.53*	*Cum*
		1	*1.39*	*1.17*	*0.50*	*0.82*	*Cum*
		1	*0.38*		*1.17*	*0.45*	*Cum*
		1	*3.05*	*1.17*	*0.60*	*2.14*	*Cum*
		1	*0.93*	*1.17*	*0.40*	*0.44*	*Cum*
		1	*0.45*	*1.17*	*0.30*	*0.16*	*Cum*
		1	*1.84*	*1.17*	*0.50*	*1.08*	*Cum*
	D/S key	*1*	*0.78*	*1.17*	*0.70*	*0.63*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**88.46**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.11*	*2.90*	*0.20*	*1.80*	*Cum*
		1	*1.48*	*1.17*	*0.20*	*0.35*	*Cum*
	crest	*1*	*1.25*	*1.17*	*0.15*	*0.22*	*Cum*
		1	*0.67*	*1.17*	*0.20*	*0.16*	*Cum*
		1	*3.00*	*1.17*	*0.20*	*0.70*	*Cum*
		1	*0.95*	*1.17*	*0.20*	*0.22*	*Cum*
		1	*1.87*	*1.17*	*0.20*	*0.44*	*Cum*
	Top Slab	*1*	*5.25*	*1.97*	*0.33*	*3.38*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*1.97*	*0.08*	*0.63*	*Cum*
	Dirt wall	*2*	*6.87*	0.82	*0.50*	*5.63*	*Cum*
		2	*6.87*	*0.40*	*0.43*	*2.34*	*Cum*
	Parapet	*2*	*2.81*	*0.45*	*0.18*	*0.44*	*Cum*
		2	*2.81*	*0.35*	*0.25*	*0.49*	*Cum*
		2	*2.81*	*0.22*	*0.55*	*0.68*	*Cum*
	TOTAL					**17.46**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*2.430*	*29*		*1.578*	*111.211*	*Kg*
a2	*10*	*5.650*	*10*		*0.616*	*34.830*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.290*	*18*		*0.616*	*25.411*	*Kg*
a5	*10*	*5.550*	*7*		*0.616*	*23.949*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.472*	*32*		*0.888*	*70.221*	*Kg*
x2	*16*	*1.294*	*32*		*1.578*	*65.348*	*Kg*
x3	*10*	*1.870*	*24*		*0.616*	*27.667*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.980*	*5*		*0.888*	*35.419*	*Kg*
	12	*1.869*	*30*		*0.888*	*49.774*	*Kg*
	floor raft						
	12	*8.546*	*5*		*0.888*	*37.932*	*Kg*
	12	*8.526*	*5*		*0.888*	*37.843*	*Kg*
	12	*3.918*	*5*		*0.888*	*17.390*	*Kg*
	12	*1.869*	*77*		*0.888*	*127.752*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*74.94*	*0.25%*	*0.19*	*7850*	*1470.76*	*Kg*
	TOTAL Weight of steel (in kg)					2313.77	Kg
	TOTAL Weight of Steel (in Tonne)					**2.31**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.38		**2.38**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*0.94*	*3.76*	*Sqm*
		4		*1.09*	*0.94*	*4.10*	*Sqm*
		4	*1.00*		*1.55*	*6.20*	*Sqm*
		4		*1.36*	*1.55*	*8.44*	*Sqm*
	Section B-B	*4*	*4.10*		*0.79*	*12.96*	*Sqm*
		4		*1.06*	*0.79*	*3.34*	*Sqm*
		4	*4.10*		*1.10*	*18.04*	*Sqm*
		4		*1.29*	*1.10*	*5.69*	*Sqm*
	Section C-C	*4*	*2.77*		*0.49*	*5.43*	*Sqm*
		4		*0.97*	*0.49*	*1.90*	*Sqm*
		4	*2.77*		*1.40*	*15.51*	*Sqm*
		4		*1.11*	*1.40*	*6.24*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*3.95*		*0.50*	*3.95*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*3.95*		*1.05*	*8.33*	*Sqm*
		2		*0.77*	*1.05*	*1.61*	*Sqm*
		2	*3.95*		*1.40*	*11.06*	*Sqm*
		2		*1.08*	*1.40*	*3.03*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*4.14*		*0.70*	*5.80*	*Sqm*
		2		*1.62*	*0.70*	*2.26*	*Sqm*
	Section a-a	*2*	*1.38*		*0.50*	*1.38*	*Sqm*
		2		*3.11*	*0.50*	*3.11*	*Sqm*
		2	*1.38*		*0.20*	*0.55*	*Sqm*
		2		*2.96*	*0.20*	*1.18*	*Sqm*
		2	*1.38*		*1.55*	*4.29*	*Sqm*
		2		*1.65*	*1.55*	*5.11*	*Sqm*
	Section b-b	*2*	*1.38*		*0.50*	*1.38*	*Sqm*
		2		*3.11*	*0.50*	*3.11*	*Sqm*
		2	*1.38*		*0.20*	*0.55*	*Sqm*
		2		*2.68*	*0.20*	*1.07*	*Sqm*
		2	*1.38*		*1.55*	*4.29*	*Sqm*
		2		*1.58*	*1.55*	*4.91*	*Sqm*
	Section c-c	*2*	*1.38*		*0.50*	*1.38*	*Sqm*
		2		*3.11*	*0.50*	*3.11*	*Sqm*
		2	*1.38*		*0.20*	*0.55*	*Sqm*
		2		*2.24*	*0.20*	*0.90*	*Sqm*
		2	*1.38*		*1.55*	*4.29*	*Sqm*
		2		*1.36*	*1.55*	*4.22*	*Sqm*
	Section d-d	*2*	*1.38*		*0.50*	*1.38*	*Sqm*
		2		*3.11*	*0.50*	*3.11*	*Sqm*
		2	*1.38*		*0.20*	*0.55*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.38*		*1.55*	*4.29*	*Sqm*
		2		*0.48*	*1.55*	*1.49*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.50*		*0.90*	*1.78*	*Sqm*
		4		*0.70*	*0.90*	*2.52*	*Sqm*
		4	*0.50*		*0.49*	*0.97*	*Sqm*
		4		*0.53*	*0.49*	*1.03*	*Sqm*
		4	*0.50*		*0.50*	*0.99*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*1.29*		*0.90*	*4.64*	*Sqm*
		4		*1.49*	*0.90*	*5.38*	*Sqm*
		4	*1.29*		*0.49*	*2.53*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.21*	*0.49*	*2.37*	*Sqm*
		4	*1.29*		*0.50*	*2.58*	*Sqm*
		4		*0.74*	*0.50*	*1.48*	*Sqm*
	Floor						
	U/S key	*2*	*1.62*		*0.70*	*2.26*	*Sqm*
		2		*2.90*	*0.70*	*4.05*	*Sqm*
	Floor	*2*	*3.13*		*0.50*	*3.13*	*Sqm*
		2		*2.90*	*0.50*	*2.90*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*1.17*	*0.50*	*1.17*	*Sqm*
		2	*3.05*		*0.60*	*3.66*	*Sqm*
		2		*1.17*	*0.60*	*1.40*	*Sqm*
		2	*0.93*		*0.40*	*0.75*	*Sqm*
		2		*1.17*	*0.40*	*0.94*	*Sqm*
		2	*0.45*		*0.30*	*0.27*	*Sqm*
		2		*1.17*	*0.30*	*0.70*	*Sqm*
		2	*0.38*		*1.17*	*0.90*	*Sqm*
		2		*1.17*	*1.17*	*2.74*	*Sqm*
		2	*1.84*		*0.50*	*1.84*	*Sqm*
		2		*1.17*	*0.50*	*1.17*	*Sqm*
	D/S key	*2*	*0.78*		*0.70*	*1.09*	*Sqm*
		2		*1.17*	*0.70*	*1.64*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.17*		*0.30*	*0.70*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.17*		*0.90*	*2.11*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*1.97*	*0.33*	*1.29*	*Sqm*
	Dirt wall	*4*	*6.87*		*0.50*	*13.74*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.87*		*0.43*	*11.68*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*2.81*		*0.18*	*1.97*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*2.81*		*0.25*	*2.81*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*2.81*		*0.55*	*6.18*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**295.80**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.02*		*12.13*	*Sqm*
	TOTAL					**12.13**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.57*	*0.90*	*1.54*	***Cum***
	TOTAL					**1.54**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.17*	*0.15*	*0.39*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.17*	*0.15*	*0.39*	*Cum*
	TOTAL					**0.77**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.33*	*0.48*		*2.24*	*Sqm*
	On Abutment Top	*2*	*2.87*	*0.45*		*2.10*	*Sqm*
	TOTAL					**4.33**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.00*	*1.01*		*2.012*	*Cum*
	Section B-B	2	*4.10*	*1.19*		*9.766*	*Cum*
	Section C-C	2	*2.77*	*0.91*		*5.040*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.95*	*1.13*		*4.449*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.64*		*0.634*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*1.29*	*1.08*		*2.779*	*Cum*
	TOTAL					**24.68**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF DABUR MR. OFFTAKING FROM RD-15+722 KM AT ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*2.02*	*4.356*	*17.581*	*Cum*
	Section B-B	*2*	*5.75*	*1.66*	*2.240*	*42.880*	*Cum*
	Section C-C	*2*	*2.73*	*1.48*	*2.240*	*18.143*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.31*	*1.74*	*4.356*	*32.641*	*Cum*
	Left Bank Sec a to d	1	5.15	3.93	2.830	*57.175*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*1.10*	*2.140*	*2.307*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.61*	*1.85*	*2.140*	*20.645*	*Cum*
	Floor						
	U/S key	*1*	*5.937*		*1.150*	*6.827*	*Cum*
	Floor	*1*	*9.000*		*0.650*	*5.850*	*Cum*
		1	*1.460*	*1.070*	*0.650*	*1.015*	*Cum*
		1	*3.552*	*1.070*	*1.150*	*4.370*	*Cum*
		1	*1.250*	*1.070*	*0.750*	*1.338*	*Cum*
		1	*0.643*	*1.070*	*0.750*	*0.516*	*Cum*
		1	*1.603*	*1.070*	*0.800*	*1.372*	*Cum*
		1	*1.310*	*1.070*	*0.800*	*1.121*	*Cum*
		1	*0.975*	*1.070*	*1.650*	*1.721*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.070*	*0.600*	*1.412*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.070*	*0.850*	*1.200*	*1.091*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.470*	*0.900*	*1.269*	*Cum*
	TOTAL					**219.28**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*5.944*	*0.150*	*0.56*	*Cum*
		1	*2.851*	*3.509*	*0.150*	*1.50*	*Cum*
		1	*1.907*	*1.070*	*0.150*	*0.31*	*Cum*
		1	*2.209*	*1.070*	*0.150*	*0.35*	*Cum*
		1	*3.624*	*1.070*	*0.150*	*0.58*	*Cum*
		1	*1.231*	*1.070*	*0.150*	*0.20*	*Cum*
		1	*0.128*	*1.070*	*0.150*	*0.02*	*Cum*
		1	*1.677*	*1.070*	*0.150*	*0.27*	*Cum*
		1	*0.692*	*1.070*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*2.018*	*0.300*	*1.21*	*Cum*
	Section B-B	*2*	*5.752*	*1.664*	*0.300*	*5.74*	*Cum*
	Section C-C	*2*	*2.729*	*1.484*	*0.300*	*2.43*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.312*	*1.738*	*0.300*	*2.25*	*Cum*
	Left Bank Sec a to d	*1*	*5.146*	*3.926*	*0.150*	*3.03*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.490*	*1.100*	*0.300*	*0.32*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.606*	*1.851*	*0.300*	*2.89*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.070*	*0.850*	*0.300*	*0.27*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.070*	*0.450*	*0.900*	*0.43*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*4*	*0.600*	*0.600*	*0.300*	*0.43*	*Cum*
	TOTAL					**24.13**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.22*	*1.33*	*3.24*	*Cum*
		2	*1.00*	*1.62*	*2.23*	*7.20*	*Cum*
	Section B-B	*2*	*5.75*	*1.04*	*0.74*	*8.87*	*Cum*
		2	*5.75*	*1.26*	*1.20*	*17.45*	*Cum*
	Section C-C	*2*	*2.73*	*0.95*	*0.44*	*2.29*	*Cum*
		2	*2.73*	*1.08*	*1.50*	*8.87*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.31*	*0.45*	*0.50*	*0.97*	*Cum*
		1	*4.31*	*0.89*	*1.48*	*5.70*	*Cum*
		1	*4.31*	*1.34*	*2.08*	*11.98*	*Cum*
	Left Bank						
	Section a-a	*1*		*3.75*	*0.50*	*1.88*	*Sqm*
		1		*3.60*	*0.20*	*0.72*	*Sqm*
		1		*1.97*	*1.98*	*3.89*	*Sqm*
						6.49	***Sqm***
	Section b-b	*1*		*3.75*	*0.50*	*1.88*	*Sqm*
		1		*3.35*	*0.20*	*0.67*	*Sqm*
		1		*1.91*	*1.98*	*3.79*	*Sqm*
						6.34	***Sqm***
	Section c-c	*1*		*3.75*	*0.50*	*1.88*	*Sqm*
		1		*2.99*	*0.20*	*0.60*	*Sqm*
		1		*1.74*	*1.98*	*3.44*	*Sqm*
						5.91	***Sqm***
	Section d-d	*1*		*3.75*	*0.50*	*1.88*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.98*	*0.95*	*Sqm*
						2.92	***Sqm***
	Bottom Key	*1*	*5.15*	*1.93*	*1.00*	*9.95*	*Cum*
	Top Stem Area	*1*	*5.15*	*5.41*		*27.86*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*0.90*	*0.62*	*Cum*
		2	*0.49*	*0.53*	*0.44*	*0.23*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.61*	*1.45*	*0.90*	*6.81*	*Cum*
		2	*2.61*	*1.19*	*0.44*	*2.72*	*Cum*
		2	*2.61*	*0.74*	*0.50*	*1.92*	*Cum*
	TOTAL					**117.66**	**Cum**
	Floor						
	U/S key	*1*	*5.94*		*1.00*	*5.94*	*Cum*
	Floor	*1*	*9.00*		*0.50*	*4.50*	*Cum*
		1	*1.46*	*1.07*	*0.50*	*0.78*	*Cum*
		1	*1.31*		*1.07*	*1.40*	*Cum*
		1	*3.55*	*1.07*	*1.00*	*3.80*	*Cum*
		1	*1.25*	*1.07*	*0.75*	*1.34*	*Cum*
		1	*0.64*	*1.07*	*0.30*	*0.21*	*Cum*
		1	*1.60*	*1.07*	*0.80*	*1.37*	*Cum*
	D/S key	*1*	*0.98*	*1.07*	*1.50*	*1.56*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**138.56**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.82*	*1.07*	*0.20*	*0.82*	*Cum*
		1	*1.43*	*1.07*	*0.20*	*0.31*	*Cum*
	crest	*1*	*1.23*	*1.07*	*0.15*	*0.20*	*Cum*
		1	*1.96*	*1.07*	*0.20*	*0.42*	*Cum*
		1	*3.50*	*1.07*	*0.20*	*0.75*	*Cum*
		1	*2.78*	*1.07*	*0.20*	*0.59*	*Cum*
	Top Slab	*1*	*5.25*	*1.87*	*0.33*	*3.21*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*1.87*	*0.08*	*0.60*	*Cum*
	Dirt wall	*2*	*8.48*	0.82	*0.50*	*6.95*	*Cum*
		2	*8.48*	*0.40*	*0.43*	*2.88*	*Cum*
	Parapet	*2*	*2.71*	*0.45*	*0.18*	*0.42*	*Cum*
		2	*2.71*	*0.35*	*0.25*	*0.48*	*Cum*
		2	*2.71*	*0.22*	*0.55*	*0.65*	*Cum*
	TOTAL					**18.27**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*2.330*	*29*		*1.578*	*106.635*	*Kg*
a2	*10*	*5.650*	*10*		*0.616*	*34.830*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.250*	*18*		*0.616*	*24.967*	*Kg*
a5	*10*	*5.550*	*7*		*0.616*	*23.949*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.502*	*30*		*0.888*	*66.631*	*Kg*
x2	*16*	*1.265*	*30*		*1.578*	*59.890*	*Kg*
x3	*10*	*1.770*	*24*		*0.616*	*26.187*	*Kg*
	Floor R/F						
	U/S Key						
	12	*9.525*	*5*		*0.888*	*42.277*	*Kg*
	12	*2.300*	*36*		*0.888*	*73.502*	*Kg*
	floor raft						
	12	*10.294*	*5*		*0.888*	*45.690*	*Kg*
	12	*10.564*	*5*		*0.888*	*46.888*	*Kg*
	12	*6.798*	*5*		*0.888*	*30.173*	*Kg*
	12	*2.300*	*98*		*0.888*	*200.088*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*117.66*	*0.25%*	*0.29*	*7850*	*2309.12*	*Kg*
	TOTAL Weight of steel (in kg)					3269.09	Kg
	TOTAL Weight of Steel (in Tonne)					**3.27**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.98		**2.98**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*1.33*	*5.32*	*Sqm*
		4		*1.22*	*1.33*	*6.49*	*Sqm*
		4	*1.00*		*2.23*	*8.90*	*Sqm*
		4		*1.62*	*2.23*	*14.41*	*Sqm*
	Section B-B	*4*	*5.75*		*0.74*	*17.03*	*Sqm*
		4		*1.04*	*0.74*	*3.08*	*Sqm*
		4	*5.75*		*1.20*	*27.61*	*Sqm*
		4		*1.26*	*1.20*	*6.07*	*Sqm*
	Section C-C	*4*	*2.73*		*0.44*	*4.80*	*Sqm*
		4		*0.95*	*0.44*	*1.68*	*Sqm*
		4	*2.73*		*1.50*	*16.37*	*Sqm*
		4		*1.08*	*1.50*	*6.50*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*4.31*		*0.50*	*4.31*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*4.31*		*1.48*	*12.76*	*Sqm*
		2		*0.89*	*1.48*	*2.65*	*Sqm*
		2	*4.31*		*2.08*	*17.90*	*Sqm*
		2		*1.34*	*2.08*	*5.56*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*5.15*		*1.00*	*10.29*	*Sqm*
		2		*1.93*	*1.00*	*3.87*	*Sqm*
	Section a-a	*2*	*1.72*		*0.50*	*1.72*	*Sqm*
		2		*3.75*	*0.50*	*3.75*	*Sqm*
		2	*1.72*		*0.20*	*0.69*	*Sqm*
		2		*3.60*	*0.20*	*1.44*	*Sqm*
		2	*1.72*		*1.98*	*6.79*	*Sqm*
		2		*1.97*	*1.98*	*7.78*	*Sqm*
	Section b-b	*2*	*1.72*		*0.50*	*1.72*	*Sqm*
		2		*3.75*	*0.50*	*3.75*	*Sqm*
		2	*1.72*		*0.20*	*0.69*	*Sqm*
		2		*3.35*	*0.20*	*1.34*	*Sqm*
		2	*1.72*		*1.98*	*6.79*	*Sqm*
		2		*1.91*	*1.98*	*7.58*	*Sqm*
	Section c-c	*2*	*1.72*		*0.50*	*1.72*	*Sqm*
		2		*3.75*	*0.50*	*3.75*	*Sqm*
		2	*1.72*		*0.20*	*0.69*	*Sqm*
		2		*2.99*	*0.20*	*1.20*	*Sqm*
		2	*1.72*		*1.98*	*6.79*	*Sqm*
		2		*1.74*	*1.98*	*6.87*	*Sqm*
	Section d-d	*2*	*1.72*		*0.50*	*1.72*	*Sqm*
		2		*3.75*	*0.50*	*3.75*	*Sqm*
		2	*1.72*		*0.20*	*0.69*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.72*		*1.98*	*6.79*	*Sqm*
		2		*0.48*	*1.98*	*1.90*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.49*		*0.90*	*1.76*	*Sqm*
		4		*0.70*	*0.90*	*2.52*	*Sqm*
		4	*0.49*		*0.44*	*0.86*	*Sqm*
		4		*0.53*	*0.44*	*0.92*	*Sqm*
		4	*0.49*		*0.50*	*0.98*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.61*		*0.90*	*9.38*	*Sqm*
		4		*1.45*	*0.90*	*5.22*	*Sqm*
		4	*2.61*		*0.44*	*4.59*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.19*	*0.44*	*2.09*	*Sqm*
		4	*2.61*		*0.50*	*5.21*	*Sqm*
		4		*0.74*	*0.50*	*1.47*	*Sqm*
	Floor						
	U/S key	*2*	*5.94*		*1.00*	*11.87*	*Sqm*
		2		*0.00*	*1.00*	*0.00*	*Sqm*
	Floor	*2*	*9.00*		*0.50*	*9.00*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.46*		*0.50*	*1.46*	*Sqm*
		2		*1.07*	*0.50*	*1.07*	*Sqm*
		2	*3.55*		*1.00*	*7.10*	*Sqm*
		2		*1.07*	*1.00*	*2.14*	*Sqm*
		2	*1.25*		*0.50*	*1.25*	*Sqm*
		2		*1.07*	*0.50*	*1.07*	*Sqm*
		2	*0.64*		*0.30*	*0.39*	*Sqm*
		2		*1.07*	*0.30*	*0.64*	*Sqm*
		2	*1.60*		*0.80*	*2.56*	*Sqm*
		2		*1.07*	*0.80*	*1.71*	*Sqm*
		2	*1.31*			*2.62*	*Sqm*
		2		*1.07*		*2.14*	*Sqm*
	D/S key	*2*	*0.98*		*1.50*	*2.93*	*Sqm*
		2		*1.07*	*1.50*	*3.21*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.07*		*0.30*	*0.64*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.07*		*0.90*	*1.93*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*1.87*	*0.33*	*1.22*	*Sqm*
	Dirt wall	*4*	*8.48*		*0.50*	*16.96*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*8.48*		*0.43*	*14.42*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*2.71*		*0.18*	*1.90*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*2.71*		*0.25*	*2.71*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*2.71*		*0.55*	*5.96*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**400.60**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*1.93*		*11.59*	*Sqm*
	TOTAL					**11.59**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.47*	*0.90*	*1.27*	***Cum***
	TOTAL					**1.27**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.07*	*0.15*	*0.35*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.07*	*0.15*	*0.35*	*Cum*
	TOTAL					**0.71**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.97*	*0.48*		*2.85*	*Sqm*
	On Abutment Top	*2*	*4.48*	*0.45*		*2.67*	*Sqm*
	TOTAL					**5.52**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.00*	*0.70*		*1.400*	*Cum*
	Section B-B	2	*5.75*	*1.15*		*13.230*	*Cum*
	Section C-C	2	*2.73*	*0.90*		*4.912*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*4.31*	*0.80*		*3.449*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.62*		*0.608*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.61*	*0.53*		*2.762*	*Cum*
	TOTAL					**26.36**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SADOPUR MR. OFFTAKING FROM RD-16+000 KM AT ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*3.31*	*1.62*	*4.121*	*44.074*	*Cum*
	Section B-B	*2*	*2.68*	*1.68*	*2.210*	*19.831*	*Cum*
	Section C-C	*2*	*3.07*	*1.50*	*2.210*	*20.320*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.79*	*1.71*	*4.121*	*26.662*	*Cum*
	Left Bank Sec a to d	1	5.03	3.86	2.780	*53.885*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*1.10*	*2.607*	*2.822*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.62*	*1.87*	*2.607*	*25.499*	*Cum*
	Floor						
	U/S key	*1*	*6.043*		*1.150*	*6.949*	*Cum*
	Floor	*1*	*9.010*		*0.650*	*5.857*	*Cum*
		1	*1.460*	*1.000*	*0.650*	*0.949*	*Cum*
		1	*2.778*	*1.000*	*1.100*	*3.055*	*Cum*
		1	*0.948*	*1.000*	*0.725*	*0.948*	*Cum*
		1	*0.544*	*1.000*	*0.750*	*0.408*	*Cum*
		1	*2.125*	*1.000*	*0.800*	*1.700*	*Cum*
		1	*0.990*	*1.000*	*0.800*	*0.792*	*Cum*
		1	*0.950*	*1.000*	*1.550*	*1.473*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.000*	*0.600*	*1.320*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.000*	*0.850*	*1.200*	*1.020*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.400*	*0.900*	*1.080*	*Cum*
	TOTAL					**218.64**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*5.507*	*0.150*	*0.52*	*Cum*
		1	*2.782*	*2.612*	*0.150*	*1.09*	*Cum*
		1	*1.918*	*1.000*	*0.150*	*0.29*	*Cum*
		1	*2.325*	*1.000*	*0.150*	*0.35*	*Cum*
		1	*2.567*	*1.000*	*0.150*	*0.39*	*Cum*
		1	*1.050*	*1.000*	*0.150*	*0.16*	*Cum*
		1	*0.707*	*1.000*	*0.150*	*0.11*	*Cum*
		1	*1.566*	*1.000*	*0.150*	*0.23*	*Cum*
		1	*0.692*	*1.000*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*3.305*	*1.618*	*0.300*	*3.21*	*Cum*
	Section B-B	*2*	*2.677*	*1.676*	*0.300*	*2.69*	*Cum*
	Section C-C	*2*	*3.073*	*1.496*	*0.300*	*2.76*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.788*	*1.708*	*0.300*	*1.94*	*Cum*
	Left Bank Sec a to d	*1*	*5.028*	*3.855*	*0.150*	*2.91*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.492*	*1.100*	*0.300*	*0.32*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.618*	*1.868*	*0.300*	*2.93*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.000*	*0.850*	*0.300*	*0.26*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.000*	*0.450*	*0.900*	*0.41*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*3*	*0.600*	*0.600*	*0.300*	*0.32*	*Cum*
	TOTAL					**22.19**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*3.31*	*0.45*	*0.50*	*1.49*	*Cum*
		2	*3.31*	*0.83*	*1.28*	*7.06*	*Cum*
		2	*3.31*	*1.22*	*2.04*	*16.43*	*Cum*
	Section B-B	*2*	*2.68*	*1.05*	*0.76*	*4.26*	*Cum*
		2	*2.68*	*1.28*	*1.15*	*7.86*	*Cum*
	Section C-C	*2*	*3.07*	*0.96*	*0.46*	*2.71*	*Cum*
		2	*3.07*	*1.10*	*1.45*	*9.77*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.79*	*0.45*	*0.50*	*0.85*	*Cum*
		1	*3.79*	*0.88*	*1.43*	*4.76*	*Cum*
		1	*3.79*	*1.31*	*1.89*	*9.37*	*Cum*
	Left Bank						
	Section a-a	*1*		*3.675*	*0.50*	*1.84*	*Sqm*
		1		*3.53*	*0.20*	*0.71*	*Sqm*
		1		*1.93*	*1.93*	*3.72*	*Sqm*
						6.26	***Sqm***
	Section b-b	*1*		*3.68*	*0.50*	*1.84*	*Sqm*
		1		*3.21*	*0.20*	*0.64*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1		*1.84*	*1.93*	*3.56*	*Sqm*
						6.04	***Sqm***
	Section c-c	*1*		*3.68*	*0.50*	*1.84*	*Sqm*
		1		*2.62*	*0.20*	*0.52*	*Sqm*
		1		*1.55*	*1.93*	*3.00*	*Sqm*
						5.36	***Sqm***
	Section d-d	*1*		*3.68*	*0.50*	*1.84*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.93*	*0.93*	*Sqm*
						2.86	***Sqm***
	Bottom Key	*1*	*5.03*	*1.60*	*1.00*	*8.03*	*Cum*
	Top Stem Area	*1*	*5.03*	*5.13*		*25.79*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*1.35*	*0.93*	*Cum*
		2	*0.49*	*0.53*	*0.46*	*0.24*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.62*	*1.47*	*1.35*	*10.35*	*Cum*
		2	*2.62*	*1.20*	*0.46*	*2.88*	*Cum*
		2	*2.62*	*0.74*	*0.50*	*1.93*	*Cum*
	TOTAL					**114.88**	**Cum**
	Floor						
	U/S key	*1*	*6.04*		*1.00*	*6.04*	*Cum*
	Floor	*1*	*9.01*		*0.50*	*4.51*	*Cum*
		1	*1.46*	*1.00*	*0.50*	*0.73*	*Cum*
		1	*0.99*		*1.00*	*0.99*	*Cum*
		1	*2.78*	*1.00*	*0.95*	*2.64*	*Cum*
		1	*0.95*	*1.00*	*0.73*	*0.95*	*Cum*
		1	*0.54*	*1.00*	*0.30*	*0.16*	*Cum*
		1	*2.13*	*1.00*	*0.80*	*1.70*	*Cum*
	D/S key	*1*	*0.95*	*1.00*	*1.40*	*1.33*	*Cum*
	TOTAL					**133.92**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.68*	*1.00*	*0.20*	*0.74*	*Cum*
		1	*1.48*	*1.00*	*0.20*	*0.30*	*Cum*
	crest	*1*	*1.23*	*1.00*	*0.15*	*0.18*	*Cum*
		1	*1.66*	*1.00*	*0.20*	*0.33*	*Cum*
		1	*3.00*	*1.00*	*0.20*	*0.60*	*Cum*
		1	*3.12*	*1.00*	*0.20*	*0.62*	*Cum*
	Top Slab	*1*	*5.25*	*1.80*	*0.33*	*3.09*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*1.80*	*0.08*	*0.57*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*2.64*	*0.45*	*0.18*	*0.41*	*Cum*
		2	*2.64*	*0.35*	*0.25*	*0.46*	*Cum*
		2	*2.64*	*0.22*	*0.55*	*0.63*	*Cum*
	TOTAL					**14.61**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
a1	*16*	*2.260*	*29*		*1.578*	*103.431*	*Kg*
a2	*10*	*5.650*	*9*		*0.616*	*31.347*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.180*	*18*		*0.616*	*24.190*	*Kg*
a5	*10*	*5.550*	*7*		*0.616*	*23.949*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.502*	*30*		*0.888*	*66.631*	*Kg*
x2	*16*	*1.265*	*30*		*1.578*	*59.890*	*Kg*
x3	*10*	*1.770*	*24*		*0.616*	*26.187*	*Kg*
	Floor R/F						
	U/S Key						
	12	*9.480*	*4*		*0.888*	*33.662*	*Kg*
	12	*1.700*	*36*		*0.888*	*54.327*	*Kg*
	floor raft						
	12	*9.774*	*4*		*0.888*	*34.706*	*Kg*
	12	*9.890*	*4*		*0.888*	*35.118*	*Kg*
	12	*6.534*	*4*		*0.888*	*23.201*	*Kg*
	12	*2.500*	*93*		*0.888*	*206.391*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*114.88*	*0.25%*	*0.29*	*7850*	*2254.44*	*Kg*
	TOTAL Weight of steel (in kg)					3155.73	Kg
	TOTAL Weight of Steel (in Tonne)					**3.16**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.84		**2.84**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*3.31*		*0.50*	*6.61*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*3.31*		*1.28*	*16.92*	*Sqm*
		4		*0.83*	*1.28*	*4.27*	*Sqm*
		4	*3.31*		*2.04*	*26.98*	*Sqm*
		4		*1.22*	*2.04*	*9.94*	*Sqm*
	Section B-B	*4*	*2.68*		*0.76*	*8.14*	*Sqm*
		4		*1.05*	*0.76*	*3.19*	*Sqm*
		4	*2.68*		*1.15*	*12.31*	*Sqm*
		4		*1.28*	*1.15*	*5.87*	*Sqm*
	Section C-C	*4*	*3.07*		*0.46*	*5.65*	*Sqm*
		4		*0.96*	*0.46*	*1.76*	*Sqm*
		4	*3.07*		*1.45*	*17.82*	*Sqm*
		4		*1.10*	*1.45*	*6.36*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*3.79*		*0.50*	*3.79*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*3.79*		*1.43*	*10.83*	*Sqm*
		2		*0.88*	*1.43*	*2.51*	*Sqm*
		2	*3.79*		*1.89*	*14.33*	*Sqm*
		2		*1.31*	*1.89*	*4.95*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*5.03*		*1.00*	*10.06*	*Sqm*
		2		*1.60*	*1.00*	*3.20*	*Sqm*
	Section a-a	*2*	*1.68*		*0.50*	*1.68*	*Sqm*
		2		*3.68*	*0.50*	*3.68*	*Sqm*
		2	*1.68*		*0.20*	*0.67*	*Sqm*
		2		*3.53*	*0.20*	*1.41*	*Sqm*
		2	*1.68*		*1.93*	*6.47*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.93	1.93	7.44	Sqm
	Section b-b	2	1.68		0.50	1.68	Sqm
		2		3.68	0.50	3.68	Sqm
		2	1.68		0.20	0.67	Sqm
		2		3.21	0.20	1.28	Sqm
		2	1.68		1.93	6.47	Sqm
		2		1.84	1.93	7.11	Sqm
	Section c-c	2	1.68		0.50	1.68	Sqm
		2		3.68	0.50	3.68	Sqm
		2	1.68		0.20	0.67	Sqm
		2		2.62	0.20	1.05	Sqm
		2	1.68		1.93	6.47	Sqm
		2		1.55	1.93	5.99	Sqm
	Section d-d	2	1.68		0.50	1.68	Sqm
		2		3.68	0.50	3.68	Sqm
		2	1.68		0.20	0.67	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.68		1.93	6.47	Sqm
		2		0.48	1.93	1.85	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.49		1.35	2.65	Sqm
		4		0.70	1.35	3.77	Sqm
		4	0.49		0.46	0.91	Sqm
		4		0.53	0.46	0.97	Sqm
		4	0.49		0.50	0.98	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.62		1.35	14.11	Sqm
		4		1.47	1.35	7.91	Sqm
		4	2.62		0.46	4.82	Sqm
		4		1.20	0.46	2.20	Sqm
		4	2.62		0.50	5.24	Sqm
		4		0.74	0.50	1.47	Sqm
	Floor						
	U/S key	2	6.04		1.00	12.09	Sqm
		2		0.00	1.00	0.00	Sqm
	Floor	2	9.01		0.50	9.01	Sqm
		2		0.00	0.50	0.00	Sqm
		2	1.46		0.50	1.46	Sqm
		2		1.00	0.50	1.00	Sqm
		2	2.78		0.95	5.28	Sqm
		2		1.00	0.95	1.90	Sqm
		2	0.95		0.50	0.95	Sqm
		2		1.00	0.50	1.00	Sqm
		2	0.54		0.30	0.33	Sqm
		2		1.00	0.30	0.60	Sqm
		2	2.13		0.80	3.40	Sqm
		2		1.00	0.80	1.60	Sqm
		2	0.99			1.98	Sqm
		2		1.00		2.00	Sqm
	D/S key	2	0.95		1.40	2.66	Sqm
		2		1.00	1.40	2.80	Sqm
	Toe Wall Base D/S Portion	2	1.00		0.30	0.60	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.00		0.90	1.80	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.33	3.43	Sqm
		2		1.80	0.33	1.18	Sqm
	Dirt wall	4	5.75		0.50	11.50	Sqm
		4		0.82	0.50	1.64	Sqm
		4	5.75		0.43	9.78	Sqm
		4		0.40	0.43	0.68	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Parapet	*4*	*2.64*		*0.18*	*1.85*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*2.64*		*0.25*	*2.64*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*2.64*		*0.55*	*5.81*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**390.26**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*1.97*		*11.80*	*Sqm*
	TOTAL					**11.80**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.40*	*0.90*	*1.08*	***Cum***
	TOTAL					**1.08**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.00*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.00*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.97*	*0.48*		*2.85*	*Sqm*
	On Abutment Top	*2*	*4.48*	*0.45*		*2.67*	*Sqm*
	TOTAL					**5.52**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*3.31*	*0.76*		*5.024*	*Cum*
	Section B-B	2	*2.68*	*1.20*		*6.425*	*Cum*
	Section C-C	2	*3.07*	*0.90*		*5.531*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.79*	*0.84*		*3.182*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.72*		*0.708*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.62*	*0.61*		*3.194*	*Cum*
	TOTAL					**24.06**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF DHARAMPUR SUB DY. OFFTAKING FROM RD-19+980 KM AT ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*1.76*	*3.256*	*11.442*	*Cum*
	Section B-B	*2*	*3.10*	*1.85*	*2.456*	*28.125*	*Cum*
	Section C-C	*2*	*3.78*	*1.67*	*2.456*	*30.976*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.63*	*1.48*	*3.256*	*22.245*	*Cum*
	Left Bank Sec a to d	1	4.02	3.21	2.395	*30.906*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*1.10*	*2.656*	*3.033*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.81*	*2.11*	*2.656*	*31.570*	*Cum*
	Floor						
	U/S key	*1*	*6.810*		*0.850*	*5.789*	*Cum*
	Floor	*1*	*11.860*		*0.650*	*7.709*	*Cum*
		1	*1.394*	*3.100*	*0.650*	*2.808*	*Cum*
		1	*3.040*	*3.100*	*0.750*	*7.068*	*Cum*
		1	*0.800*	*3.100*	*0.400*	*2.480*	*Cum*
		1	*0.910*	*3.100*	*0.800*	*2.257*	*Cum*
		1	*1.850*	*3.100*	*0.500*	*2.868*	*Cum*
		1	*0.390*	*3.100*	*0.500*	*0.605*	*Cum*
		1	*0.778*	*3.100*	*0.861*	*2.075*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*3.100*	*0.600*	*4.092*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.100*	*0.850*	*1.200*	*3.162*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*2.500*	*0.900*	*6.750*	*Cum*
	TOTAL					**205.96**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*5.181*	*0.150*	*0.49*	*Cum*
		1	*2.135*	*3.827*	*0.150*	*1.23*	*Cum*
		1	*1.775*	*3.100*	*0.150*	*0.83*	*Cum*
		1	*0.863*	*3.100*	*0.150*	*0.40*	*Cum*
		1	*3.060*	*3.100*	*0.150*	*1.42*	*Cum*
		1	*0.895*	*3.100*	*0.150*	*0.42*	*Cum*
		1	*0.910*	*3.100*	*0.150*	*0.42*	*Cum*
		1	*0.795*	*3.100*	*0.150*	*0.37*	*Cum*
		1	*0.692*	*3.100*	*0.150*	*0.32*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.757*	*0.300*	*1.05*	*Cum*
	Section B-B	*2*	*3.100*	*1.847*	*0.300*	*3.44*	*Cum*
	Section C-C	*2*	*3.783*	*1.667*	*0.300*	*3.78*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.626*	*1.477*	*0.300*	*2.05*	*Cum*
	Left Bank Sec a to d	*1*	*4.020*	*3.210*	*0.150*	*1.94*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.519*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.814*	*2.112*	*0.300*	*3.57*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.100*	*0.850*	*0.300*	*0.79*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*3.100*	*0.450*	*0.900*	*1.26*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*13*	*0.600*	*0.600*	*0.300*	*1.40*	*Cum*
	TOTAL					**26.72**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.09*	*0.90*	*1.95*	*Cum*
		2	*1.00*	*1.36*	*1.56*	*4.24*	*Cum*
	Section B-B	*2*	*3.10*	*1.13*	*1.05*	*7.34*	*Cum*
		2	*3.10*	*1.45*	*1.11*	*9.97*	*Cum*
	Section C-C	*2*	*3.78*	*1.04*	*0.75*	*5.88*	*Cum*
		2	*3.78*	*1.27*	*1.41*	*13.53*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.63*	*0.45*	*0.50*	*1.04*	*Cum*
		1	*4.63*	*0.76*	*1.05*	*3.69*	*Cum*
		1	*4.63*	*1.08*	*1.41*	*7.03*	*Cum*
	Left Bank						
	Section a-a	*1*		3.098	*0.50*	*1.55*	*Sqm*
		1		*3.24*	*0.20*	*0.65*	*Sqm*
		1		*1.93*	*1.55*	*2.98*	*Sqm*
						5.17	***Sqm***
	Section b-b	*1*		*3.10*	*0.50*	*1.55*	*Sqm*
		1		*2.53*	*0.20*	*0.51*	*Sqm*
		1		*1.50*	*1.55*	*2.32*	*Sqm*
						4.38	***Sqm***
	Section c-c	*1*		*3.10*	*0.50*	*1.55*	*Sqm*
		1		*1.77*	*0.20*	*0.35*	*Sqm*
		1		*1.12*	*1.55*	*1.73*	*Sqm*
						3.64	***Sqm***
	Section d-d	*1*		*3.10*	*0.50*	*1.55*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.55*	*0.74*	*Sqm*
						2.39	***Sqm***
	Bottom Key	*1*	*4.02*	*1.31*	*1.00*	*5.26*	*Cum*
	Top Stem Area	*1*	*4.02*	*3.89*		*15.65*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*0.70*	*1.11*	*0.81*	*Cum*
		2	*0.52*	*0.53*	*0.75*	*0.41*	*Cum*
		2	*0.52*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.81*	*1.71*	*1.11*	*10.70*	*Cum*
		2	*2.81*	*1.33*	*0.75*	*5.56*	*Cum*
		2	*2.81*	*0.75*	*0.50*	*2.11*	*Cum*
	TOTAL					**96.17**	**Cum**
	Floor						
	U/S key	*1*	*6.81*		*0.70*	*4.77*	*Cum*
	Floor	*1*	*11.86*		*0.50*	*5.93*	*Cum*
		1	*1.39*	*3.10*	*0.50*	*2.16*	*Cum*
		1	*0.39*		*3.10*	*1.21*	*Cum*
		1	*3.04*	*3.10*	*0.60*	*5.65*	*Cum*
		1	*0.80*	*3.10*	*0.40*	*2.48*	*Cum*
		1	*0.91*	*3.10*	*0.35*	*0.99*	*Cum*
		1	*1.85*	*3.10*	*0.50*	*2.87*	*Cum*
	D/S key	*1*	*0.78*	*3.10*	*0.71*	*1.71*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**123.94**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.10*	*3.10*	*0.20*	*1.92*	*Cum*
		1	*1.48*	*3.10*	*0.20*	*0.92*	*Cum*
	crest	*1*	*1.23*	*3.10*	*0.15*	*0.57*	*Cum*
		1	*0.67*	*3.10*	*0.20*	*0.42*	*Cum*
		1	*3.00*	*3.10*	*0.20*	*1.86*	*Cum*
		1	*2.83*	*3.10*	*0.20*	*1.76*	*Cum*
	Top Slab	*1*	*5.25*	*3.90*	*0.38*	*7.71*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.90*	*0.08*	*1.24*	*Cum*
	Dirt wall	*2*	*6.88*	0.82	*0.50*	*5.64*	*Cum*
		2	*6.88*	*0.40*	*0.43*	*2.34*	*Cum*
	Parapet	*2*	*4.74*	*0.45*	*0.18*	*0.74*	*Cum*
		2	*4.74*	*0.35*	*0.25*	*0.83*	*Cum*
		2	*4.74*	*0.22*	*0.55*	*1.14*	*Cum*
	TOTAL					**27.08**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*4.360*	*37*		*1.578*	*254.585*	*Kg*
a2	*10*	*5.650*	*20*		*0.616*	*69.660*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*4.280*	*21*		*0.616*	*55.407*	*Kg*
a5	*10*	*5.550*	*16*		*0.616*	*54.742*	*Kg*
	Dirt Wall						
d1	*12*	*4.560*	*26*		*0.888*	*105.246*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.552*	*64*		*0.888*	*144.987*	*Kg*
x2	*16*	*1.315*	*64*		*1.578*	*132.816*	*Kg*
x3	*10*	*3.800*	*24*		*0.616*	*56.221*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.956*	*12*		*0.888*	*84.751*	*Kg*
	12	*3.800*	*31*		*0.888*	*104.571*	*Kg*
	floor raft						
	12	*8.511*	*12*		*0.888*	*90.663*	*Kg*
	12	*8.494*	*12*		*0.888*	*90.482*	*Kg*
	12	*3.946*	*12*		*0.888*	*42.035*	*Kg*
	12	*3.800*	*77*		*0.888*	*259.742*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*96.17*	*0.25%*	*0.24*	*7850*	*1887.39*	*Kg*
	TOTAL Weight of steel (in kg)					3508.62	Kg
	TOTAL Weight of Steel (in Tonne)					**3.51**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		3.93		**3.93**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*0.90*	*3.58*	*Sqm*
		4		*1.09*	*0.90*	*3.90*	*Sqm*
		4	*1.00*		*1.56*	*6.24*	*Sqm*
		4		*1.36*	*1.56*	*8.47*	*Sqm*
	Section B-B	*4*	*3.10*		*1.05*	*12.96*	*Sqm*
		4		*1.13*	*1.05*	*4.74*	*Sqm*
		4	*3.10*		*1.11*	*13.78*	*Sqm*
		4		*1.45*	*1.11*	*6.43*	*Sqm*
	Section C-C	*4*	*3.78*		*0.75*	*11.27*	*Sqm*
		4		*1.04*	*0.75*	*3.11*	*Sqm*
		4	*3.78*		*1.41*	*21.35*	*Sqm*
		4		*1.27*	*1.41*	*7.15*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*4.63*		*0.50*	*4.63*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*4.63*		*1.05*	*9.67*	*Sqm*
		2		*0.76*	*1.05*	*1.60*	*Sqm*
		2	*4.63*		*1.41*	*13.05*	*Sqm*
		2		*1.08*	*1.41*	*3.04*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*4.02*		*1.00*	*8.04*	*Sqm*
		2		*1.31*	*1.00*	*2.62*	*Sqm*
	Section a-a	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.10*	*0.50*	*3.10*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*3.24*	*0.20*	*1.29*	*Sqm*
		2	*1.34*		*1.55*	*4.14*	*Sqm*
		2		*1.93*	*1.55*	*5.96*	*Sqm*
	Section b-b	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.10*	*0.50*	*3.10*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*2.53*	*0.20*	*1.01*	*Sqm*
		2	*1.34*		*1.55*	*4.14*	*Sqm*
		2		*1.50*	*1.55*	*4.65*	*Sqm*
	Section c-c	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.10*	*0.50*	*3.10*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*1.77*	*0.20*	*0.71*	*Sqm*
		2	*1.34*		*1.55*	*4.14*	*Sqm*
		2		*1.12*	*1.55*	*3.47*	*Sqm*
	Section d-d	*2*	*1.34*		*0.50*	*1.34*	*Sqm*
		2		*3.10*	*0.50*	*3.10*	*Sqm*
		2	*1.34*		*0.20*	*0.54*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.34*		*1.55*	*4.14*	*Sqm*
		2		*0.48*	*1.55*	*1.48*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.52*		*1.11*	*2.31*	*Sqm*
		4		*0.70*	*1.11*	*3.11*	*Sqm*
		4	*0.52*		*0.75*	*1.55*	*Sqm*
		4		*0.53*	*0.75*	*1.56*	*Sqm*
		4	*0.52*		*0.50*	*1.04*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.81*		*1.11*	*12.51*	*Sqm*
		4		*1.71*	*1.11*	*7.61*	*Sqm*
		4	*2.81*		*0.75*	*8.39*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.33*	*0.75*	*3.95*	*Sqm*
		4	*2.81*		*0.50*	*5.63*	*Sqm*
		4		*0.75*	*0.50*	*1.50*	*Sqm*
	Floor						
	U/S key	*2*	*6.81*		*0.70*	*9.53*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*11.86*		*0.50*	*11.86*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*3.10*	*0.50*	*3.10*	*Sqm*
		2	*3.04*		*0.60*	*3.65*	*Sqm*
		2		*3.10*	*0.60*	*3.72*	*Sqm*
		2	*0.80*		*0.50*	*0.80*	*Sqm*
		2		*3.10*	*0.50*	*3.10*	*Sqm*
		2	*0.91*		*0.35*	*0.64*	*Sqm*
		2		*3.10*	*0.35*	*2.17*	*Sqm*
		2	*1.85*		*0.50*	*1.85*	*Sqm*
		2		*3.10*	*0.50*	*3.10*	*Sqm*
		2	*0.39*			*0.78*	*Sqm*
		2		*3.10*		*6.20*	*Sqm*
	D/S key	*2*	*0.78*		*0.71*	*1.11*	*Sqm*
		2		*3.10*	*0.71*	*4.41*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*3.10*		*0.30*	*1.86*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*3.10*		*0.90*	*5.58*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*3.90*	*0.38*	*2.94*	*Sqm*
	Dirt wall	*4*	*6.88*		*0.50*	*13.77*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.88*		*0.43*	*11.70*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*4.74*		*0.18*	*3.32*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*4.74*		*0.25*	*4.74*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*4.74*		*0.55*	*10.43*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**375.25**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.48*		*14.89*	*Sqm*
	TOTAL					**14.89**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*2.50*	*0.90*	*6.75*	***Cum***
	TOTAL					**6.75**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*3.10*	*0.15*	*1.02*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*3.10*	*0.15*	*1.02*	*Cum*
	TOTAL					**2.05**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.32*	*0.48*		*2.23*	*Sqm*
	On Abutment Top	*2*	*2.88*	*0.45*		*2.09*	*Sqm*
	TOTAL					**4.31**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.00*	*1.10*		*2.200*	*Cum*
	Section B-B	2	*3.10*	*1.60*		*9.920*	*Cum*
	Section C-C	2	*3.78*	*1.23*		*9.306*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*4.63*	*1.24*		*5.736*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.52*	*0.78*		*0.810*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.81*	*0.66*		*3.714*	*Cum*
	TOTAL					**31.69**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PATOI DY. OFFTAKING FROM RD-19+980 KM AT ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.20*	*1.48*	*3.300*	*11.722*	*Cum*
	Section B-B	*2*	*4.90*	*2.00*	*2.600*	*50.960*	*Cum*
	Section C-C	*2*	*2.35*	*1.82*	*2.600*	*22.240*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.69*	*1.57*	*3.300*	*24.286*	*Cum*
	Left Bank Sec a to d	1	4.49	3.43	2.550	*39.228*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*1.10*	*2.756*	*3.147*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.81*	*2.33*	*2.756*	*36.202*	*Cum*
	Floor						
	U/S key	*1*	*10.006*		*0.850*	*8.505*	*Cum*
	Floor	*1*	*17.900*		*0.650*	*11.635*	*Cum*
		1	*1.394*	*4.610*	*0.650*	*4.176*	*Cum*
		1	*4.000*	*4.610*	*0.750*	*13.830*	*Cum*
		1	*1.200*	*4.610*	*0.400*	*5.532*	*Cum*
		1	*0.718*	*4.610*	*0.750*	*2.482*	*Cum*
		1	*1.150*	*4.610*	*0.500*	*2.651*	*Cum*
		1	*0.402*	*4.610*	*0.500*	*0.927*	*Cum*
		1	*0.750*	*4.610*	*0.750*	*2.593*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*4.610*	*0.600*	*6.085*	*Cum*
	Toe Wall Base D/S Portion	*1*	*4.610*	*0.850*	*1.200*	*4.702*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*4.010*	*0.900*	*10.827*	*Cum*
	TOTAL					**261.73**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*6.903*	*0.150*	*0.65*	*Cum*
		1	*2.356*	*5.468*	*0.150*	*1.93*	*Cum*
		1	*1.774*	*4.610*	*0.150*	*1.23*	*Cum*
		1	*0.863*	*4.610*	*0.150*	*0.60*	*Cum*
		1	*4.061*	*4.610*	*0.150*	*2.81*	*Cum*
		1	*1.265*	*4.610*	*0.150*	*0.87*	*Cum*
		1	*0.133*	*4.610*	*0.150*	*0.09*	*Cum*
		1	*0.670*	*4.610*	*0.150*	*0.46*	*Cum*
		1	*0.692*	*4.610*	*0.150*	*0.48*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.200*	*1.480*	*0.300*	*1.07*	*Cum*
	Section B-B	*2*	*4.900*	*2.000*	*0.300*	*5.88*	*Cum*
	Section C-C	*2*	*2.350*	*1.820*	*0.300*	*2.57*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.688*	*1.570*	*0.300*	*2.21*	*Cum*
	Left Bank Sec a to d	*1*	*4.485*	*3.430*	*0.150*	*2.31*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.519*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.814*	*2.334*	*0.300*	*3.94*	*Cum*
	Toe Wall Base D/S Portion	*1*	*4.610*	*0.850*	*0.300*	*1.18*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*4.610*	*0.450*	*0.900*	*1.87*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*21*	*0.600*	*0.600*	*0.300*	*2.27*	*Cum*
	TOTAL					**33.96**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.20*	*0.45*	*0.50*	*0.54*	*Cum*
		2	*1.20*	*0.77*	*1.05*	*1.93*	*Cum*
		2	*1.20*	*1.08*	*1.45*	*3.76*	*Cum*
	Section B-B	*2*	*4.90*	*1.21*	*1.30*	*15.42*	*Cum*
		2	*4.90*	*1.60*	*1.00*	*15.68*	*Cum*
	Section C-C	*2*	*2.35*	*1.12*	*1.00*	*5.26*	*Cum*
		2	*2.35*	*1.42*	*1.30*	*8.68*	*Cum*
	pier						
	circular portion	*1*	*0.41*	*0.82*	*1.800*	*0.475*	*Cum*
	Retangular Portion	*1*	*6.13*	*0.82*	*1.800*	*9.048*	*Cum*
	pier Nose	*1*	*0.42*		*1.800*	*0.756*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.69*	*0.45*	*0.50*	*1.05*	*Cum*
		1	*4.69*	*0.81*	*1.20*	*4.56*	*Cum*
		1	*4.69*	*1.17*	*1.30*	*7.13*	*Cum*
	Left Bank						
	Section a-a	*1*		*3.33*	*0.50*	*1.67*	*Sqm*
		1		*3.18*	*0.20*	*0.64*	*Sqm*
		1		*1.76*	*1.70*	*2.98*	*Sqm*
						5.28	***Sqm***
	Section b-b	*1*		*3.33*	*0.50*	*1.67*	*Sqm*
		1		*2.77*	*0.20*	*0.55*	*Sqm*
		1		*1.62*	*1.70*	*2.76*	*Sqm*
						4.98	***Sqm***
	Section c-c	*1*		*3.33*	*0.50*	*1.67*	*Sqm*
		1		*2.10*	*0.20*	*0.42*	*Sqm*
		1		*1.29*	*1.70*	*2.19*	*Sqm*
						4.28	***Sqm***
	Section d-d	*1*		*3.33*	*0.50*	*1.67*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.70*	*0.82*	*Sqm*
						2.58	***Sqm***
	Bottom Key	*1*	*4.49*	*1.43*	*1.00*	*6.39*	*Cum*
	Top Stem Area	*1*	*4.49*	*4.28*		*19.19*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*0.70*	*0.96*	*0.69*	*Cum*
		2	*0.52*	*0.53*	*1.00*	*0.54*	*Cum*
		2	*0.52*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.81*	*1.93*	*0.96*	*10.41*	*Cum*
		2	*2.81*	*1.44*	*1.00*	*8.13*	*Cum*
		2	*2.81*	*0.77*	*0.50*	*2.16*	*Cum*
	TOTAL					**121.98**	**Cum**
	Floor						
	U/S key	*1*	*10.01*		*0.70*	*7.00*	*Cum*
	Floor	*1*	*17.90*		*0.50*	*8.95*	*Cum*
		1	*1.39*	*4.61*	*0.50*	*3.21*	*Cum*
		1	*0.40*		*4.61*	*1.85*	*Cum*
		1	*4.00*	*4.61*	*0.60*	*11.06*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*1.20*	*4.61*	*0.40*	*5.53*	*Cum*
		1	*0.72*	*4.61*	*0.30*	*0.99*	*Cum*
		1	*1.15*	*4.61*	*0.50*	*2.65*	*Cum*
	D/S key	*1*	*0.75*	*4.61*	*0.60*	*2.07*	*Cum*
	TOTAL					**165.31**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.33*	*4.61*	*0.20*	*3.07*	*Cum*
		1	*1.48*	*4.61*	*0.20*	*1.36*	*Cum*
	crest	*1*	*1.23*	*4.61*	*0.15*	*0.85*	*Cum*
		1	*0.67*	*4.61*	*0.20*	*0.62*	*Cum*
		1	*4.00*	*4.61*	*0.20*	*3.69*	*Cum*
		1	*2.40*	*4.61*	*0.20*	*2.21*	*Cum*
	Top Slab	*2*	*5.25*	*2.70*	*0.33*	*9.24*	*Cum*
	75mm Th. Wearing coat on top slab	*2*	*4.25*	*2.70*	*0.08*	*1.72*	*Cum*
	Dirt wall	*2*	*7.25*	0.82	*0.50*	*5.95*	*Cum*
		2	*7.25*	*0.40*	*0.43*	*2.47*	*Cum*
	Parapet	*2*	*6.23*	*0.45*	*0.18*	*0.97*	*Cum*
		2	*6.23*	*0.35*	*0.25*	*1.09*	*Cum*
		2	*6.23*	*0.22*	*0.55*	*1.50*	*Cum*
	TOTAL					**34.73**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.235*	*58*		*1.578*	*296.106*	*Kg*
a2	*10*	*6.800*	*28*		*0.616*	*117.374*	*Kg*
a3	*10*	*5.150*	*4*		*0.616*	*12.699*	*Kg*
a4	*10*	*3.075*	*36*		*0.616*	*68.242*	*Kg*
a5	*10*	*5.550*	*20*		*0.616*	*68.427*	*Kg*
	Dirt Wall						
d1	*12*	*4.660*	*26*		*0.888*	*107.554*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.602*	*90*		*0.888*	*207.882*	*Kg*
x2	*16*	*1.365*	*90*		*1.578*	*193.874*	*Kg*
x3	*10*	*5.310*	*24*		*0.616*	*78.562*	*Kg*
	Floor R/F						
	U/S Key						
	12	*8.405*	*19*		*0.888*	*141.762*	*Kg*
	12	*5.310*	*31*		*0.888*	*146.125*	*Kg*
	floor raft						
	12	*9.080*	*19*		*0.888*	*153.147*	*Kg*
	12	*9.033*	*19*		*0.888*	*152.354*	*Kg*
	12	*3.656*	*19*		*0.888*	*61.663*	*Kg*
	12	*5.310*	*73*		*0.888*	*344.100*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*121.98*	*0.25%*	*0.30*	*7850*	*2393.87*	*Kg*
	TOTAL Weight of steel (in kg)					4612.71	Kg
	TOTAL Weight of Steel (in Tonne)					**4.61**	**MT**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		6.47		**6.47**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.20*		*0.50*	*2.40*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*1.20*		*1.05*	*5.04*	*Sqm*
		4		*0.77*	*1.05*	*3.21*	*Sqm*
		4	*1.20*		*1.45*	*6.96*	*Sqm*
		4		*1.08*	*1.45*	*6.26*	*Sqm*
	Section B-B	*4*	*4.90*		*1.30*	*25.48*	*Sqm*
		4		*1.21*	*1.30*	*6.29*	*Sqm*
		4	*4.90*		*1.00*	*19.60*	*Sqm*
		4		*1.60*	*1.00*	*6.40*	*Sqm*
	Section C-C	*4*	*2.35*		*1.00*	*9.40*	*Sqm*
		4		*1.12*	*1.00*	*4.48*	*Sqm*
		4	*2.35*		*1.30*	*12.22*	*Sqm*
		4		*1.42*	*1.30*	*7.38*	*Sqm*
	pier						
	circular portion	*2*	*1.2874*		*1.8*	*4.63*	*Sqm*
		2		*0.82*	*1.8*	*2.95*	*Sqm*
	Retangular Portion	*2*	*6.13*		*1.8*	*22.07*	*Sqm*
	pier Nose	*2*	*0.86*		*1.8*	*3.10*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*4.69*		*0.50*	*4.69*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*4.69*		*1.20*	*11.25*	*Sqm*
		2		*0.81*	*1.20*	*1.94*	*Sqm*
		2	*4.69*		*1.30*	*12.19*	*Sqm*
		2		*1.17*	*1.30*	*3.04*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*4.49*		*1.00*	*8.97*	*Sqm*
		2		*1.43*	*1.00*	*2.85*	*Sqm*
	Section a-a	*2*	*1.50*		*0.50*	*1.50*	*Sqm*
		2		*3.33*	*0.50*	*3.33*	*Sqm*
		2	*1.50*		*0.20*	*0.60*	*Sqm*
		2		*3.18*	*0.20*	*1.27*	*Sqm*
		2	*1.50*		*1.70*	*5.08*	*Sqm*
		2		*1.76*	*1.70*	*5.97*	*Sqm*
	Section b-b	*2*	*1.50*		*0.50*	*1.50*	*Sqm*
		2		*3.33*	*0.50*	*3.33*	*Sqm*
		2	*1.50*		*0.20*	*0.60*	*Sqm*
		2		*2.77*	*0.20*	*1.11*	*Sqm*
		2	*1.50*		*1.70*	*5.08*	*Sqm*
		2		*1.62*	*1.70*	*5.52*	*Sqm*
	Section c-c	*2*	*1.50*		*0.50*	*1.50*	*Sqm*
		2		*3.33*	*0.50*	*3.33*	*Sqm*
		2	*1.50*		*0.20*	*0.60*	*Sqm*
		2		*2.10*	*0.20*	*0.84*	*Sqm*
		2	*1.50*		*1.70*	*5.08*	*Sqm*
		2		*1.29*	*1.70*	*4.39*	*Sqm*
	Section d-d	*2*	*1.50*		*0.50*	*1.50*	*Sqm*
		2		*3.33*	*0.50*	*3.33*	*Sqm*
		2	*1.50*		*0.20*	*0.60*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.50*		*1.70*	*5.08*	*Sqm*
		2		*0.48*	*1.70*	*1.63*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.52*		*0.96*	*1.98*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.70*	*0.96*	*2.68*	*Sqm*
		4	*0.52*		*1.00*	*2.08*	*Sqm*
		4		*0.53*	*1.00*	*2.10*	*Sqm*
		4	*0.52*		*0.50*	*1.04*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.81*		*0.96*	*10.76*	*Sqm*
		4		*1.93*	*0.96*	*7.40*	*Sqm*
		4	*2.81*		*1.00*	*11.26*	*Sqm*
		4		*1.44*	*1.00*	*5.78*	*Sqm*
		4	*2.81*		*0.50*	*5.63*	*Sqm*
		4		*0.77*	*0.50*	*1.53*	*Sqm*
	Floor						
	U/S key	*2*	*10.01*		*0.70*	*14.01*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*17.90*		*0.50*	*17.90*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*4.61*	*0.50*	*4.61*	*Sqm*
		2	*4.00*		*0.60*	*4.80*	*Sqm*
		2		*4.61*	*0.60*	*5.53*	*Sqm*
		2	*1.20*		*0.50*	*1.20*	*Sqm*
		2		*4.61*	*0.50*	*4.61*	*Sqm*
		2	*0.72*		*0.30*	*0.43*	*Sqm*
		2		*4.61*	*0.30*	*2.77*	*Sqm*
		2	*1.15*		*0.50*	*1.15*	*Sqm*
		2		*4.61*	*0.50*	*4.61*	*Sqm*
		2	*0.40*			*0.80*	*Sqm*
		2		*4.61*		*9.22*	*Sqm*
	D/S key	*2*	*0.75*		*0.60*	*0.90*	*Sqm*
		2		*4.61*	*0.60*	*5.53*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*4.61*		*0.30*	*2.77*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*4.61*		*0.90*	*8.30*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.70*	*0.33*	*1.76*	*Sqm*
	Dirt wall	*4*	*7.25*		*0.50*	*14.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*7.25*		*0.43*	*12.33*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*6.23*		*0.18*	*4.36*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*6.23*		*0.25*	*6.23*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*6.23*		*0.55*	*13.71*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**461.66**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.94*		*17.65*	*Sqm*
	TOTAL					**17.65**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*4.01*	*0.90*	*10.83*	***Cum***
	TOTAL					**10.83**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*4.61*	*0.15*	*1.52*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*4.61*	*0.15*	*1.52*	*Cum*
	TOTAL					**3.04**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.55*	*0.48*		*2.45*	*Sqm*
	On Abutment Top	*2*	*3.45*	*0.45*		*2.30*	*Sqm*
	TOTAL					**4.74**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.20*	*1.25*		*3.000*	*Cum*
	Section B-B	2	*4.90*	*1.98*		*19.404*	*Cum*
	Section C-C	2	*2.35*	*1.60*		*7.520*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*4.69*	*1.40*		*6.563*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.52*	*0.84*		*0.874*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.81*	*0.72*		*4.056*	*Cum*
	TOTAL					**41.42**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF ANTI MR. OFFTAKING FROM RD-2+470 KM AT PATOI DY.						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*1.68*	*2.910*	*9.754*	*Cum*
	Section B-B	*2*	*3.60*	*1.86*	*2.260*	*30.201*	*Cum*
	Section C-C	*2*	*3.26*	*1.68*	*2.260*	*24.681*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.48*	*1.40*	*2.910*	*14.137*	*Cum*
	Left Bank Sec a to d	1	3.80	3.02	2.260	*25.941*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*1.10*	*2.460*	*2.809*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.83*	*2.15*	*2.460*	*29.813*	*Cum*
	Floor						
	U/S key	*1*	*6.000*		*0.850*	*5.100*	*Cum*
	Floor	*1*	*10.100*		*0.650*	*6.565*	*Cum*
		1	*1.394*	*2.680*	*0.650*	*2.427*	*Cum*
		1	*2.620*	*2.680*	*0.650*	*4.564*	*Cum*
		1	*0.532*	*2.680*	*0.300*	*1.426*	*Cum*
		1	*0.532*	*2.680*	*0.800*	*1.141*	*Cum*
		1	*2.250*	*2.680*	*0.500*	*3.015*	*Cum*
		1	*0.348*	*2.680*	*0.500*	*0.466*	*Cum*
		1	*0.725*	*2.680*	*0.650*	*1.263*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.680*	*0.600*	*3.538*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.680*	*0.850*	*1.200*	*2.734*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*2.080*	*0.900*	*5.616*	*Cum*
	TOTAL					**175.19**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*5.185*	*0.150*	*0.49*	*Cum*
		1	*1.945*	*3.449*	*0.150*	*1.01*	*Cum*
		1	*1.780*	*2.680*	*0.150*	*0.72*	*Cum*
		1	*0.778*	*2.680*	*0.150*	*0.31*	*Cum*
		1	*2.175*	*2.680*	*0.150*	*0.87*	*Cum*
		1	*0.949*	*2.680*	*0.150*	*0.38*	*Cum*
		1	*1.280*	*2.680*	*0.150*	*0.51*	*Cum*
		1	*0.560*	*2.680*	*0.150*	*0.23*	*Cum*
		1	*0.692*	*2.680*	*0.150*	*0.28*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.676*	*0.300*	*1.01*	*Cum*
	Section B-B	*2*	*3.600*	*1.856*	*0.300*	*4.01*	*Cum*
	Section C-C	*2*	*3.258*	*1.676*	*0.300*	*3.28*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.480*	*1.396*	*0.300*	*1.46*	*Cum*
	Left Bank Sec a to d	*1*	*3.802*	*3.019*	*0.150*	*1.72*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.519*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.825*	*2.145*	*0.300*	*3.64*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.680*	*0.850*	*0.300*	*0.68*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.680*	*0.450*	*0.900*	*1.09*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*12*	*0.600*	*0.600*	*0.300*	*1.30*	*Cum*
	TOTAL					**24.52**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.05*	*0.76*	*1.59*	*Cum*
		2	*1.00*	*1.28*	*1.35*	*3.45*	*Cum*
	Section B-B	*2*	*3.60*	*1.14*	*1.06*	*8.69*	*Cum*
		2	*3.60*	*1.46*	*0.90*	*9.43*	*Cum*
	Section C-C	*2*	*3.26*	*1.05*	*0.76*	*5.19*	*Cum*
		2	*3.26*	*1.28*	*1.20*	*9.98*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.48*	*0.45*	*0.50*	*0.78*	*Cum*
		1	*3.48*	*0.72*	*0.91*	*2.29*	*Cum*
		1	*3.48*	*1.00*	*1.20*	*4.16*	*Cum*
	Left Bank						
	Section a-a	*1*		2.895	*0.50*	*1.45*	*Sqm*
		1		*2.75*	*0.20*	*0.55*	*Sqm*
		1		*1.54*	*1.41*	*2.17*	*Sqm*
						4.16	***Sqm***
	Section b-b	*1*		*2.90*	*0.50*	*1.45*	*Sqm*
		1		*2.43*	*0.20*	*0.49*	*Sqm*
		1		*1.46*	*1.41*	*2.05*	*Sqm*
						3.99	***Sqm***
	Section c-c	*1*		*2.90*	*0.50*	*1.45*	*Sqm*
		1		*1.85*	*0.20*	*0.37*	*Sqm*
		1		*1.16*	*1.41*	*1.64*	*Sqm*
						3.46	***Sqm***
	Section d-d	*1*		*2.90*	*0.50*	*1.45*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.41*	*0.68*	*Sqm*
						2.22	***Sqm***
	Bottom Key	*1*	*3.80*	*1.21*	*1.00*	*4.59*	*Cum*
	Top Stem Area	*1*	*3.80*	*3.46*		*13.15*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*0.70*	*0.90*	*0.65*	*Cum*
		2	*0.52*	*0.53*	*0.76*	*0.41*	*Cum*
		2	*0.52*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.83*	*1.75*	*0.90*	*8.87*	*Cum*
		2	*2.83*	*1.35*	*0.76*	*5.79*	*Cum*
		2	*2.83*	*0.76*	*0.50*	*2.15*	*Cum*
	TOTAL					**82.18**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor						
	U/S key	*1*	*6.00*		*0.70*	*4.20*	*Cum*
	Floor	*1*	*10.10*		*0.50*	*5.05*	*Cum*
		1	*1.39*	*2.68*	*0.50*	*1.87*	*Cum*
		1	*0.35*		*2.68*	*0.93*	*Cum*
		1	*2.62*	*2.68*	*0.50*	*3.51*	*Cum*
		1	*0.53*	*2.68*	*0.30*	*1.43*	*Cum*
		1	*0.53*	*2.68*	*0.35*	*0.50*	*Cum*
		1	*2.25*	*2.68*	*0.50*	*3.02*	*Cum*
	D/S key	*1*	*0.73*	*2.68*	*0.50*	*0.97*	*Cum*
	TOTAL					**103.65**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*2.90*	*2.68*	*0.20*	*1.55*	*Cum*
		1	*1.48*	*2.68*	*0.20*	*0.79*	*Cum*
	crest	*1*	*1.23*	*2.68*	*0.15*	*0.49*	*Cum*
		1	*0.67*	*2.68*	*0.20*	*0.36*	*Cum*
		1	*2.50*	*2.68*	*0.20*	*1.34*	*Cum*
		1	*3.31*	*2.68*	*0.20*	*1.77*	*Cum*
	Top Slab	*1*	*5.25*	*3.48*	*0.33*	*5.97*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.48*	*0.08*	*1.11*	*Cum*
	Dirt wall	*2*	*6.86*	0.82	*0.50*	*5.62*	*Cum*
		2	*6.86*	*0.40*	*0.43*	*2.33*	*Cum*
	Parapet	*2*	*4.32*	*0.45*	*0.18*	*0.67*	*Cum*
		2	*4.32*	*0.35*	*0.25*	*0.76*	*Cum*
		2	*4.32*	*0.22*	*0.55*	*1.04*	*Cum*
	TOTAL					**23.81**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.940*	*29*		*1.578*	*180.318*	*Kg*
a2	*10*	*5.650*	*17*		*0.616*	*59.211*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.860*	*18*		*0.616*	*42.832*	*Kg*
a5	*10*	*5.550*	*12*		*0.616*	*41.056*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.502*	*58*		*0.888*	*128.820*	*Kg*
x2	*16*	*1.265*	*58*		*1.578*	*115.788*	*Kg*
x3	*10*	*3.380*	*24*		*0.616*	*50.007*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.560*	*11*		*0.888*	*73.821*	*Kg*
	12	*3.380*	*29*		*0.888*	*87.013*	*Kg*
	floor raft						
	12	*8.490*	*11*		*0.888*	*82.903*	*Kg*
	12	*8.389*	*11*		*0.888*	*81.916*	*Kg*
	12	*3.656*	*11*		*0.888*	*35.700*	*Kg*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	12	*3.380*	*75*		*0.888*	*225.033*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*82.18*	*0.25%*	*0.21*	*7850*	*1612.72*	*Kg*
	TOTAL Weight of steel (in kg)					2995.40	Kg
	TOTAL Weight of Steel (in Tonne)					**3.00**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		3.21		**3.21**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*0.76*	*3.04*	*Sqm*
		4		*1.05*	*0.76*	*3.19*	*Sqm*
		4	*1.00*		*1.35*	*5.40*	*Sqm*
		4		*1.28*	*1.35*	*6.89*	*Sqm*
	Section B-B	*4*	*3.60*		*1.06*	*15.26*	*Sqm*
		4		*1.14*	*1.06*	*4.83*	*Sqm*
		4	*3.60*		*0.90*	*12.96*	*Sqm*
		4		*1.46*	*0.90*	*5.24*	*Sqm*
	Section C-C	*4*	*3.26*		*0.76*	*9.90*	*Sqm*
		4		*1.05*	*0.76*	*3.19*	*Sqm*
		4	*3.26*		*1.20*	*15.64*	*Sqm*
		4		*1.28*	*1.20*	*6.12*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*3.48*		*0.50*	*3.48*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*3.48*		*0.91*	*6.33*	*Sqm*
		2		*0.72*	*0.91*	*1.32*	*Sqm*
		2	*3.48*		*1.20*	*8.35*	*Sqm*
		2		*1.00*	*1.20*	*2.39*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*3.80*		*1.00*	*7.60*	*Sqm*
		2		*1.21*	*1.00*	*2.42*	*Sqm*
	Section a-a	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.90*	*0.50*	*2.90*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*2.75*	*0.20*	*1.10*	*Sqm*
		2	*1.27*		*1.41*	*3.57*	*Sqm*
		2		*1.54*	*1.41*	*4.34*	*Sqm*
	Section b-b	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.90*	*0.50*	*2.90*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*2.43*	*0.20*	*0.97*	*Sqm*
		2	*1.27*		*1.41*	*3.57*	*Sqm*
		2		*1.46*	*1.41*	*4.11*	*Sqm*
	Section c-c	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.90*	*0.50*	*2.90*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*1.85*	*0.20*	*0.74*	*Sqm*
		2	*1.27*		*1.41*	*3.57*	*Sqm*
		2		*1.16*	*1.41*	*3.28*	*Sqm*
	Section d-d	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.90*	*0.50*	*2.90*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.27*		*1.41*	*3.57*	*Sqm*
		2		*0.48*	*1.41*	*1.35*	*Sqm*
	D/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Sec 4-4	*4*	*0.52*		*0.90*	*1.87*	*Sqm*
		4		*0.70*	*0.90*	*2.52*	*Sqm*
		4	*0.52*		*0.76*	*1.58*	*Sqm*
		4		*0.53*	*0.76*	*1.60*	*Sqm*
		4	*0.52*		*0.50*	*1.04*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.83*		*0.90*	*10.17*	*Sqm*
		4		*1.75*	*0.90*	*6.28*	*Sqm*
		4	*2.83*		*0.76*	*8.59*	*Sqm*
		4		*1.35*	*0.76*	*4.10*	*Sqm*
		4	*2.83*		*0.50*	*5.65*	*Sqm*
		4		*0.76*	*0.50*	*1.53*	*Sqm*
	Floor						
	U/S key	*2*	*6.00*		*0.70*	*8.40*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*10.10*		*0.50*	*10.10*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*2.68*	*0.50*	*2.68*	*Sqm*
		2	*2.62*		*0.50*	*2.62*	*Sqm*
		2		*2.68*	*0.50*	*2.68*	*Sqm*
		2	*0.53*		*0.50*	*0.53*	*Sqm*
		2		*2.68*	*0.50*	*2.68*	*Sqm*
		2	*0.53*		*0.35*	*0.37*	*Sqm*
		2		*2.68*	*0.35*	*1.88*	*Sqm*
		2	*2.25*		*0.50*	*2.25*	*Sqm*
		2		*2.68*	*0.50*	*2.68*	*Sqm*
		2	*0.35*			*0.70*	*Sqm*
		2		*2.68*		*5.36*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*2.68*	*0.50*	*2.68*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.68*		*0.30*	*1.61*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.68*		*0.90*	*4.82*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*3.48*	*0.33*	*2.27*	*Sqm*
	Dirt wall	*4*	*6.86*		*0.50*	*13.72*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.86*		*0.43*	*11.66*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*4.32*		*0.18*	*3.02*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*4.32*		*0.25*	*4.32*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*4.32*		*0.55*	*9.50*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**329.17**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.51*		*15.05*	*Sqm*
	TOTAL					**15.05**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*2.08*	*0.90*	*5.62*	***Cum***
	TOTAL					**5.62**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.68*	*0.15*	*0.88*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.68*	*0.15*	*0.88*	*Cum*
	TOTAL					**1.77**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.12*	*0.48*		*2.03*	*Sqm*
	On Abutment Top	*2*	*2.86*	*0.45*		*1.90*	*Sqm*
	TOTAL					**3.93**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.00*	*0.93*		*1.850*	*Cum*
	Section B-B	2	*3.60*	*1.50*		*10.800*	*Cum*
	Section C-C	2	*3.26*	*1.18*		*7.656*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.48*	*1.04*		*3.633*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.52*	*0.74*		*0.768*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.83*	*0.63*		*3.565*	*Cum*
	TOTAL					**28.27**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF MARUKA MR. OFFTAKING FROM RD-5+730 KM AT PATOI DY.						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.20*	*1.58*	*2.983*	*11.319*	*Cum*
	Section B-B	*2*	*3.54*	*1.71*	*2.183*	*26.476*	*Cum*
	Section C-C	*2*	*3.08*	*1.53*	*2.183*	*20.635*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.09*	*1.30*	*2.983*	*11.986*	*Cum*
	Left Bank Sec a to d	1	3.43	2.80	2.102	*20.195*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*2.383*	*2.616*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.66*	*1.87*	*2.383*	*23.636*	*Cum*
	Floor						
	U/S key	*1*	*4.066*		*0.850*	*3.456*	*Cum*
	Floor	*1*	*6.500*		*0.650*	*4.225*	*Cum*
		1	*1.380*	*1.690*	*0.650*	*1.515*	*Cum*
		1	*2.620*	*1.690*	*0.650*	*2.878*	*Cum*
		1	*0.532*	*1.690*	*0.350*	*0.899*	*Cum*
		1	*0.532*	*1.690*	*0.750*	*0.674*	*Cum*
		1	*2.069*	*1.690*	*0.500*	*1.748*	*Cum*
		1	*0.435*	*1.690*	*0.500*	*0.368*	*Cum*
		1	*0.765*	*1.690*	*0.811*	*1.049*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.690*	*0.600*	*2.231*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.690*	*0.850*	*1.200*	*1.724*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*1.090*	*0.900*	*2.943*	*Cum*
	TOTAL					**140.57**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*4.279*	*0.150*	*0.40*	*Cum*
		1	*1.727*	*2.614*	*0.150*	*0.68*	*Cum*
		1	*1.753*	*1.690*	*0.150*	*0.44*	*Cum*
		1	*0.960*	*1.690*	*0.150*	*0.24*	*Cum*
		1	*2.716*	*1.690*	*0.150*	*0.69*	*Cum*
		1	*0.949*	*1.690*	*0.150*	*0.24*	*Cum*
		1	*1.022*	*1.690*	*0.150*	*0.26*	*Cum*
		1	*0.740*	*1.690*	*0.150*	*0.19*	*Cum*
		1	*0.692*	*1.690*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.200*	*1.581*	*0.300*	*1.14*	*Cum*
	Section B-B	*2*	*3.540*	*1.713*	*0.300*	*3.64*	*Cum*
	Section C-C	*2*	*3.083*	*1.533*	*0.300*	*2.84*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.089*	*1.301*	*0.300*	*1.21*	*Cum*
	Left Bank Sec a to d	*1*	*3.430*	*2.801*	*0.150*	*1.44*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.499*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.657*	*1.867*	*0.300*	*2.98*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.690*	*0.850*	*0.300*	*0.43*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.690*	*0.450*	*0.900*	*0.68*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*7*	*0.600*	*0.600*	*0.300*	*0.76*	*Cum*
	TOTAL					**19.97**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.20*	*0.82*	*0.50*	*0.98*	*Cum*
		2	*1.20*	*1.00*	*0.60*	*1.45*	*Cum*
		2	*1.20*	*1.18*	*1.58*	*4.48*	*Cum*
	Section B-B	*2*	*3.54*	*1.07*	*0.82*	*6.21*	*Cum*
		2	*3.54*	*1.31*	*1.06*	*9.86*	*Cum*
	Section C-C	*2*	*3.08*	*0.98*	*0.52*	*3.14*	*Cum*
		2	*3.08*	*1.13*	*1.36*	*9.51*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.09*	*0.45*	*0.50*	*0.69*	*Cum*
		1	*3.09*	*0.68*	*0.75*	*1.57*	*Cum*
		1	*3.09*	*0.90*	*1.43*	*3.98*	*Cum*
	Left Bank						
	Section a-a	*1*		2.658	*0.50*	*1.33*	*Sqm*
		1		*2.51*	*0.20*	*0.50*	*Sqm*
		1		*1.42*	*1.25*	*1.78*	*Sqm*
						3.61	***Sqm***
	Section b-b	*1*		*2.66*	*0.50*	*1.33*	*Sqm*
		1		*2.23*	*0.20*	*0.45*	*Sqm*
		1		*1.35*	*1.25*	*1.69*	*Sqm*
						3.47	***Sqm***
	Section c-c	*1*		*2.66*	*0.50*	*1.33*	*Sqm*
		1		*1.76*	*0.20*	*0.35*	*Sqm*
		1		*1.12*	*1.25*	*1.40*	*Sqm*
						3.08	***Sqm***
	Section d-d	*1*		*2.66*	*0.50*	*1.33*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.25*	*0.60*	*Sqm*
						2.03	***Sqm***
	Bottom Key	*1*	*3.43*	*1.09*	*1.00*	*3.74*	*Cum*
	Top Stem Area	*1*	*3.43*	*3.05*		*10.45*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*1.06*	*0.74*	*Cum*
		2	*0.50*	*0.53*	*0.52*	*0.27*	*Cum*
		2	*0.50*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.66*	*1.52*	*1.06*	*8.57*	*Cum*
		2	*2.66*	*1.22*	*0.52*	*3.39*	*Cum*
		2	*2.66*	*0.74*	*0.50*	*1.96*	*Cum*
	TOTAL					**71.18**	**Cum**
	Floor						
	U/S key	*1*	*4.07*		*0.70*	*2.85*	*Cum*
	Floor	*1*	*6.50*		*0.50*	*3.25*	*Cum*
		1	*1.38*	*1.69*	*0.50*	*1.17*	*Cum*
		1	*0.44*		*1.69*	*0.74*	*Cum*
		1	*2.62*	*1.69*	*0.50*	*2.21*	*Cum*
		1	*0.53*	*1.69*	*0.35*	*0.90*	*Cum*
		1	*0.53*	*1.69*	*0.30*	*0.27*	*Cum*
		1	*2.07*	*1.69*	*0.50*	*1.75*	*Cum*
	D/S key	*1*	*0.77*	*1.69*	*0.66*	*0.85*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**85.16**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*2.66*	*1.69*	*0.20*	*0.90*	*Cum*
		1	*1.48*	*1.69*	*0.20*	*0.50*	*Cum*
	crest	*1*	*1.23*	*1.69*	*0.15*	*0.31*	*Cum*
		1	*0.83*	*1.69*	*0.20*	*0.28*	*Cum*
		1	*2.50*	*1.69*	*0.20*	*0.85*	*Cum*
		1	*3.13*	*1.69*	*0.20*	*1.06*	*Cum*
	Top Slab	*1*	*5.25*	*2.49*	*0.33*	*4.27*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.49*	*0.08*	*0.79*	*Cum*
	Dirt wall	*2*	*6.62*	0.82	*0.50*	*5.43*	*Cum*
		2	*6.62*	*0.40*	*0.43*	*2.25*	*Cum*
	Parapet	*2*	*3.33*	*0.45*	*0.18*	*0.52*	*Cum*
		2	*3.33*	*0.35*	*0.25*	*0.59*	*Cum*
		2	*3.33*	*0.22*	*0.55*	*0.80*	*Cum*
	TOTAL					**18.54**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*2.950*	*29*		*1.578*	*135.010*	*Kg*
a2	*10*	*5.650*	*13*		*0.616*	*45.279*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.870*	*18*		*0.616*	*31.846*	*Kg*
a5	*10*	*5.550*	*9*		*0.616*	*30.792*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.502*	*40*		*0.888*	*88.841*	*Kg*
x2	*16*	*1.265*	*40*		*1.578*	*79.854*	*Kg*
x3	*10*	*2.390*	*24*		*0.616*	*35.360*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.100*	*7*		*0.888*	*44.119*	*Kg*
	12	*2.390*	*27*		*0.888*	*57.283*	*Kg*
	floor raft						
	12	*8.468*	*7*		*0.888*	*52.619*	*Kg*
	12	*8.365*	*7*		*0.888*	*51.979*	*Kg*
	12	*3.816*	*7*		*0.888*	*23.712*	*Kg*
	12	*2.390*	*75*		*0.888*	*159.121*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*71.18*	*0.25%*	*0.18*	*7850*	*1396.92*	*Kg*
	TOTAL Weight of steel (in kg)					2411.00	Kg
	TOTAL Weight of Steel (in Tonne)					**2.41**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.20		**2.20**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.20*		*0.50*	*2.40*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.20*		*0.60*	*2.89*	*Sqm*
		4		*1.00*	*0.60*	*2.41*	*Sqm*
		4	*1.20*		*1.58*	*7.59*	*Sqm*
		4		*1.18*	*1.58*	*7.47*	*Sqm*
	Section B-B	*4*	*3.54*		*0.82*	*11.64*	*Sqm*
		4		*1.07*	*0.82*	*3.51*	*Sqm*
		4	*3.54*		*1.06*	*15.02*	*Sqm*
		4		*1.31*	*1.06*	*5.57*	*Sqm*
	Section C-C	*4*	*3.08*		*0.52*	*6.44*	*Sqm*
		4		*0.98*	*0.52*	*2.04*	*Sqm*
		4	*3.08*		*1.36*	*16.78*	*Sqm*
		4		*1.13*	*1.36*	*6.17*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*3.09*		*0.50*	*3.09*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*3.09*		*0.75*	*4.65*	*Sqm*
		2		*0.68*	*0.75*	*1.02*	*Sqm*
		2	*3.09*		*1.43*	*8.84*	*Sqm*
		2		*0.90*	*1.43*	*2.58*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*3.43*		*1.00*	*6.86*	*Sqm*
		2		*1.09*	*1.00*	*2.18*	*Sqm*
	Section a-a	*2*	*1.14*		*0.50*	*1.14*	*Sqm*
		2		*2.66*	*0.50*	*2.66*	*Sqm*
		2	*1.14*		*0.20*	*0.46*	*Sqm*
		2		*2.51*	*0.20*	*1.00*	*Sqm*
		2	*1.14*		*1.25*	*2.86*	*Sqm*
		2		*1.42*	*1.25*	*3.55*	*Sqm*
	Section b-b	*2*	*1.14*		*0.50*	*1.14*	*Sqm*
		2		*2.66*	*0.50*	*2.66*	*Sqm*
		2	*1.14*		*0.20*	*0.46*	*Sqm*
		2		*2.23*	*0.20*	*0.89*	*Sqm*
		2	*1.14*		*1.25*	*2.86*	*Sqm*
		2		*1.35*	*1.25*	*3.39*	*Sqm*
	Section c-c	*2*	*1.14*		*0.50*	*1.14*	*Sqm*
		2		*2.66*	*0.50*	*2.66*	*Sqm*
		2	*1.14*		*0.20*	*0.46*	*Sqm*
		2		*1.76*	*0.20*	*0.70*	*Sqm*
		2	*1.14*		*1.25*	*2.86*	*Sqm*
		2		*1.12*	*1.25*	*2.80*	*Sqm*
	Section d-d	*2*	*1.14*		*0.50*	*1.14*	*Sqm*
		2		*2.66*	*0.50*	*2.66*	*Sqm*
		2	*1.14*		*0.20*	*0.46*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.14*		*1.25*	*2.86*	*Sqm*
		2		*0.48*	*1.25*	*1.20*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.50*		*1.06*	*2.12*	*Sqm*
		4		*0.70*	*1.06*	*2.97*	*Sqm*
		4	*0.50*		*0.52*	*1.04*	*Sqm*
		4		*0.53*	*0.52*	*1.10*	*Sqm*
		4	*0.50*		*0.50*	*1.00*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.66*		*1.06*	*11.28*	*Sqm*
		4		*1.52*	*1.06*	*6.45*	*Sqm*
		4	*2.66*		*0.52*	*5.55*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.22*	*0.52*	*2.56*	*Sqm*
		4	*2.66*		*0.50*	*5.31*	*Sqm*
		4		*0.74*	*0.50*	*1.48*	*Sqm*
	Floor						
	U/S key	*2*	*4.07*		*0.70*	*5.69*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*6.50*		*0.50*	*6.50*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.38*		*0.50*	*1.38*	*Sqm*
		2		*1.69*	*0.50*	*1.69*	*Sqm*
		2	*2.62*		*0.50*	*2.62*	*Sqm*
		2		*1.69*	*0.50*	*1.69*	*Sqm*
		2	*0.53*		*0.50*	*0.53*	*Sqm*
		2		*1.69*	*0.50*	*1.69*	*Sqm*
		2	*0.53*		*0.30*	*0.32*	*Sqm*
		2		*1.69*	*0.30*	*1.01*	*Sqm*
		2	*2.07*		*0.50*	*2.07*	*Sqm*
		2		*1.69*	*0.50*	*1.69*	*Sqm*
		2	*0.44*			*0.87*	*Sqm*
		2		*1.69*		*3.38*	*Sqm*
	D/S key	*2*	*0.77*		*0.66*	*1.01*	*Sqm*
		2		*1.69*	*0.66*	*2.23*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.69*		*0.30*	*1.01*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.69*		*0.90*	*3.04*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.49*	*0.33*	*1.63*	*Sqm*
	Dirt wall	*4*	*6.62*		*0.50*	*13.25*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.62*		*0.43*	*11.26*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.33*		*0.18*	*2.33*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.33*		*0.25*	*3.33*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.33*		*0.55*	*7.33*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**290.76**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.08*		*12.48*	*Sqm*
	TOTAL					**12.48**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.09*	*0.90*	*2.94*	***Cum***
	TOTAL					**2.94**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.69*	*0.15*	*0.56*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.69*	*0.15*	*0.56*	*Cum*
	TOTAL					**1.12**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.88*	*0.48*		*1.80*	*Sqm*
	On Abutment Top	*2*	*2.82*	*0.45*		*1.69*	*Sqm*
	TOTAL					**3.49**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.20*	*0.83*		*1.992*	*Cum*
	Section B-B	2	*3.54*	*1.22*		*8.638*	*Cum*
	Section C-C	2	*3.08*	*0.94*		*5.765*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.09*	*0.93*		*2.875*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.70*		*0.699*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.66*	*0.57*		*3.026*	*Cum*
	TOTAL					**23.00**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF RAMPUR MR. OFFTAKING FROM RD-5+950 KM AT PATOI DY.						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.03*	*1.59*	*2.923*	*9.504*	*Cum*
	Section B-B	*2*	*3.60*	*1.68*	*2.273*	*27.414*	*Cum*
	Section C-C	*2*	*3.26*	*1.50*	*2.273*	*22.184*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.74*	*1.22*	*2.923*	*9.735*	*Cum*
	Left Bank Sec a to d	1	3.10	2.61	1.960	*15.827*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*1.10*	*2.473*	*2.677*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.62*	*1.87*	*2.473*	*24.188*	*Cum*
	Floor						
	U/S key	*1*	*3.173*		*0.850*	*2.697*	*Cum*
	Floor	*1*	*4.880*		*0.650*	*3.172*	*Cum*
		1	*1.394*	*1.280*	*0.650*	*1.159*	*Cum*
		1	*2.620*	*1.280*	*0.650*	*2.180*	*Cum*
		1	*0.532*	*1.280*	*0.350*	*0.681*	*Cum*
		1	*0.532*	*1.280*	*0.750*	*0.511*	*Cum*
		1	*2.272*	*1.280*	*0.500*	*1.454*	*Cum*
		1	*0.350*	*1.280*	*0.500*	*0.224*	*Cum*
		1	*0.803*	*1.280*	*0.963*	*0.990*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.280*	*0.600*	*1.690*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.280*	*0.850*	*1.200*	*1.306*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.680*	*0.900*	*1.836*	*Cum*
	TOTAL					**129.43**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*3.510*	*0.150*	*0.33*	*Cum*
		1	*1.535*	*1.845*	*0.150*	*0.42*	*Cum*
		1	*1.780*	*1.280*	*0.150*	*0.34*	*Cum*
		1	*0.779*	*1.280*	*0.150*	*0.15*	*Cum*
		1	*2.716*	*1.280*	*0.150*	*0.52*	*Cum*
		1	*0.949*	*1.280*	*0.150*	*0.18*	*Cum*
		1	*1.149*	*1.280*	*0.150*	*0.22*	*Cum*
		1	*0.910*	*1.280*	*0.150*	*0.17*	*Cum*
		1	*0.692*	*1.280*	*0.150*	*0.13*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.025*	*1.586*	*0.300*	*0.98*	*Cum*
	Section B-B	*2*	*3.598*	*1.676*	*0.300*	*3.62*	*Cum*
	Section C-C	*2*	*3.262*	*1.496*	*0.300*	*2.93*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.739*	*1.216*	*0.300*	*1.00*	*Cum*
	Left Bank Sec a to d	*1*	*3.095*	*2.609*	*0.150*	*1.21*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.492*	*1.100*	*0.300*	*0.32*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.618*	*1.868*	*0.300*	*2.93*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.280*	*0.850*	*0.300*	*0.33*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.280*	*0.450*	*0.900*	*0.52*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*7*	*0.600*	*0.600*	*0.300*	*0.76*	*Cum*
	TOTAL					**18.28**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.03*	*0.82*	*0.50*	*0.84*	*Cum*
		2	*1.03*	*1.00*	*0.46*	*0.95*	*Cum*
		2	*1.03*	*1.19*	*1.66*	*4.04*	*Cum*
	Section B-B	*2*	*3.60*	*1.05*	*0.76*	*5.73*	*Cum*
		2	*3.60*	*1.28*	*1.21*	*11.14*	*Cum*
	Section C-C	*2*	*3.26*	*0.96*	*0.46*	*2.87*	*Cum*
		2	*3.26*	*1.10*	*1.51*	*10.82*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.74*	*0.45*	*0.50*	*0.62*	*Cum*
		1	*2.74*	*0.63*	*0.61*	*1.06*	*Cum*
		1	*2.74*	*0.82*	*1.51*	*3.38*	*Cum*
	Left Bank						
	Section a-a	*1*		2.445	*0.50*	*1.22*	*Sqm*
		1		*2.30*	*0.20*	*0.46*	*Sqm*
		1		*1.31*	*1.11*	*1.46*	*Sqm*
						3.14	***Sqm***
	Section b-b	*1*		*2.45*	*0.50*	*1.22*	*Sqm*
		1		*2.04*	*0.20*	*0.41*	*Sqm*
		1		*1.26*	*1.11*	*1.40*	*Sqm*
						3.03	***Sqm***
	Section c-c	*1*		*2.45*	*0.50*	*1.22*	*Sqm*
		1		*1.67*	*0.20*	*0.33*	*Sqm*
		1		*1.08*	*1.11*	*1.19*	*Sqm*
						2.75	***Sqm***
	Section d-d	*1*		*2.45*	*0.50*	*1.22*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.11*	*0.53*	*Sqm*
						1.85	***Sqm***
	Bottom Key	*1*	*3.10*	*0.98*	*1.00*	*3.04*	*Cum*
	Top Stem Area	*1*	*3.10*	*2.69*		*8.33*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*1.21*	*0.84*	*Cum*
		2	*0.49*	*0.53*	*0.46*	*0.24*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.62*	*1.47*	*1.21*	*9.32*	*Cum*
		2	*2.62*	*1.20*	*0.46*	*2.88*	*Cum*
		2	*2.62*	*0.74*	*0.50*	*1.93*	*Cum*
	TOTAL					**68.20**	**Cum**
	Floor						
	U/S key	*1*	*3.17*		*0.70*	*2.22*	*Cum*
	Floor	*1*	*4.88*		*0.50*	*2.44*	*Cum*
		1	*1.39*	*1.28*	*0.50*	*0.89*	*Cum*
		1	*0.35*		*1.28*	*0.45*	*Cum*
		1	*2.62*	*1.28*	*0.50*	*1.68*	*Cum*
		1	*0.53*	*1.28*	*0.35*	*0.68*	*Cum*
		1	*0.53*	*1.28*	*0.30*	*0.20*	*Cum*
		1	*2.27*	*1.28*	*0.50*	*1.45*	*Cum*
	D/S key	*1*	*0.80*	*1.28*	*0.81*	*0.84*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**79.05**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*2.45*	*1.28*	*0.20*	*0.63*	*Cum*
		1	*1.48*	*1.28*	*0.20*	*0.38*	*Cum*
	crest	*1*	*1.23*	*1.28*	*0.15*	*0.24*	*Cum*
		1	*0.67*	*1.28*	*0.20*	*0.17*	*Cum*
		1	*2.50*	*1.28*	*0.20*	*0.64*	*Cum*
		1	*3.33*	*1.28*	*0.20*	*0.85*	*Cum*
	Top Slab	*1*	*5.25*	*2.08*	*0.33*	*3.57*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.08*	*0.08*	*0.66*	*Cum*
	Dirt wall	*2*	*6.86*	0.82	*0.50*	*5.63*	*Cum*
		2	*6.86*	*0.40*	*0.43*	*2.33*	*Cum*
	Parapet	*2*	*2.92*	*0.45*	*0.18*	*0.46*	*Cum*
		2	*2.92*	*0.35*	*0.25*	*0.51*	*Cum*
		2	*2.92*	*0.22*	*0.55*	*0.70*	*Cum*
	TOTAL					**16.76**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*2.540*	*29*		*1.578*	*116.246*	*Kg*
a2	*10*	*5.650*	*11*		*0.616*	*38.313*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.460*	*18*		*0.616*	*27.297*	*Kg*
a5	*10*	*5.550*	*7*		*0.616*	*23.949*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.502*	*34*		*0.888*	*75.515*	*Kg*
x2	*16*	*1.265*	*34*		*1.578*	*67.876*	*Kg*
x3	*10*	*1.980*	*24*		*0.616*	*29.294*	*Kg*
	Floor R/F						
	U/S Key						
	12	*6.700*	*5*		*0.888*	*29.738*	*Kg*
	12	*1.980*	*25*		*0.888*	*43.941*	*Kg*
	floor raft						
	12	*8.215*	*5*		*0.888*	*36.462*	*Kg*
	12	*8.414*	*5*		*0.888*	*37.346*	*Kg*
	12	*4.214*	*5*		*0.888*	*18.704*	*Kg*
	12	*1.980*	*75*		*0.888*	*131.824*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*68.20*	*0.25%*	*0.17*	*7850*	*1338.40*	*Kg*
	TOTAL Weight of steel (in kg)					2193.17	Kg
	TOTAL Weight of Steel (in Tonne)					**2.19**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		1.75		**1.75**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.03*		*0.50*	*2.05*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.03*		*0.46*	*1.89*	*Sqm*
		4		*1.00*	*0.46*	*1.85*	*Sqm*
		4	*1.03*		*1.66*	*6.82*	*Sqm*
		4		*1.19*	*1.66*	*7.89*	*Sqm*
	Section B-B	*4*	*3.60*		*0.76*	*10.94*	*Sqm*
		4		*1.05*	*0.76*	*3.19*	*Sqm*
		4	*3.60*		*1.21*	*17.46*	*Sqm*
		4		*1.28*	*1.21*	*6.19*	*Sqm*
	Section C-C	*4*	*3.26*		*0.46*	*6.00*	*Sqm*
		4		*0.96*	*0.46*	*1.76*	*Sqm*
		4	*3.26*		*1.51*	*19.74*	*Sqm*
		4		*1.10*	*1.51*	*6.63*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*2.74*		*0.50*	*2.74*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*2.74*		*0.61*	*3.34*	*Sqm*
		2		*0.63*	*0.61*	*0.77*	*Sqm*
		2	*2.74*		*1.51*	*8.29*	*Sqm*
		2		*0.82*	*1.51*	*2.47*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*3.10*		*1.00*	*6.19*	*Sqm*
		2		*0.98*	*1.00*	*1.97*	*Sqm*
	Section a-a	*2*	*1.03*		*0.50*	*1.03*	*Sqm*
		2		*2.45*	*0.50*	*2.45*	*Sqm*
		2	*1.03*		*0.20*	*0.41*	*Sqm*
		2		*2.30*	*0.20*	*0.92*	*Sqm*
		2	*1.03*		*1.11*	*2.29*	*Sqm*
		2		*1.31*	*1.11*	*2.91*	*Sqm*
	Section b-b	*2*	*1.03*		*0.50*	*1.03*	*Sqm*
		2		*2.45*	*0.50*	*2.45*	*Sqm*
		2	*1.03*		*0.20*	*0.41*	*Sqm*
		2		*2.04*	*0.20*	*0.82*	*Sqm*
		2	*1.03*		*1.11*	*2.29*	*Sqm*
		2		*1.26*	*1.11*	*2.80*	*Sqm*
	Section c-c	*2*	*1.03*		*0.50*	*1.03*	*Sqm*
		2		*2.45*	*0.50*	*2.45*	*Sqm*
		2	*1.03*		*0.20*	*0.41*	*Sqm*
		2		*1.67*	*0.20*	*0.67*	*Sqm*
		2	*1.03*		*1.11*	*2.29*	*Sqm*
		2		*1.08*	*1.11*	*2.39*	*Sqm*
	Section d-d	*2*	*1.03*		*0.50*	*1.03*	*Sqm*
		2		*2.45*	*0.50*	*2.45*	*Sqm*
		2	*1.03*		*0.20*	*0.41*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.03*		*1.11*	*2.29*	*Sqm*
		2		*0.48*	*1.11*	*1.07*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.49*		*1.21*	*2.39*	*Sqm*
		4		*0.70*	*1.21*	*3.40*	*Sqm*
		4	*0.49*		*0.46*	*0.91*	*Sqm*
		4		*0.53*	*0.46*	*0.97*	*Sqm*
		4	*0.49*		*0.50*	*0.98*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.62*		*1.21*	*12.70*	*Sqm*
		4		*1.47*	*1.21*	*7.12*	*Sqm*
		4	*2.62*		*0.46*	*4.82*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.20*	*0.46*	*2.20*	*Sqm*
		4	*2.62*		*0.50*	*5.24*	*Sqm*
		4		*0.74*	*0.50*	*1.47*	*Sqm*
	Floor						
	U/S key	*2*	*3.17*		*0.70*	*4.44*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*4.88*		*0.50*	*4.88*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*1.28*	*0.50*	*1.28*	*Sqm*
		2	*2.62*		*0.50*	*2.62*	*Sqm*
		2		*1.28*	*0.50*	*1.28*	*Sqm*
		2	*0.53*		*0.50*	*0.53*	*Sqm*
		2		*1.28*	*0.50*	*1.28*	*Sqm*
		2	*0.53*		*0.30*	*0.32*	*Sqm*
		2		*1.28*	*0.30*	*0.77*	*Sqm*
		2	*2.27*		*0.50*	*2.27*	*Sqm*
		2		*1.28*	*0.50*	*1.28*	*Sqm*
		2	*0.35*			*0.70*	*Sqm*
		2		*1.28*		*2.56*	*Sqm*
	D/S key	*2*	*0.80*		*0.81*	*1.31*	*Sqm*
		2		*1.28*	*0.81*	*2.08*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.28*		*0.30*	*0.77*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.28*		*0.90*	*2.30*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.08*	*0.33*	*1.36*	*Sqm*
	Dirt wall	*4*	*6.86*		*0.50*	*13.72*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.86*		*0.43*	*11.66*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*2.92*		*0.18*	*2.04*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*2.92*		*0.25*	*2.92*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*2.92*		*0.55*	*6.42*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**278.03**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*1.97*		*11.81*	*Sqm*
	TOTAL					**11.81**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.68*	*0.90*	*1.84*	***Cum***
	TOTAL					**1.84**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.28*	*0.15*	*0.42*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.28*	*0.15*	*0.42*	*Cum*
	TOTAL					**0.84**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.67*	*0.48*		*1.60*	*Sqm*
	On Abutment Top	*2*	*2.89*	*0.45*		*1.50*	*Sqm*
	TOTAL					**3.10**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.03*	*0.80*		*1.640*	*Cum*
	Section B-B	2	*3.60*	*1.11*		*7.988*	*Cum*
	Section C-C	2	*3.26*	*0.90*		*5.872*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*2.74*	*0.82*		*2.246*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.69*		*0.679*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.62*	*0.58*		*3.050*	*Cum*
	TOTAL					**21.47**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF MALHAD SUB DY. OFFTAKE FROM RD - 26+970 KM., ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.20*	*1.29*	*3.229*	*10.012*	*Cum*
	Section B-B	*2*	*3.55*	*1.80*	*2.429*	*30.965*	*Cum*
	Section C-C	*2*	*3.37*	*1.62*	*2.429*	*26.464*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.98*	*1.38*	*3.229*	*13.316*	*Cum*
	Left Bank Sec a to d	1	3.81	2.99	2.236	*25.425*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.629*	*2.961*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.75*	*2.04*	*2.629*	*29.504*	*Cum*
	Floor						
	U/S key	*1*	*2.253*		*0.850*	*1.915*	*Cum*
	Floor	*1*	*10.250*		*0.650*	*6.663*	*Cum*
		1	*1.394*	*2.500*	*0.650*	*2.264*	*Cum*
		1	*2.620*	*2.500*	*0.650*	*4.258*	*Cum*
		1	*0.532*	*2.500*	*0.350*	*1.330*	*Cum*
		1	*0.532*	*2.500*	*0.750*	*0.998*	*Cum*
		1	*2.360*	*2.500*	*0.500*	*2.950*	*Cum*
		1	*0.450*	*2.500*	*0.500*	*0.563*	*Cum*
		1	*0.793*	*2.500*	*0.919*	*1.821*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.500*	*0.600*	*3.300*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.500*	*0.850*	*1.200*	*2.550*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*1.900*	*0.900*	*5.130*	*Cum*
	TOTAL					**172.39**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*5.581*	*0.150*	*0.52*	*Cum*
		1	*1.912*	*3.503*	*0.150*	*1.00*	*Cum*
		1	*1.775*	*2.500*	*0.150*	*0.67*	*Cum*
		1	*0.837*	*2.500*	*0.150*	*0.31*	*Cum*
		1	*2.838*	*2.500*	*0.150*	*1.06*	*Cum*
		1	*0.949*	*2.500*	*0.150*	*0.36*	*Cum*
		1	*1.259*	*2.500*	*0.150*	*0.47*	*Cum*
		1	*0.860*	*2.500*	*0.150*	*0.32*	*Cum*
		1	*0.692*	*2.500*	*0.150*	*0.26*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.200*	*1.292*	*0.300*	*0.93*	*Cum*
	Section B-B	*2*	*3.549*	*1.796*	*0.300*	*3.82*	*Cum*
	Section C-C	*2*	*3.371*	*1.616*	*0.300*	*3.27*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.984*	*1.382*	*0.300*	*1.24*	*Cum*
	Left Bank Sec a to d	*1*	*3.808*	*2.986*	*0.150*	*1.71*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.512*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.752*	*2.039*	*0.300*	*3.37*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.500*	*0.850*	*0.300*	*0.64*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.500*	*0.450*	*0.900*	*1.01*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*7*	*0.600*	*0.600*	*0.300*	*0.76*	*Cum*
	TOTAL					**23.27**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.20*	*0.45*	*0.50*	*0.54*	*Cum*
		2	*1.20*	*0.67*	*0.74*	*1.19*	*Cum*
		2	*1.20*	*0.89*	*1.69*	*3.62*	*Cum*
	Section B-B	*2*	*3.55*	*1.11*	*0.96*	*7.55*	*Cum*
		2	*3.55*	*1.40*	*1.17*	*11.58*	*Cum*
	Section C-C	*2*	*3.37*	*1.02*	*0.66*	*4.53*	*Cum*
		2	*3.37*	*1.22*	*1.47*	*12.04*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.98*	*0.45*	*0.50*	*0.67*	*Cum*
		1	*2.98*	*0.72*	*0.89*	*1.89*	*Cum*
		1	*2.98*	*0.98*	*1.54*	*4.52*	*Cum*
	Left Bank						
	Section a-a	*1*		2.859	*0.50*	*1.43*	*Sqm*
		1		*2.71*	*0.20*	*0.54*	*Sqm*
		1		*1.52*	*1.39*	*2.11*	*Sqm*
						4.08	***Sqm***
	Section b-b	*1*		*2.86*	*0.50*	*1.43*	*Sqm*
		1		*2.40*	*0.20*	*0.48*	*Sqm*
		1		*1.44*	*1.39*	*2.00*	*Sqm*
						3.90	***Sqm***
	Section c-c	*1*		*2.86*	*0.50*	*1.43*	*Sqm*
		1		*1.83*	*0.20*	*0.37*	*Sqm*
		1		*1.16*	*1.39*	*1.60*	*Sqm*
						3.40	***Sqm***
	Section d-d	*1*		*2.86*	*0.50*	*1.43*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.39*	*0.67*	*Sqm*
						2.19	***Sqm***
	Bottom Key	*1*	*3.81*	*1.19*	*1.00*	*4.53*	*Cum*
	Top Stem Area	*1*	*3.81*	*3.39*		*12.92*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*1.17*	*0.84*	*Cum*
		2	*0.51*	*0.53*	*0.66*	*0.35*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.75*	*1.64*	*1.17*	*10.55*	*Cum*
		2	*2.75*	*1.29*	*0.66*	*4.67*	*Cum*
		2	*2.75*	*0.75*	*0.50*	*2.06*	*Cum*
	TOTAL					**84.24**	**Cum**
	Floor						
	U/S key	*1*	*2.25*		*0.70*	*1.58*	*Cum*
	Floor	*1*	*10.25*		*0.50*	*5.13*	*Cum*
		1	*1.39*	*2.50*	*0.50*	*1.74*	*Cum*
		1	*0.45*		*2.50*	*1.13*	*Cum*
		1	*2.62*	*2.50*	*0.50*	*3.28*	*Cum*
		1	*0.53*	*2.50*	*0.35*	*1.33*	*Cum*
		1	*0.53*	*2.50*	*0.30*	*0.40*	*Cum*
		1	*2.36*	*2.50*	*0.50*	*2.95*	*Cum*
	D/S key	*1*	*0.79*	*2.50*	*0.77*	*1.52*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**103.29**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*2.86*	*2.50*	*0.20*	*1.43*	*Cum*
		1	*1.48*	*2.50*	*0.20*	*0.74*	*Cum*
	crest	*1*	*1.23*	*2.50*	*0.15*	*0.46*	*Cum*
		1	*0.84*	*2.50*	*0.20*	*0.42*	*Cum*
		1	*2.50*	*2.50*	*0.20*	*1.25*	*Cum*
		1	*3.42*	*2.50*	*0.20*	*1.71*	*Cum*
	Top Slab	*1*	*5.25*	*3.30*	*0.33*	*5.66*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.30*	*0.08*	*1.05*	*Cum*
	Dirt wall	*2*	*6.92*	0.82	*0.50*	*5.67*	*Cum*
		2	*6.92*	*0.40*	*0.43*	*2.35*	*Cum*
	Parapet	*2*	*4.14*	*0.45*	*0.18*	*0.65*	*Cum*
		2	*4.14*	*0.35*	*0.25*	*0.73*	*Cum*
		2	*4.14*	*0.22*	*0.55*	*1.00*	*Cum*
	TOTAL					**23.11**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.760*	*29*		*1.578*	*172.080*	*Kg*
a2	*10*	*5.650*	*17*		*0.616*	*59.211*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.680*	*18*		*0.616*	*40.834*	*Kg*
a5	*10*	*5.550*	*12*		*0.616*	*41.056*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.502*	*54*		*0.888*	*119.936*	*Kg*
x2	*16*	*1.265*	*54*		*1.578*	*107.803*	*Kg*
x3	*10*	*3.200*	*24*		*0.616*	*47.344*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.490*	*11*		*0.888*	*73.138*	*Kg*
	12	*3.200*	*25*		*0.888*	*71.016*	*Kg*
	floor raft						
	12	*8.768*	*11*		*0.888*	*85.617*	*Kg*
	12	*8.678*	*11*		*0.888*	*84.738*	*Kg*
	12	*4.098*	*11*		*0.888*	*40.016*	*Kg*
	12	*3.200*	*77*		*0.888*	*218.730*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*84.24*	*0.25%*	*0.21*	*7850*	*1653.20*	*Kg*
	TOTAL Weight of steel (in kg)					2992.98	Kg
	TOTAL Weight of Steel (in Tonne)					**2.99**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		3.03		**3.03**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.20*		*0.50*	*2.40*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*1.20*		*0.74*	*3.53*	*Sqm*
		4		*0.67*	*0.74*	*1.98*	*Sqm*
		4	*1.20*		*1.69*	*8.13*	*Sqm*
		4		*0.89*	*1.69*	*6.04*	*Sqm*
	Section B-B	*4*	*3.55*		*0.96*	*13.63*	*Sqm*
		4		*1.11*	*0.96*	*4.25*	*Sqm*
		4	*3.55*		*1.17*	*16.60*	*Sqm*
		4		*1.40*	*1.17*	*6.53*	*Sqm*
	Section C-C	*4*	*3.37*		*0.66*	*8.90*	*Sqm*
		4		*1.02*	*0.66*	*2.69*	*Sqm*
		4	*3.37*		*1.47*	*19.81*	*Sqm*
		4		*1.22*	*1.47*	*7.15*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*2.98*		*0.50*	*2.98*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*2.98*		*0.89*	*5.29*	*Sqm*
		2		*0.72*	*0.89*	*1.27*	*Sqm*
		2	*2.98*		*1.54*	*9.21*	*Sqm*
		2		*0.98*	*1.54*	*3.03*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*3.81*		*1.00*	*7.62*	*Sqm*
		2		*1.19*	*1.00*	*2.38*	*Sqm*
	Section a-a	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.86*	*0.50*	*2.86*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*2.71*	*0.20*	*1.08*	*Sqm*
		2	*1.27*		*1.39*	*3.52*	*Sqm*
		2		*1.52*	*1.39*	*4.21*	*Sqm*
	Section b-b	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.86*	*0.50*	*2.86*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*2.40*	*0.20*	*0.96*	*Sqm*
		2	*1.27*		*1.39*	*3.52*	*Sqm*
		2		*1.44*	*1.39*	*3.99*	*Sqm*
	Section c-c	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.86*	*0.50*	*2.86*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*1.83*	*0.20*	*0.73*	*Sqm*
		2	*1.27*		*1.39*	*3.52*	*Sqm*
		2		*1.16*	*1.39*	*3.21*	*Sqm*
	Section d-d	*2*	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*2.86*	*0.50*	*2.86*	*Sqm*
		2	*1.27*		*0.20*	*0.51*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.27*		*1.39*	*3.52*	*Sqm*
		2		*0.48*	*1.39*	*1.33*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.51*		*1.17*	*2.39*	*Sqm*
		4		*0.70*	*1.17*	*3.27*	*Sqm*
		4	*0.51*		*0.66*	*1.35*	*Sqm*
		4		*0.53*	*0.66*	*1.39*	*Sqm*
		4	*0.51*		*0.50*	*1.02*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.75*		*1.17*	*12.87*	*Sqm*
		4		*1.64*	*1.17*	*7.66*	*Sqm*
		4	*2.75*		*0.66*	*7.27*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.29*	*0.66*	*3.40*	*Sqm*
		4	*2.75*		*0.50*	*5.50*	*Sqm*
		4		*0.75*	*0.50*	*1.49*	*Sqm*
	Floor						
	U/S key	*2*	*2.25*		*0.70*	*3.15*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*10.25*		*0.50*	*10.25*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*2.62*		*0.50*	*2.62*	*Sqm*
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*0.53*		*0.50*	*0.53*	*Sqm*
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*0.53*		*0.30*	*0.32*	*Sqm*
		2		*2.50*	*0.30*	*1.50*	*Sqm*
		2	*2.36*		*0.50*	*2.36*	*Sqm*
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*0.45*			*0.90*	*Sqm*
		2		*2.50*		*5.00*	*Sqm*
	D/S key	*2*	*0.79*		*0.77*	*1.22*	*Sqm*
		2		*2.50*	*0.77*	*3.85*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.50*		*0.30*	*1.50*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.50*		*0.90*	*4.50*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*3.30*	*0.33*	*2.15*	*Sqm*
	Dirt wall	*4*	*6.92*		*0.50*	*13.84*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.92*		*0.43*	*11.76*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*4.14*		*0.18*	*2.90*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*4.14*		*0.25*	*4.14*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*4.14*		*0.55*	*9.11*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**332.60**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.33*		*13.97*	*Sqm*
	TOTAL					**13.97**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.90*	*0.90*	*5.13*	***Cum***
	TOTAL					**5.13**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.50*	*0.15*	*0.83*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.50*	*0.15*	*0.83*	*Cum*
	TOTAL					**1.65**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.79*	*0.48*		*2.68*	*Sqm*
	On Abutment Top	*2*	*3.12*	*0.45*		*2.51*	*Sqm*
	TOTAL					**5.19**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.20*	*0.97*		*2.328*	*Cum*
	Section B-B	2	*3.55*	*1.33*		*9.440*	*Cum*
	Section C-C	2	*3.37*	*1.04*		*6.978*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*2.98*	*1.09*		*3.253*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.76*		*0.778*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.75*	*0.64*		*3.534*	*Cum*
	TOTAL					**26.31**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF RAMPUR MR-II (OFFTAKE FROM RD -31+530 KM., ANGRA BRANCH CANAL)						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.01*	*1.48*	*2.881*	*8.594*	*Cum*
	Section B-B	*2*	*3.60*	*1.73*	*2.231*	*27.751*	*Cum*
	Section C-C	*2*	*3.46*	*1.55*	*2.231*	*23.944*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.79*	*1.20*	*2.881*	*9.667*	*Cum*
	Left Bank Sec a to d	1	3.05	2.58	1.940	*15.268*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*2.431*	*2.679*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.68*	*1.94*	*2.431*	*25.290*	*Cum*
	Floor						
	U/S key	*1*	*3.880*		*0.850*	*3.298*	*Cum*
	Floor	*1*	*6.303*		*0.650*	*4.097*	*Cum*
		1	*1.394*	*1.960*	*0.650*	*1.775*	*Cum*
		1	*2.620*	*1.960*	*0.650*	*3.338*	*Cum*
		1	*0.532*	*1.960*	*0.350*	*1.043*	*Cum*
		1	*0.532*	*1.960*	*0.750*	*0.782*	*Cum*
		1	*2.232*	*1.960*	*0.500*	*2.187*	*Cum*
		1	*0.488*	*1.960*	*0.500*	*0.478*	*Cum*
		1	*0.770*	*1.960*	*0.831*	*1.254*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.960*	*0.600*	*2.587*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.960*	*0.850*	*1.200*	*1.999*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*1.360*	*0.900*	*3.672*	*Cum*
	TOTAL					**139.70**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.625*	*3.906*	*0.150*	*0.37*	*Cum*
		1	*1.508*	*2.471*	*0.150*	*0.56*	*Cum*
		1	*1.775*	*1.960*	*0.150*	*0.52*	*Cum*
		1	*0.917*	*1.960*	*0.150*	*0.27*	*Cum*
		1	*2.838*	*1.960*	*0.150*	*0.83*	*Cum*
		1	*0.949*	*1.960*	*0.150*	*0.28*	*Cum*
		1	*1.175*	*1.960*	*0.150*	*0.35*	*Cum*
		1	*0.762*	*1.960*	*0.150*	*0.22*	*Cum*
		1	*0.692*	*1.960*	*0.150*	*0.20*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.005*	*1.484*	*0.300*	*0.89*	*Cum*
	Section B-B	*2*	*3.595*	*1.730*	*0.300*	*3.73*	*Cum*
	Section C-C	*2*	*3.462*	*1.550*	*0.300*	*3.22*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.787*	*1.204*	*0.300*	*1.01*	*Cum*
	Left Bank Sec a to d	*1*	*3.048*	*2.582*	*0.150*	*1.18*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.501*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.675*	*1.945*	*0.300*	*3.12*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.960*	*0.850*	*0.300*	*0.50*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.960*	*0.450*	*0.900*	*0.79*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*3.000*	*0.450*	*0.300*	*0.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem (For Brick Pitching)	*1*	*3.000*	*0.300*	*0.900*	*0.81*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*7*	*0.600*	*0.600*	*0.300*	*0.76*	*Cum*
	TOTAL					**20.35**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.01*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.01*	*0.95*	*0.44*	*0.84*	*Cum*
		2	*1.01*	*1.08*	*1.64*	*3.58*	*Cum*
	Section B-B	*2*	*3.60*	*1.08*	*0.85*	*6.57*	*Cum*
		2	*3.60*	*1.33*	*1.08*	*10.34*	*Cum*
	Section C-C	*2*	*3.46*	*0.99*	*0.55*	*3.75*	*Cum*
		2	*3.46*	*1.15*	*1.38*	*11.00*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.79*	*0.45*	*0.50*	*0.63*	*Cum*
		1	*2.79*	*0.63*	*0.59*	*1.03*	*Cum*
		1	*2.79*	*0.80*	*1.49*	*3.34*	*Cum*
	Left Bank						
	Section a-a	*1*		2.415	*0.50*	*1.21*	*Sqm*
		1		*2.27*	*0.20*	*0.45*	*Sqm*
		1		*1.30*	*1.09*	*1.41*	*Sqm*
						3.07	***Sqm***
	Section b-b	*1*		*2.42*	*0.50*	*1.21*	*Sqm*
		1		*2.01*	*0.20*	*0.40*	*Sqm*
		1		*1.25*	*1.09*	*1.36*	*Sqm*
						2.97	***Sqm***
	Section c-c	*1*		*2.42*	*0.50*	*1.21*	*Sqm*
		1		*1.66*	*0.20*	*0.33*	*Sqm*
		1		*1.07*	*1.09*	*1.17*	*Sqm*
						2.71	***Sqm***
	Section d-d	*1*		*2.42*	*0.50*	*1.21*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.09*	*0.52*	*Sqm*
						1.83	***Sqm***
	Bottom Key	*1*	*3.05*	*0.97*	*1.00*	*2.95*	*Cum*
	Top Stem Area	*1*	*3.05*	*2.64*		*8.06*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*1.08*	*0.76*	*Cum*
		2	*0.50*	*0.53*	*0.55*	*0.29*	*Cum*
		2	*0.50*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.68*	*1.54*	*1.08*	*8.93*	*Cum*
		2	*2.68*	*1.24*	*0.55*	*3.64*	*Cum*
		2	*2.68*	*0.74*	*0.50*	*1.98*	*Cum*
	TOTAL					**68.68**	**Cum**
	Floor						
	U/S key	*1*	*3.88*		*0.70*	*2.72*	*Cum*
	Floor	*1*	*6.30*		*0.50*	*3.15*	*Cum*
		1	*1.39*	*1.96*	*0.50*	*1.37*	*Cum*
		1	*0.49*		*1.96*	*0.96*	*Cum*
		1	*2.62*	*1.96*	*0.50*	*2.57*	*Cum*
		1	*0.53*	*1.96*	*0.35*	*1.04*	*Cum*
		1	*0.53*	*1.96*	*0.30*	*0.31*	*Cum*
		1	*2.23*	*1.96*	*0.50*	*2.19*	*Cum*
	D/S key	*1*	*0.77*	*1.96*	*0.68*	*1.03*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**84.01**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*2.42*	*1.96*	*0.20*	*0.95*	*Cum*
		1	*1.48*	*1.96*	*0.20*	*0.58*	*Cum*
	crest	*1*	*1.23*	*1.96*	*0.15*	*0.36*	*Cum*
		1	*0.92*	*1.96*	*0.20*	*0.36*	*Cum*
		1	*2.50*	*1.96*	*0.20*	*0.98*	*Cum*
		1	*3.29*	*1.96*	*0.20*	*1.29*	*Cum*
	Top Slab	*1*	*5.25*	*2.76*	*0.33*	*4.73*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.76*	*0.08*	*0.88*	*Cum*
	Dirt wall	*2*	*7.06*	0.82	*0.50*	*5.79*	*Cum*
		2	*7.06*	*0.40*	*0.43*	*2.40*	*Cum*
	Parapet	*2*	*3.60*	*0.45*	*0.18*	*0.56*	*Cum*
		2	*3.60*	*0.35*	*0.25*	*0.63*	*Cum*
		2	*3.60*	*0.22*	*0.55*	*0.87*	*Cum*
	TOTAL					**20.37**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.220*	*29*		*1.578*	*147.367*	*Kg*
a2	*10*	*5.650*	*14*		*0.616*	*48.762*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.140*	*18*		*0.616*	*34.842*	*Kg*
a5	*10*	*5.550*	*10*		*0.616*	*34.214*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.502*	*46*		*0.888*	*102.168*	*Kg*
x2	*16*	*1.265*	*46*		*1.578*	*91.832*	*Kg*
x3	*10*	*2.660*	*24*		*0.616*	*39.355*	*Kg*
	Floor R/F						
	U/S Key						
	12	*6.640*	*9*		*0.888*	*53.049*	*Kg*
	12	*2.660*	*25*		*0.888*	*59.032*	*Kg*
	floor raft						
	12	*8.720*	*9*		*0.888*	*69.667*	*Kg*
	12	*8.630*	*9*		*0.888*	*68.948*	*Kg*
	12	*4.098*	*9*		*0.888*	*32.740*	*Kg*
	12	*2.660*	*77*		*0.888*	*181.819*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*68.68*	*0.25%*	*0.17*	*7850*	*1347.86*	*Kg*
	TOTAL Weight of steel (in kg)					2489.91	Kg
	TOTAL Weight of Steel (in Tonne)					**2.49**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.05		**2.05**	**MT**
	*Separate sheet attached						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.01*		*0.50*	*2.01*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.01*		*0.44*	*1.77*	*Sqm*
		4		*0.95*	*0.44*	*1.68*	*Sqm*
		4	*1.01*		*1.64*	*6.60*	*Sqm*
		4		*1.08*	*1.64*	*7.12*	*Sqm*
	Section B-B	*4*	*3.60*		*0.85*	*12.22*	*Sqm*
		4		*1.08*	*0.85*	*3.66*	*Sqm*
		4	*3.60*		*1.08*	*15.54*	*Sqm*
		4		*1.33*	*1.08*	*5.75*	*Sqm*
	Section C-C	*4*	*3.46*		*0.55*	*7.62*	*Sqm*
		4		*0.99*	*0.55*	*2.17*	*Sqm*
		4	*3.46*		*1.38*	*19.12*	*Sqm*
		4		*1.15*	*1.38*	*6.35*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*2.79*		*0.50*	*2.79*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*2.79*		*0.59*	*3.29*	*Sqm*
		2		*0.63*	*0.59*	*0.74*	*Sqm*
		2	*2.79*		*1.49*	*8.31*	*Sqm*
		2		*0.80*	*1.49*	*2.40*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*3.05*		*1.00*	*6.10*	*Sqm*
		2		*0.97*	*1.00*	*1.94*	*Sqm*
	Section a-a	*2*	*1.02*		*0.50*	*1.02*	*Sqm*
		2		*2.42*	*0.50*	*2.42*	*Sqm*
		2	*1.02*		*0.20*	*0.41*	*Sqm*
		2		*2.27*	*0.20*	*0.91*	*Sqm*
		2	*1.02*		*1.09*	*2.21*	*Sqm*
		2		*1.30*	*1.09*	*2.83*	*Sqm*
	Section b-b	*2*	*1.02*		*0.50*	*1.02*	*Sqm*
		2		*2.42*	*0.50*	*2.42*	*Sqm*
		2	*1.02*		*0.20*	*0.41*	*Sqm*
		2		*2.01*	*0.20*	*0.81*	*Sqm*
		2	*1.02*		*1.09*	*2.21*	*Sqm*
		2		*1.25*	*1.09*	*2.72*	*Sqm*
	Section c-c	*2*	*1.02*		*0.50*	*1.02*	*Sqm*
		2		*2.42*	*0.50*	*2.42*	*Sqm*
		2	*1.02*		*0.20*	*0.41*	*Sqm*
		2		*1.66*	*0.20*	*0.66*	*Sqm*
		2	*1.02*		*1.09*	*2.21*	*Sqm*
		2		*1.07*	*1.09*	*2.33*	*Sqm*
	Section d-d	*2*	*1.02*		*0.50*	*1.02*	*Sqm*
		2		*2.42*	*0.50*	*2.42*	*Sqm*
		2	*1.02*		*0.20*	*0.41*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.02*		*1.09*	*2.21*	*Sqm*
		2		*0.48*	*1.09*	*1.05*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.50*		*1.08*	*2.17*	*Sqm*
		4		*0.70*	*1.08*	*3.03*	*Sqm*
		4	*0.50*		*0.55*	*1.10*	*Sqm*
		4		*0.53*	*0.55*	*1.16*	*Sqm*
		4	*0.50*		*0.50*	*1.00*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.68*		*1.08*	*11.57*	*Sqm*
		4		*1.54*	*1.08*	*6.68*	*Sqm*
		4	*2.68*		*0.55*	*5.89*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.24*	*0.55*	*2.72*	*Sqm*
		4	*2.68*		*0.50*	*5.35*	*Sqm*
		4		*0.74*	*0.50*	*1.48*	*Sqm*
	Floor						
	U/S key	*2*	*3.88*		*0.70*	*5.43*	*Sqm*
		2		*0.00*	*0.70*	*0.00*	*Sqm*
	Floor	*2*	*6.30*		*0.50*	*6.30*	*Sqm*
		2		*0.00*	*0.50*	*0.00*	*Sqm*
		2	*1.39*		*0.50*	*1.39*	*Sqm*
		2		*1.96*	*0.50*	*1.96*	*Sqm*
		2	*2.62*		*0.50*	*2.62*	*Sqm*
		2		*1.96*	*0.50*	*1.96*	*Sqm*
		2	*0.53*		*0.50*	*0.53*	*Sqm*
		2		*1.96*	*0.50*	*1.96*	*Sqm*
		2	*0.53*		*0.30*	*0.32*	*Sqm*
		2		*1.96*	*0.30*	*1.18*	*Sqm*
		2	*2.23*		*0.50*	*2.23*	*Sqm*
		2		*1.96*	*0.50*	*1.96*	*Sqm*
		2	*0.49*			*0.98*	*Sqm*
		2		*1.96*		*3.92*	*Sqm*
	D/S key	*2*	*0.77*		*0.68*	*1.05*	*Sqm*
		2		*1.96*	*0.68*	*2.67*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.96*		*0.30*	*1.18*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.96*		*0.90*	*3.53*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.76*	*0.33*	*1.80*	*Sqm*
	Dirt wall	*4*	*7.06*		*0.50*	*14.11*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*7.06*		*0.43*	*12.00*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.60*		*0.18*	*2.52*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.60*		*0.25*	*3.60*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.60*		*0.55*	*7.92*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**289.12**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*2.13*		*12.78*	*Sqm*
	TOTAL					**12.78**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.36*	*0.90*	*3.67*	***Cum***
	TOTAL					**3.67**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.96*	*0.15*	*0.65*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.96*	*0.15*	*0.65*	*Cum*
	TOTAL					**1.29**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.79*	*0.48*		*2.68*	*Sqm*
	On Abutment Top	*2*	*3.12*	*0.45*		*2.51*	*Sqm*
	TOTAL					**5.19**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*1.01*	*0.72*		*1.449*	*Cum*
	Section B-B	2	*3.60*	*1.26*		*9.059*	*Cum*
	Section C-C	2	*3.46*	*0.97*		*6.709*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*2.79*	*0.80*		*2.230*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.70*		*0.701*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.68*	*0.59*		*3.157*	*Cum*
	TOTAL					**23.31**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE HR OF PALUA MR OFFTAKING FROM RD-0.350 KM ANGRA BRANCH CANAL						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.62*	*0.85*	*1.20*	*0.63*	*Cum*
	D/S Toe Wall Base	*1*	*0.83*	*0.85*	*1.20*	*0.85*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.25*	*0.60*	*1.15*	*1.55*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*1.64*	*1*	*2.17*	*7.12*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.59*	*1.154*	*2.12*	*12.68*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*1.43*	*14.69*	*Cum*
	TOTAL					**37.51**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.62*	*0.85*	*0.30*	*0.16*	*Cum*
	U/S Toe Wall Stem	*1*	*0.62*	*0.45*	*0.90*	*0.25*	*Cum*
	D/S Toe Wall Base	*1*	*0.83*	*0.85*	*0.30*	*0.21*	*Cum*
	D/S Toe Wall Stem	*1*	*0.83*	*0.45*	*0.90*	*0.34*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.25*	*0.60*	*0.39*	*0.52*	*Cum*
	Floor Apron (D/S Portion)	*1*	*1.55*	*0.73*	*0.39*	*0.44*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*1.64*	*1.00*	*0.30*	*0.99*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.59*	*1.15*	*0.30*	*1.79*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.30*	*3.08*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	Collar Joint	*3*	*1.37*	*0.30*	*1.14*	*1.41*	*Cum*
	Deduct Pipe Area	*3*	*0.28*		*0.30*	*-0.25*	*Cum*
	TOTAL					**10.71**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*1.64*	*0.60*	*0.90*	*1.77*	*Cum*
		2	*1.64*	*0.45*	*0.47*	*0.69*	*Cum*
		2	*1.64*	*0.30*	*0.50*	*0.49*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.59*	*0.60*	*0.90*	*2.79*	*Cum*
		2	*2.59*	*0.45*	*0.43*	*0.99*	*Cum*
		2	*2.59*	*0.30*	*0.50*	*0.78*	*Cum*
	Section A-C	*2*	*2.59*	*1.37*	*0.90*	*6.37*	*Cum*
		2	*2.59*	*2.25*	*0.43*	*4.96*	*Cum*
		2	*2.59*	*1.37*	*0.50*	*3.55*	*Cum*
	Gate Abutment	*2*	*0.70*	*0.60*	*1.60*	*1.35*	*Cum*
	Deduct gate Groove	*2*	*0.20*	*0.10*	*1.60*	*-0.06*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Parapet wall for earth filling Protection	*2*	*1.14*	*0.25*	*0.30*	*0.17*	*Cum*
	TOTAL					**23.85**	**Cum**
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Toe Wall Base	*2*	*0.62*		*0.30*	*0.37*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	U/S Toe Wall Stem	*2*	*0.62*		*0.90*	*1.10*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Toe Wall Base	*2*	*0.83*		*0.30*	*0.50*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	D/S Toe Wall Stem	*2*	*0.83*		*0.90*	*1.50*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.25*		*0.39*	*1.73*	*Sqm*
		2		*0.60*	*0.39*	*0.46*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*1.55*		*0.39*	*1.19*	*Sqm*
		2		*0.73*	*0.39*	*0.56*	*Sqm*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*4*	*1.64*		*0.90*	*5.89*	*Sqm*
		4		*0.60*	*0.90*	*2.15*	*Sqm*
		4	*1.64*		*0.43*	*2.79*	*Sqm*
		4		*0.45*	*0.43*	*0.77*	*Sqm*
		4	*1.64*		*0.50*	*3.28*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*4*	*2.59*		*0.90*	*9.29*	*Sqm*
		4		*0.60*	*0.90*	*2.15*	*Sqm*
		4	*2.59*		*0.43*	*4.40*	*Sqm*
		4		*0.45*	*0.43*	*0.77*	*Sqm*
		4	*2.59*		*0.50*	*5.18*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Gate Abutment	*4*	*0.70*		*1.60*	*4.49*	*Sqm*
		4		*0.60*	*1.60*	*3.84*	*Sqm*
	Parapet wall for earth filling Protection	*4*	*1.14*		*0.30*	*1.37*	*Sqm*
		4		*0.25*	*0.30*	*0.30*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.30*	*4.50*	*Sqm*
		2		*1.37*	*0.30*	*0.82*	*Sqm*
	PCC Below Hume Pipe in (Curve Portion)	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	Collar Joint	*6*	*1.37*		*1.44*	*11.84*	*Sqm*
		6		*0.30*	*1.44*	*2.59*	*Sqm*
	TOTAL					**85.21**	**Sqm**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*23.85*	*0.25%*	*0.06*	*7850*	*467.96*	*Kg*
	TOTAL Weight of steel (in kg)					467.96	Kg
	TOTAL Weight of Steel (in Tonne)					**0.47**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*0.82*	*3.16*	*Kg*
		1	*0.000491*	*7850.00*	*0.23*	*0.87*	*Kg*
	800 X800 MM MS GATE	*1*		*40.19*		*40.19*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.40*	*7.65*	*Kg*
		2		*9.56*	*1.07*	*20.46*	*Kg*
	TOTAL (In Kg)					**72.32**	**Kg**
	TOTAL					**0.07**	**MT**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	3	2.50			7.5	Rm
	TOTAL					**7.50**	**Rm**
8	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)						
		1	11.304	1.37	0.075	*1.16*	**Cum**
	TOTAL					**1.16**	**Cum**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Toe Wall Base	1	0.62	0.25		0.156	*Cum*
	D/S Toe Wall Base	1	0.83	0.27		0.224	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*1.64*	0.48		1.576	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.59*	0.36		1.886	*Cum*
	Section A-C	*2*	*2.59*	0.73		3.771	*Cum*
	Above Hume Pipe	*1*	*1.14*	5.29		6.034	*Cum*
	TOTAL					**13.65**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE HR OF GULAB BIGHA MR OFFTAKING FROM RD-8.400 KM PATOI DY.						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.71*	*0.85*	*1.77*	*1.07*	*Cum*
	D/S Toe Wall Base	*1*	*0.83*	*0.85*	*1.77*	*1.26*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.18*	*0.60*	*1.15*	*0.81*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	*1*	*2.69*	*2.92*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.51*	*1.13*	*2.60*	*14.76*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*1.43*	*14.69*	*Cum*
	TOTAL					**35.51**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.71*	*0.85*	*0.30*	*0.18*	*Cum*
	U/S Toe Wall Stem	*1*	*0.71*	*0.45*	*1.47*	*0.47*	*Cum*
	D/S Toe Wall Base	*1*	*0.83*	*0.85*	*0.30*	*0.21*	*Cum*
	D/S Toe Wall Stem	*1*	*0.83*	*0.45*	*1.47*	*0.55*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.18*	*0.60*	*0.39*	*0.27*	*Cum*
	Floor Apron (D/S Portion)	*1*	*1.55*	*0.73*	*0.39*	*0.44*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	*1.00*	*0.30*	*0.33*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.51*	*1.13*	*0.30*	*1.70*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.30*	*3.08*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	Collar Joint	*3*	*1.37*	*0.30*	*1.14*	*1.41*	*Cum*
	Deduct Pipe Area	*3*	*0.28*		*0.30*	*-0.25*	*Cum*
	TOTAL					**10.17**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	*0.60*	*1.47*	*0.96*	*Cum*
		2	*0.54*	*0.45*	*0.42*	*0.21*	*Cum*
		2	*0.54*	*0.30*	*0.50*	*0.16*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.51*	*0.60*	*1.47*	*4.43*	*Cum*
		2	*2.51*	*0.45*	*0.33*	*0.75*	*Cum*
		2	*2.51*	*0.30*	*0.50*	*0.75*	*Cum*
	Section A-C	*2*	*2.51*	*1.29*	*1.47*	*9.52*	*Cum*
		2	*2.51*	*2.09*	*0.33*	*3.47*	*Cum*
		2	*2.51*	*1.29*	*0.50*	*3.23*	*Cum*
	Gate Abutment	*2*	*0.70*	*0.60*	*1.02*	*0.86*	*Cum*
	Deduct gate Groove	*2*	*0.20*	*0.10*	*1.02*	*-0.04*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Parapet wall for earth filling Protection	*2*	*1.14*	*0.25*	*0.30*	*0.17*	*Cum*
	TOTAL					**24.46**	**Cum**
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Toe Wall Base	*2*	*0.71*		*0.30*	*0.42*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	U/S Toe Wall Stem	*2*	*0.71*		*1.47*	*2.08*	*Sqm*
		2		*0.45*	*1.47*	*1.33*	*Sqm*
	D/S Toe Wall Base	*2*	*0.83*		*0.30*	*0.50*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	D/S Toe Wall Stem	*2*	*0.83*		*1.47*	*2.46*	*Sqm*
		2		*0.45*	*1.47*	*1.33*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*1.18*		*0.39*	*0.91*	*Sqm*
		2		*0.60*	*0.39*	*0.46*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*1.55*		*0.39*	*1.19*	*Sqm*
		2		*0.73*	*0.39*	*0.56*	*Sqm*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*4*	*0.54*		*1.47*	*3.20*	*Sqm*
		4		*0.60*	*1.47*	*3.54*	*Sqm*
		4	*0.54*		*0.33*	*0.72*	*Sqm*
		4		*0.45*	*0.33*	*0.59*	*Sqm*
		4	*0.54*		*0.50*	*1.09*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*4*	*2.51*		*1.47*	*14.78*	*Sqm*
		4		*0.60*	*1.47*	*3.54*	*Sqm*
		4	*2.51*		*0.33*	*3.31*	*Sqm*
		4		*0.45*	*0.33*	*0.59*	*Sqm*
		4	*2.51*		*0.50*	*5.02*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Gate Abutment	*4*	*0.70*		*1.02*	*2.86*	*Sqm*
		4		*0.60*	*1.02*	*2.45*	*Sqm*
	Parapet wall for earth filling Protection	*4*	*1.14*		*0.30*	*1.37*	*Sqm*
		4		*0.25*	*0.30*	*0.30*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.30*	*4.50*	*Sqm*
		2		*1.37*	*0.30*	*0.82*	*Sqm*
	PCC Below Hume Pipe in (Curve Portion)	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	Collar Joint	*6*	*1.37*		*1.44*	*11.84*	*Sqm*
		6		*0.30*	*1.44*	*2.59*	*Sqm*
	TOTAL					**84.09**	**Sqm**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*24.46*	*0.25%*	*0.06*	*7850*	*480.02*	*Kg*
	TOTAL Weight of steel (in kg)					480.02	Kg
	TOTAL Weight of Steel (in Tonne)					**0.48**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*0.82*	*3.16*	*Kg*
		1	*0.000491*	*7850.00*	*0.23*	*0.87*	*Kg*
	800 X800 MM MS GATE	*1*		*40.19*		*40.19*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.40*	*7.65*	*Kg*
		2		*9.56*	*1.07*	*20.46*	*Kg*
	TOTAL (In Kg)					**72.32**	**Kg**
	TOTAL					**0.07**	**MT**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	3	2.50			7.5	Rm
	TOTAL					**7.50**	**Rm**
8	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)						
		1	10.43	1.37	0.075	*1.07*	**Cum**
	TOTAL					**1.07**	**Cum**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Toe Wall Base	1	0.71	0.25		0.175	*Cum*
	D/S Toe Wall Base	1	0.83	0.29		0.243	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	0.40		0.430	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.51*	0.37		1.837	*Cum*
	Section A-C	*2*	*2.51*	0.73		3.673	*Cum*
	Above Hume Pipe	*1*	*1.14*	3.81		4.349	*Cum*
	TOTAL					**10.71**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR FALL

Sr. No.	KM	STRUCTURE	Amount in Rs.
		ANGRA BRANCH CANAL	
1	1.676	2.440 M Fall	₹ 70,12,920.39
2	12.750	1.524 M Fall	₹ 47,24,199.17
3	17.450	0.914 M Fall	₹ 30,92,786.28
4	19.150	1.828 M Fall	₹ 52,25,451.72
5	19.500	0.610 M Fall	₹ 28,40,439.19
6	21.050	1.828 M Fall	₹ 30,77,788.59
7	22.300	1.066 M Fall	₹ 21,80,934.68
8	25.350	0.762 M Fall	₹ 15,60,638.36
9	26.650	1.067 M Fall	₹ 19,20,787.56
10	28.500	0.914 M Fall	₹ 12,39,536.74
11	29.550	0.914 M Fall	₹ 11,80,758.96
12	30.800	0.914 M Fall	₹ 11,84,927.18
13	34.500	1.066 M Fall	₹ 7,13,331.44
		PALUA MINOR	
1	1.650	0.610 M Fall	₹ 5,57,723.91
2	1.768	1.372 M Fall	₹ 8,76,762.79
3	2.022	0.914 M Fall	₹ 3,59,684.69
4	2.225	1.524 M Fall	₹ 6,17,334.33
		ASNIMINOR	
1	1.700	0.610 M Fall	₹ 4,74,227.96
2	4.084	0.610 M Fall	₹ 3,64,083.42
		KAILASHPUR SUB DY.	
1	1.575	0.457 M Fall	₹ 6,42,081.93
2	2.250	0.610 M Fall	₹ 6,08,851.13
3	5.400	0.610 M Fall	₹ 5,02,149.62
4	6.000	0.610 M Fall	₹ 4,65,201.72
5	7.175	1.524 M Fall	₹ 11,67,153.73
		BUDHAUL SUB DY.	
1	1.260	1.22 M Fall	₹ 12,48,005.83
2	1.700	1.066 M Fall	₹ 11,41,730.94
3	3.500	0.914 M Fall	₹ 10,38,394.22
4	3.800	0.305 M Fall	₹ 7,78,865.32
5	4.500	0.457 M Fall	₹ 8,06,699.75
6	5.060	0.457 M Fall	₹ 7,48,110.06
7	5.910	1.524 M Fall	₹ 14,17,455.33
8	7.190	1.981 M Fall	₹ 19,23,714.25
9	7.620	1.066 M Fall	₹ 9,04,259.31
10	8.100	1.066 M Fall	₹ 9,04,345.73
11	9.800	0.914 M Fall	₹ 10,10,536.24
12	11.500	0.610 M Fall	₹ 3,96,230.31
		PATOI SUB DY.	
1	0.475	0.305 M Fall	₹ 13,27,781.78
2	4.510	0.914 M Fall	₹ 15,19,550.32
3	6.950	1.828 M Fall	₹ 14,27,970.97
4	7.900	0.610 M Fall	₹ 9,59,023.88
5	8.382	1.828 M Fall	₹ 19,51,983.48
6	9.240	0.610 M Fall	₹ 8,44,513.09
7	10.025	1.524 M Fall	₹ 14,42,842.94
8	11.125	0.914 M Fall	₹ 8,36,743.34
9	12.000	1.220 M Fall	₹ 8,63,011.32
10	12.689	0.914 M Fall	₹ 8,82,028.13
11	13.500	0.610 M Fall	₹ 5,83,370.17
12	15.000	0.610 M Fall	₹ 2,35,693.51
		Sub-Total	₹ 6,77,82,615.72
		Seigniorage charges	₹ 6,01,862.39
		Total (in Rs. Lakhs)	**₹ 683.84**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF FALLS FOR ANGRA BRANCH CANAL								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
GLACIS TYPE FALL OF HEIGHT 2.440 METER AT CH. 1.676 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	403.648	Cum	**195.20**	78792.05			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	72.63	Cum	**6381.70**	463514.69	23.53	32.68	65.37
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	528.27	Cum	**6914.20**	3652547.86	217.91	227.16	454.31
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.46	Cum	**8151.40**	28209.39	1.96	1.35	2.73
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	10.37	MT	**73574.90**	762769.51			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	1136.44	Sqm	**578.60**	657545.66			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	71.75	Sqm	**680.10**	48797.18			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	13.65	Cum	**694.61**	9481.43			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	13.65	Cum	**1237.00**	16885.05			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	13.65	Cum	**1377.70**	18805.61			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	13.65	Cum	**516.50**	7050.23			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	34.29	Sqm	**63.20**	2167.36	0.051		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	175.61	Cum	**149.30**	26218.08			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	261.189	Cum	**1075.00**	280778.25			
	Coarse Aggregates (100 Km lead)	522.413	Cum	**1398.00**	730333.01			
	Cement (30 km lead)	243.457	MT	**742.00**	180644.91			
	Boulder (60 Km lead)	13.65	Cum	**1159.00**	15820.35			
	Brick (15 km lead)	4305.00	No.	**3.18**	13689.90			
	Steel (30 Km lead)	10.37	MT	**742.00**	7692.50			
	TOTAL (In Rs.)				**7012920.39**			
	TOTAL (In Rs.)				**7012920.39**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	261.19	Cum	**584.64**	152701.58	15270.16		
	Coarse Aggregate	522.41	Cum	**944.26**	493293.46	49329.35		
	Boulders	13.65	Cum	**694.61**	9481.43	948.14		
	Total					65547.65		
	For 1 nos. fall, Total Seigniorage charges					**65547.65**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 12.750 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	485.141	Cum	**195.20**	94699.57			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	54.20	Cum	**6381.70**	345900.67	17.56	24.39	48.78
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	362.48	Cum	**6914.20**	2506231.04	149.52	155.86	311.73
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.38	Cum	**8151.40**	19412.11	1.35	0.93	1.88
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	5.69	MT	**73574.90**	418705.34			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	656.27	Sqm	**578.60**	379718.12			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	61.00	Sqm	**680.10**	41487.46			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	9.59	Cum	**694.61**	6657.84			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	9.59	Cum	**1237.00**	11856.65			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	9.59	Cum	**1377.70**	13205.25			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	9.59	Cum	**516.50**	4950.65			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	23.37	Sqm	**63.20**	1477.23	0.035		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	102.80	Cum	**149.30**	15348.38			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	181.184	Cum	**1075.00**	194773.12			
	Coarse Aggregates (100 Km lead)	362.392	Cum	**1398.00**	506624.58			
	Cement (30 km lead)	168.468	MT	**742.00**	125003.33			
	Boulder (60 Km lead)	9.59	Cum	**1159.00**	11109.02			
	Brick (15 km lead)	3660.00	No.	**3.18**	11638.80			
	Steel (30 Km lead)	5.69	MT	**742.00**	4222.63			
	TOTAL (In Rs.)				**4724199.17**			
	TOTAL (In Rs.)				**4724199.17**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	181.18	Cum	**584.64**	105927.59	10592.76		
	Coarse Aggregate	362.39	Cum	**944.26**	342192.65	34219.27		
	Boulders	9.59	Cum	**694.61**	6657.84	665.78		
	Total					45477.81		
	For 1 nos. fall, Total Seigniorage charges					**45477.81**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 17.450 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	255.733	Cum	**195.20**	49919.16			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	38.27	Cum	**6381.70**	244229.20	12.40	17.22	34.44
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	221.95	Cum	**6914.20**	1534603.57	91.55	95.44	190.88
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.34	Cum	**8151.40**	19044.56	1.32	0.91	1.85
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	4.36	MT	**73574.90**	320474.60			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	475.00	Sqm	**578.60**	274833.20			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	57.04	Sqm	**680.10**	38794.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	9.05	Cum	**694.61**	6289.31			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	9.05	Cum	**1237.00**	11200.35			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	9.05	Cum	**1377.70**	12474.32			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	9.05	Cum	**516.50**	4676.62			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.42	Sqm	**63.20**	1290.66	0.031		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	143.10	Cum	**149.30**	21365.30			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	113.571	Cum	**1075.00**	122088.93			
	Coarse Aggregates (100 Km lead)	227.166	Cum	**1398.00**	317577.44			
	Cement (30 km lead)	105.309	MT	**742.00**	78139.35			
	Boulder (60 Km lead)	9.05	Cum	**1159.00**	10494.11			
	Brick (15 km lead)	3422.00	No.	**3.18**	10881.96			
	Steel (30 Km lead)	4.36	MT	**742.00**	3231.97			
	TOTAL (In Rs.)				**3092786.28**			
	TOTAL (In Rs.)				**3092786.28**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	113.57	Cum	**584.64**	66398.20	6639.82		
	Coarse Aggregate	227.17	Cum	**944.26**	214503.34	21450.33		
	Boulders	9.05	Cum	**694.61**	6289.31	628.93		
	Total					28719.09		
	For 1 nos. fall, Total Seigniorage charges					**28719.09**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.19.150 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	532.954	Cum	**195.20**	104032.63			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	43.04	Cum	**6381.70**	274677.25	13.95	19.37	38.74
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	405.38	Cum	**6914.20**	2802846.11	167.22	174.31	348.62
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.79	Cum	**8151.40**	22709.80	1.58	1.09	2.20
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	7.96	MT	**73574.90**	585324.45			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	699.39	Sqm	**578.60**	404665.94			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	59.28	Sqm	**680.10**	40318.37			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	9.05	Cum	**694.61**	6289.31			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	9.05	Cum	**1237.00**	11200.35			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	9.05	Cum	**1377.70**	12474.32			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	9.05	Cum	**516.50**	4676.62			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	23.57	Sqm	**63.20**	1489.57	0.035		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	101.04	Cum	**149.30**	15085.64			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	194.767	Cum	**1075.00**	209374.05			
	Coarse Aggregates (100 Km lead)	389.561	Cum	**1398.00**	544606.25			
	Cement (30 km lead)	182.778	MT	**742.00**	135621.09			
	Boulder (60 Km lead)	9.05	Cum	**1159.00**	10494.11			
	Brick (15 km lead)	3556.00	No.	**3.18**	11308.08			
	Steel (30 Km lead)	7.96	MT	**742.00**	5902.97			
	TOTAL (In Rs.)				**5225451.72**			
	TOTAL (In Rs.)				**5225451.72**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	194.77	Cum	**584.64**	113868.32	11386.83		
	Coarse Aggregate	389.56	Cum	**944.26**	367846.85	36784.68		
	Boulders	9.05	Cum	**694.61**	6289.31	628.93		
	Total					48800.45		
	For 1 nos. fall, Total Seigniorage charges					**48800.45**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 19.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	187.798	Cum	**195.20**	36658.08			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	38.27	Cum	**6381.70**	244229.20	12.40	17.22	34.44
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	198.85	Cum	**6914.20**	1374875.26	82.02	85.50	171.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.34	Cum	**8151.40**	19044.56	1.32	0.91	1.85
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	3.90	MT	**73574.90**	287118.19			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	474.75	Sqm	**578.60**	274692.22			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	57.04	Sqm	**680.10**	38794.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	9.05	Cum	**694.61**	6289.31			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	9.05	Cum	**1237.00**	11200.35			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	9.05	Cum	**1377.70**	12474.32			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	9.05	Cum	**516.50**	4676.62			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.42	Sqm	**63.20**	1290.66	0.031		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	143.10	Cum	**149.30**	21365.30			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	103.637	Cum	**1075.00**	111410.26			
	Coarse Aggregates (100 Km lead)	207.298	Cum	**1398.00**	289802.98			
	Cement (30 km lead)	95.780	MT	**742.00**	71068.56			
	Boulder (60 Km lead)	9.05	Cum	**1159.00**	10494.11			
	Brick (15 km lead)	3422.00	No.	**3.18**	10881.96			
	Steel (30 Km lead)	3.90	MT	**742.00**	2895.58			
	TOTAL (In Rs.)				**2840439.19**			
	TOTAL (In Rs.)				**2840439.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	103.64	Cum	**584.64**	60590.60	6059.06		
	Coarse Aggregate	207.30	Cum	**944.26**	195743.46	19574.35		
	Boulders	9.05	Cum	**694.61**	6289.31	628.93		
	Total					26262.34		
	For 1 nos. fall, Total Seigniorage charges					**26262.34**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH. 21.050 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	358.051	Cum	**195.20**	69891.60			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	32.44	Cum	**6381.70**	207047.78	10.51	14.60	29.20
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	228.92	Cum	**6914.20**	1582799.07	94.43	98.44	196.87
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.95	Cum	**8151.40**	15922.17	1.11	0.76	1.54
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	4.49	MT	**73574.90**	330539.37			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	467.80	Sqm	**578.60**	270671.03			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	29.71	Sqm	**680.10**	20207.13			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.68	Cum	**694.61**	3250.77			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.68	Cum	**1237.00**	5789.16			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.68	Cum	**1377.70**	6447.64			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.68	Cum	**516.50**	2417.22			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.87	Sqm	**63.20**	1002.74	0.024		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	113.59	Cum	**149.30**	16958.92			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	113.797	Cum	**1075.00**	122332.00			
	Coarse Aggregates (100 Km lead)	227.614	Cum	**1398.00**	318204.30			
	Cement (30 km lead)	106.073	MT	**742.00**	78705.94			
	Boulder (60 Km lead)	4.68	Cum	**1159.00**	5424.12			
	Brick (15 km lead)	1782.00	No.	**3.18**	5666.76			
	Steel (30 Km lead)	4.49	MT	**742.00**	3333.48			
	TOTAL (In Rs.)				**3077788.59**			
	TOTAL (In Rs.)				**3077788.59**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	113.80	Cum	**584.64**	66530.40	6653.04		
	Coarse Aggregate	227.61	Cum	**944.26**	214926.75	21492.67		
	Boulders	4.68	Cum	**694.61**	3250.77	325.08		
	Total					28470.79		
	For 1 nos. fall, Total Seigniorage charges					**28470.79**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH. 22.300 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	185.611	Cum	**195.20**	36231.17			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	28.61	Cum	**6381.70**	182562.64	9.27	12.87	25.75
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	148.66	Cum	**6914.20**	1027840.69	61.32	63.92	127.84
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.75	Cum	**8151.40**	14234.59	0.99	0.68	1.38
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	3.50	MT	**73574.90**	257575.45			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	375.31	Sqm	**578.60**	217152.94			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	42.86	Sqm	**680.10**	29147.73			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	6.75	Cum	**694.61**	4688.62			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	6.75	Cum	**1237.00**	8349.75			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	6.75	Cum	**1377.70**	9299.48			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	6.75	Cum	**516.50**	3486.38			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.01	Sqm	**63.20**	1074.75	0.026		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	43.20	Cum	**149.30**	6449.13			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	77.477	Cum	**1075.00**	83287.33			
	Coarse Aggregates (100 Km lead)	154.971	Cum	**1398.00**	216648.94			
	Cement (30 km lead)	71.605	MT	**742.00**	53131.05			
	Boulder (60 Km lead)	6.75	Cum	**1159.00**	7823.25			
	Brick (15 km lead)	2571.00	No.	**3.18**	8175.78			
	Steel (30 Km lead)	3.50	MT	**742.00**	2597.64			
	TOTAL (In Rs.)				**2180934.68**			
	TOTAL (In Rs.)				**2180934.68**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	77.48	Cum	**584.64**	45295.91	4529.59		
	Coarse Aggregate	154.97	Cum	**944.26**	146332.56	14633.26		
	Boulders	6.75	Cum	**694.61**	4688.62	468.86		
	Total					19631.71		
	For 1 nos. fall, Total Seigniorage charges					**19631.71**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH.25.350 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	141.474	Cum	**195.20**	27615.75			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	23.15	Cum	**6381.70**	147761.56	7.50	10.42	20.84
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	102.34	Cum	**6914.20**	707566.98	42.21	44.00	88.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.62	Cum	**8151.40**	13206.78	0.92	0.63	1.28
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	2.41	MT	**73574.90**	177315.30			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	284.34	Sqm	**578.60**	164518.93			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	24.85	Sqm	**680.10**	16903.55			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.13	Cum	**694.61**	2865.27			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.13	Cum	**1237.00**	5102.63			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.13	Cum	**1377.70**	5683.01			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.13	Cum	**516.50**	2130.56			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.48	Sqm	**63.20**	915.37	0.022		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	31.21	Cum	**149.30**	4659.08			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	55.055	Cum	**1075.00**	59184.50			
	Coarse Aggregates (100 Km lead)	110.127	Cum	**1398.00**	153957.39			
	Cement (30 km lead)	50.656	MT	**742.00**	37586.44			
	Boulder (60 Km lead)	4.13	Cum	**1159.00**	4780.88			
	Brick (15 km lead)	1491.00	No.	**3.18**	4741.38			
	Steel (30 Km lead)	2.41	MT	**742.00**	1788.22			
	TOTAL (In Rs.)				**1560638.36**			
	TOTAL (In Rs.)				**1560638.36**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	55.06	Cum	**584.64**	32187.56	3218.76		
	Coarse Aggregate	110.13	Cum	**944.26**	103988.42	10398.84		
	Boulders	4.13	Cum	**694.61**	2865.27	286.53		
	Total					13904.12		
	For 1 nos. fall, Total Seigniorage charges					**13904.12**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH.26.650 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	205.563	Cum	**195.20**	40125.81			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	26.16	Cum	**6381.70**	166923.76	8.47	11.77	23.54
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	129.34	Cum	**6914.20**	894294.45	53.35	55.62	111.23
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.68	Cum	**8151.40**	13704.54	0.95	0.66	1.33
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	3.05	MT	**73574.90**	224108.94			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	337.86	Sqm	**578.60**	195487.92			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	24.85	Sqm	**680.10**	16903.55			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.13	Cum	**694.61**	2865.27			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.13	Cum	**1237.00**	5102.63			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.13	Cum	**1377.70**	5683.01			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.13	Cum	**516.50**	2130.56			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.71	Sqm	**63.20**	992.56	0.024		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	55.64	Cum	**149.30**	8307.68			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	68.043	Cum	**1075.00**	73146.34			
	Coarse Aggregates (100 Km lead)	136.103	Cum	**1398.00**	190272.03			
	Cement (30 km lead)	62.805	MT	**742.00**	46601.33			
	Boulder (60 Km lead)	4.13	Cum	**1159.00**	4780.88			
	Brick (15 km lead)	1491.00	No.	**3.18**	4741.38			
	Steel (30 Km lead)	3.05	MT	**742.00**	2260.13			
	TOTAL (In Rs.)				**1920787.56**			
	TOTAL (In Rs.)				**1920787.56**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	68.04	Cum	**584.64**	39780.72	3978.07		
	Coarse Aggregate	136.10	Cum	**944.26**	128516.64	12851.66		
	Boulders	4.13	Cum	**694.61**	2865.27	286.53		
	Total					17116.26		
	For 1 nos. fall, Total Seigniorage charges					**17116.26**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.28.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	114.120	Cum	**195.20**	22276.22			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	17.20	Cum	**6381.70**	109764.45	5.57	7.74	15.48
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	81.58	Cum	**6914.20**	564033.25	33.65	35.08	70.16
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.04	Cum	**8151.40**	8469.83	0.59	0.41	0.82
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.92	MT	**73574.90**	141345.95			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	243.04	Sqm	**578.60**	140623.08			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	17.83	Sqm	**680.10**	12128.56			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.50	Cum	**694.61**	1734.79			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.50	Cum	**1237.00**	3089.41			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.50	Cum	**1377.70**	3440.81			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.50	Cum	**516.50**	1289.96			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.75	Sqm	**63.20**	742.68	0.018		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	24.36	Cum	**149.30**	3636.34			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	43.223	Cum	**1075.00**	46464.61			
	Coarse Aggregates (100 Km lead)	86.456	Cum	**1398.00**	120865.72			
	Cement (30 km lead)	39.830	MT	**742.00**	29553.61			
	Boulder (60 Km lead)	2.50	Cum	**1159.00**	2894.60			
	Brick (15 km lead)	1070.00	No.	**3.18**	3402.60			
	Steel (30 Km lead)	1.92	MT	**742.00**	1425.47			
	TOTAL (In Rs.)				**1239536.74**			
	TOTAL (In Rs.)				**1239536.74**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	43.22	Cum	**584.64**	25269.83	2526.98		
	Coarse Aggregate	86.46	Cum	**944.26**	81637.10	8163.71		
	Boulders	2.50	Cum	**694.61**	1734.79	173.48		
	Total					10864.17		
	For 1 nos. fall, Total Seigniorage charges					**10864.17**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH. 34.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	56.859	Cum	**195.20**	11098.82			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.54	Cum	**6381.70**	80037.57	4.06	5.64	11.29
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	47.64	Cum	**6914.20**	329409.32	19.65	20.49	40.97
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.52	Cum	**8151.40**	12350.96	0.86	0.59	1.20
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.56	MT	**73574.90**	41274.76			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	162.16	Sqm	**578.60**	93823.99			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	6.87	Sqm	**680.10**	4674.33			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.72	Cum	**694.61**	500.12			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.72	Cum	**1237.00**	890.64			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.72	Cum	**1377.70**	991.94			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.72	Cum	**516.50**	371.88			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.43	Sqm	**63.20**	596.27	0.014		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.52	Cum	**149.30**	1869.29			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	26.721	Cum	**1075.00**	28725.02			
	Coarse Aggregates (100 Km lead)	53.457	Cum	**1398.00**	74732.97			
	Cement (30 km lead)	24.589	MT	**742.00**	18245.26			
	Boulder (60 Km lead)	0.72	Cum	**1159.00**	834.48			
	Brick (15 km lead)	412.00	No.	**3.18**	1310.16			
	Steel (30 Km lead)	0.56	MT	**742.00**	416.25			
	TOTAL (In Rs.)				**713331.44**			
	TOTAL (In Rs.)				**713331.44**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	26.72	Cum	**584.64**	15622.14	1562.21		
	Coarse Aggregate	53.46	Cum	**944.26**	50477.36	5047.74		
	Boulders	0.72	Cum	**694.61**	500.12	50.01		
	Total					6659.96		
	For 1 nos. fall, Total Seigniorage charges					**6659.96**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.29.550 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	123.456	Cum	**195.20**	24098.60			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.13	Cum	**6381.70**	115709.13	5.87	8.16	16.32
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	75.65	Cum	**6914.20**	523063.60	31.21	32.53	65.06
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.07	Cum	**8151.40**	8685.89	0.60	0.42	0.84
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.78	MT	**73574.90**	131079.01			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	234.85	Sqm	**578.60**	135885.18			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	16.47	Sqm	**680.10**	11198.19			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.30	Cum	**694.61**	1594.13			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.30	Cum	**1237.00**	2838.92			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.30	Cum	**1377.70**	3161.82			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.30	Cum	**516.50**	1185.37			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.91	Sqm	**63.20**	816.00	0.019		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	32.56	Cum	**149.30**	4861.17			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	41.104	Cum	**1075.00**	44187.31			
	Coarse Aggregates (100 Km lead)	82.220	Cum	**1398.00**	114943.00			
	Cement (30 km lead)	37.704	MT	**742.00**	27976.37			
	Boulder (60 Km lead)	2.30	Cum	**1159.00**	2659.91			
	Brick (15 km lead)	987.00	No.	**3.18**	3138.66			
	Steel (30 Km lead)	1.78	MT	**742.00**	1321.93			
	TOTAL (In Rs.)				**1180758.96**			
	TOTAL (In Rs.)				**1180758.96**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	41.10	Cum	**584.64**	24031.32	2403.13		
	Coarse Aggregate	82.22	Cum	**944.26**	77636.68	7763.67		
	Boulders	2.30	Cum	**694.61**	1594.13	159.41		
	Total					10326.21		
	For 1 nos. fall, Total Seigniorage charges					**10326.21**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.30.800 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	110.332	Cum	**195.20**	21536.82			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.23	Cum	**6381.70**	116315.07	5.91	8.20	16.40
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	76.25	Cum	**6914.20**	527216.27	31.45	32.79	65.58
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.01	Cum	**8151.40**	8213.07	0.57	0.39	0.80
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.80	MT	**73574.90**	132119.66			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	236.64	Sqm	**578.60**	136917.30			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	16.47	Sqm	**680.10**	11198.19			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.30	Cum	**694.61**	1594.13			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.30	Cum	**1237.00**	2838.92			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.30	Cum	**1377.70**	3161.82			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.30	Cum	**516.50**	1185.37			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.75	Sqm	**63.20**	742.68	0.018		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	27.04	Cum	**149.30**	4037.73			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	41.383	Cum	**1075.00**	44486.55			
	Coarse Aggregates (100 Km lead)	82.776	Cum	**1398.00**	115720.49			
	Cement (30 km lead)	37.948	MT	**742.00**	28157.33			
	Boulder (60 Km lead)	2.30	Cum	**1159.00**	2659.91			
	Brick (15 km lead)	987.00	No.	**3.18**	3138.66			
	Steel (30 Km lead)	1.80	MT	**742.00**	1332.42			
	TOTAL (In Rs.)				**1184927.18**			
	TOTAL (In Rs.)				**1184927.18**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	41.38	Cum	**584.64**	24194.06	2419.41		
	Coarse Aggregate	82.78	Cum	**944.26**	78161.83	7816.18		
	Boulders	2.30	Cum	**694.61**	1594.13	159.41		
	Total					10395.00		
	For 1 nos. fall, Total Seigniorage charges					**10395.00**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR PALUA MINOR							
	SHARDA TYPE FALL CUM CULVERT OF HEIGHT 0.610 METER AT CH. 1.650 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	32.942	Cum	**195.20**	6430.28			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	4.37	Cum	**6381.70**	27910.26	1.42	1.97	3.94
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	28.29	Cum	**6914.20**	195624.99	11.67	12.17	24.33
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	9.57	Cum	**8151.40**	78042.73	5.43	3.73	7.56
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.95	MT	**73574.90**	70040.68			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	124.98	Sqm	**578.60**	72311.73			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	2.94	Sqm	**63.20**	186.00	0.004		
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	7.18	Cum	**149.30**	1072.42			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.868	Cum	**1075.00**	19208.18			
	Coarse Aggregates (100 Km lead)	35.832	Cum	**1398.00**	50092.97			
	Cement (30 km lead)	18.521	MT	**742.00**	13742.52			
	Steel (30 Km lead)	0.95	MT	**742.00**	706.36			
	TOTAL (In Rs.)				**557723.91**			
	TOTAL (In Rs.)				**557723.91**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.87	Cum	**584.64**	10446.39	1044.64		
	Coarse Aggregate	35.83	Cum	**944.26**	33834.61	3383.46		
	Total					4428.10		
	For 1 nos. fall, Total Seigniorage charges					**4428.10**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL CUM CULVERT OF HEIGHT 1.372 METER AT CH. 1.768 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	75.017	Cum	**195.20**	14643.24			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.63	Cum	**6381.70**	35938.30	1.82	2.53	5.07
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	55.10	Cum	**6914.20**	381005.58	22.73	23.70	47.39
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.26	Cum	**8151.40**	59219.07	4.12	2.83	5.74
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.57	MT	**73574.90**	115577.20			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	191.26	Sqm	**578.60**	110662.58			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.19	Sqm	**63.20**	264.55	0.006		
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	13.72	Cum	**149.30**	2048.12			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	29.063	Cum	**1075.00**	31242.22			
	Coarse Aggregates (100 Km lead)	58.198	Cum	**1398.00**	81360.40			
	Cement (30 km lead)	28.681	MT	**742.00**	21281.15			
	Steel (30 Km lead)	1.57	MT	**742.00**	1165.59			
	TOTAL (In Rs.)				**876762.79**			
	TOTAL (In Rs.)				**876762.79**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.06	Cum	**584.64**	16991.12	1699.11		
	Coarse Aggregate	58.20	Cum	**944.26**	54953.77	5495.38		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					7194.49		
	For 1 nos. fall, Total Seigniorage charges					**7194.49**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.022 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	25.032	Cum	**195.20**	4886.34			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	3.69	Cum	**6381.70**	23540.14	1.20	1.66	3.32
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.09	Cum	**6914.20**	159631.60	9.52	9.93	19.86
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.33	Cum	**8151.40**	2703.41	0.19	0.13	0.26
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.54	MT	**73574.90**	40003.46			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	88.72	Sqm	**578.60**	51332.72			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.55	Sqm	**63.20**	350.95	0.008		
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	6.82	Cum	**149.30**	1018.15			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	11.717	Cum	**1075.00**	12595.65			
	Coarse Aggregates (100 Km lead)	23.437	Cum	**1398.00**	32765.04			
	Cement (30 km lead)	10.915	MT	**742.00**	8099.01			
	Steel (30 Km lead)	0.54	MT	**742.00**	403.43			
	TOTAL (In Rs.)				**359684.69**			
	TOTAL (In Rs.)				**359684.69**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	11.72	Cum	**584.64**	6850.16	685.02		
	Coarse Aggregate	23.44	Cum	**944.26**	22130.70	2213.07		
	Total					2898.09		
	For 1 nos. fall, Total Seigniorage charges					**2898.09**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 2.225 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	68.513	Cum	**195.20**	13373.83			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.71	Cum	**6381.70**	36456.82	1.85	2.57	5.14
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.62	Cum	**6914.20**	287797.99	17.17	17.90	35.80
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.52	Cum	**8151.40**	4209.91	0.29	0.20	0.41
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.98	MT	**73574.90**	72121.78			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	143.72	Sqm	**578.60**	83158.31			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.98	Sqm	**63.20**	567.49	0.013		
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	14.75	Cum	**149.30**	2202.38			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	20.671	Cum	**1075.00**	22220.84			
	Coarse Aggregates (100 Km lead)	41.346	Cum	**1398.00**	57802.06			
	Cement (30 km lead)	19.327	MT	**742.00**	14340.78			
	Steel (30 Km lead)	0.98	MT	**742.00**	727.35			
	TOTAL (In Rs.)				**617334.33**			
	TOTAL (In Rs.)				**617334.33**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	20.67	Cum	**584.64**	12084.83	1208.48		
	Coarse Aggregate	41.35	Cum	**944.26**	39041.61	3904.16		
	Total					5112.64		
	For 1 nos. fall, Total Seigniorage charges					**5112.64**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR ASHNI MINOR								
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.1.700 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	39.291	Cum	**195.20**	7669.57			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.01	Cum	**6381.70**	44719.33	2.27	3.15	6.31
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	28.45	Cum	**6914.20**	196711.78	11.74	12.23	24.47
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.53	Cum	**8151.40**	4314.58	0.30	0.21	0.42
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.67	MT	**73574.90**	49295.70			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	119.57	Sqm	**578.60**	69185.21			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.22	Sqm	**680.10**	4910.66			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.67	Sqm	**63.20**	547.70	0.013		
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.05	Cum	**149.30**	1649.99			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.593	Cum	**1075.00**	16762.96			
	Coarse Aggregates (100 Km lead)	31.192	Cum	**1398.00**	43606.68			
	Cement (30 km lead)	14.319	MT	**742.00**	10624.93			
	Brick (15 km lead)	433.00	No.	**3.18**	1376.94			
	Steel (30 Km lead)	0.67	MT	**742.00**	497.15			
TOTAL (In Rs.)					**474227.96**			
TOTAL (In Rs.)					**474227.96**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.59	Cum	**584.64**	9116.55	911.66		
	Coarse Aggregate	31.19	Cum	**944.26**	29453.53	2945.35		
	Total					3857.01		
	For 1 nos. fall, Total Seigniorage charges					**3857.01**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.4.084 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	34.968	Cum	**195.20**	6825.70			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.67	Cum	**6381.70**	36164.96	1.84	2.55	5.10
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	21.64	Cum	**6914.20**	149648.57	8.93	9.31	18.61
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.44	Cum	**8151.40**	3618.24	0.25	0.17	0.35
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.51	MT	**73574.90**	37501.72			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	100.86	Sqm	**578.60**	58357.37			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	4.23	Sqm	**680.10**	2875.12			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.94	Sqm	**63.20**	501.91	0.012		
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	9.86	Cum	**149.30**	1472.68			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	12.030	Cum	**1075.00**	12932.28			
	Coarse Aggregates (100 Km lead)	24.064	Cum	**1398.00**	33642.16			
	Cement (30 km lead)	11.028	MT	**742.00**	8182.55			
	Brick (15 km lead)	253.00	No.	**3.18**	804.54			
	Steel (30 Km lead)	0.51	MT	**742.00**	378.20			
	TOTAL (In Rs.)				**364083.42**			
	TOTAL (In Rs.)				**364083.42**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	12.03	Cum	**584.64**	7033.23	703.32		
	Coarse Aggregate	24.06	Cum	**944.26**	22723.14	2272.31		
	Total					2975.64		
	For 1 nos. fall, Total Seigniorage charges					**2975.64**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KAILASHPUR SUB DY.							
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.1.575 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	53.559	Cum	**195.20**	10454.68			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.83	Cum	**6381.70**	69105.14	3.51	4.87	9.75
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	38.76	Cum	**6914.20**	268009.06	15.99	16.67	33.34
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.67	Cum	**8151.40**	5421.13	0.38	0.26	0.53
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.91	MT	**73574.90**	67162.70			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	146.20	Sqm	**578.60**	84588.79			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.93	Sqm	**680.10**	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.02	Cum	**694.61**	708.50			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.02	Cum	**1237.00**	1261.74			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.02	Cum	**1377.70**	1405.25			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.02	Cum	**516.50**	526.83			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.16	Sqm	**63.20**	578.98	0.014		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.50	Cum	**149.30**	1717.19			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	21.800	Cum	**1075.00**	23434.97			
	Coarse Aggregates (100 Km lead)	43.607	Cum	**1398.00**	60962.02			
	Cement (30 km lead)	19.889	MT	**742.00**	14757.40			
	Boulder (60 Km lead)	1.02	Cum	**1159.00**	1182.18			
	Brick (15 km lead)	535.00	No.	**3.18**	1701.30			
	Steel (30 Km lead)	0.91	MT	**742.00**	677.33			
	TOTAL (In Rs.)				**642081.93**			
	TOTAL (In Rs.)				**642081.93**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	21.80	Cum	**584.64**	12745.14	1274.51		
	Coarse Aggregate	43.61	Cum	**944.26**	41175.96	4117.60		
	Boulders	1.02	Cum	**694.61**	708.50	70.85		
	Total					5462.96		
	For 1 nos. fall, Total Seigniorage charges					**5462.96**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.2.250 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	49.081	Cum	**195.20**	9580.63			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.15	Cum	**6381.70**	64771.74	3.29	4.57	9.13
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	37.73	Cum	**6914.20**	260899.53	15.57	16.23	32.45
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.64	Cum	**8151.40**	5186.00	0.36	0.25	0.50
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.89	MT	**73574.90**	65381.06			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	143.47	Sqm	**578.60**	83012.85			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.50	Sqm	**680.10**	5098.71			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.76	Cum	**694.61**	528.77			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.76	Cum	**1237.00**	941.67			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.76	Cum	**1377.70**	1048.77			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.76	Cum	**516.50**	393.19			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.03	Sqm	**63.20**	570.96	0.014		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	10.48	Cum	**149.30**	1564.56			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	21.041	Cum	**1075.00**	22619.09			
	Coarse Aggregates (100 Km lead)	42.088	Cum	**1398.00**	58839.56			
	Cement (30 km lead)	19.228	MT	**742.00**	14267.16			
	Boulder (60 Km lead)	0.76	Cum	**1159.00**	882.29			
	Brick (15 km lead)	449.00	No.	**3.18**	1427.82			
	Steel (30 Km lead)	0.89	MT	**742.00**	659.37			
	TOTAL (In Rs.)				**608851.13**			
	TOTAL (In Rs.)				**608851.13**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	21.04	Cum	**584.64**	12301.42	1230.14		
	Coarse Aggregate	42.09	Cum	**944.26**	39742.37	3974.24		
	Boulders	0.76	Cum	**694.61**	528.77	52.88		
	Total					5257.26		
	For 1 nos. fall, Total Seigniorage charges					**5257.26**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.5.400 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	46.527	Cum	**195.20**	9082.12			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.57	Cum	**6381.70**	54718.05	2.78	3.86	7.72
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	30.50	Cum	**6914.20**	210876.04	12.58	13.11	26.23
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.58	Cum	**8151.40**	4737.39	0.33	0.23	0.46
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.72	MT	**73574.90**	52845.24			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	124.32	Sqm	**578.60**	71931.41			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	4.54	Sqm	**680.10**	3089.35			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.34	Cum	**694.61**	234.43			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.34	Cum	**1237.00**	417.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.34	Cum	**1377.70**	464.97			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.34	Cum	**516.50**	174.32			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.92	Sqm	**63.20**	563.97	0.013		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.12	Cum	**149.30**	1809.81			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.200	Cum	**1075.00**	18489.59			
	Coarse Aggregates (100 Km lead)	34.405	Cum	**1398.00**	48098.25			
	Cement (30 km lead)	15.702	MT	**742.00**	11650.72			
	Boulder (60 Km lead)	0.34	Cum	**1159.00**	391.16			
	Brick (15 km lead)	272.00	No.	**3.18**	864.96			
	Steel (30 Km lead)	0.72	MT	**742.00**	532.94			
	TOTAL (In Rs.)				**502149.62**			
	TOTAL (In Rs.)				**502149.62**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.20	Cum	**584.64**	10055.58	1005.56		
	Coarse Aggregate	34.41	Cum	**944.26**	32487.31	3248.73		
	Boulders	0.34	Cum	**694.61**	234.43	23.44		
	Total					4277.73		
	For 1 nos. fall, Total Seigniorage charges					**4277.73**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.6.000 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	35.468	Cum	**195.20**	6923.38			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.72	Cum	**6381.70**	49246.74	2.50	3.47	6.95
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.36	Cum	**6914.20**	189138.17	11.28	11.76	23.53
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.52	Cum	**8151.40**	4266.77	0.30	0.20	0.41
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.64	MT	**73574.90**	47397.76			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	116.54	Sqm	**578.60**	67427.36			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.13	Sqm	**680.10**	3486.87			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.29	Cum	**694.61**	203.17			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.29	Cum	**1237.00**	361.82			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.29	Cum	**1377.70**	402.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.29	Cum	**516.50**	151.08			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.22	Sqm	**63.20**	519.43	0.012		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	8.69	Cum	**149.30**	1297.65			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.439	Cum	**1075.00**	16597.35			
	Coarse Aggregates (100 Km lead)	30.884	Cum	**1398.00**	43175.87			
	Cement (30 km lead)	14.093	MT	**742.00**	10457.25			
	Boulder (60 Km lead)	0.29	Cum	**1159.00**	339.01			
	Brick (15 km lead)	307.00	No.	**3.18**	976.26			
	Steel (30 Km lead)	0.64	MT	**742.00**	478.00			
	TOTAL (In Rs.)				**465201.72**			
	TOTAL (In Rs.)				**465201.72**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.44	Cum	**584.64**	9026.49	902.65		
	Coarse Aggregate	30.88	Cum	**944.26**	29162.55	2916.26		
	Boulders	0.29	Cum	**694.61**	203.17	20.32		
	Total					3839.22		
	For 1 nos. fall, Total Seigniorage charges					**3839.22**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 7.175 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	137.549	Cum	**195.20**	26849.57			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.34	Cum	**6381.70**	65992.75	3.35	4.65	9.31
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	73.53	Cum	**6914.20**	508378.60	30.33	31.62	63.23
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	8.30	Cum	**8151.40**	67621.61	4.70	3.24	6.55
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	2.07	MT	**73574.90**	152179.99			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	229.87	Sqm	**578.60**	133000.99			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	4.54	Sqm	**680.10**	3089.35			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.15	Cum	**694.61**	104.19			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.15	Cum	**1237.00**	185.55			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.15	Cum	**1377.70**	206.66			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.15	Cum	**516.50**	77.48			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.56	Sqm	**63.20**	414.60	0.010		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	17.38	Cum	**149.30**	2595.12			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	39.505	Cum	**1075.00**	42468.14			
	Coarse Aggregates (100 Km lead)	79.093	Cum	**1398.00**	110572.64			
	Cement (30 km lead)	38.394	MT	**742.00**	28488.16			
	Boulder (60 Km lead)	0.15	Cum	**1159.00**	173.85			
	Brick (15 km lead)	272.00	No.	**3.18**	864.96			
	Steel (30 Km lead)	2.07	MT	**742.00**	1534.73			
	TOTAL (In Rs.)				**1167153.73**			
	TOTAL (In Rs.)				**1167153.73**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	39.51	Cum	**584.64**	23096.35	2309.63		
	Coarse Aggregate	79.09	Cum	**944.26**	74684.78	7468.48		
	Boulders	0.15	Cum	**694.61**	104.19	10.42		
	Total					9788.53		
	For 1 nos. fall, Total Seigniorage charges					**9788.53**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR BUDHAUL SUB DY.							
	SHARDA TYPE FALL OF HEIGHT 1.219 METER AT CH.1.260 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	95.946	Cum	**195.20**	18728.69			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	16.23	Cum	**6381.70**	103581.12	5.26	7.30	14.61
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	83.85	Cum	**6914.20**	579767.72	34.59	36.06	72.11
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.04	Cum	**8151.40**	8475.46	0.59	0.41	0.82
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.97	MT	**73574.90**	145288.98			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	250.07	Sqm	**578.60**	144690.81			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.96	Sqm	**680.10**	8814.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.75	Cum	**694.61**	1213.83			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.75	Cum	**1237.00**	2161.66			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.75	Cum	**1377.70**	2407.53			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.75	Cum	**516.50**	902.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.01	Sqm	**63.20**	758.72	0.018		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	23.10	Cum	**149.30**	3449.11			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	43.766	Cum	**1075.00**	47048.11			
	Coarse Aggregates (100 Km lead)	87.542	Cum	**1398.00**	122383.39			
	Cement (30 km lead)	40.455	MT	**742.00**	30017.78			
	Boulder (60 Km lead)	1.75	Cum	**1159.00**	2025.35			
	Brick (15 km lead)	777.00	No.	**3.18**	2470.86			
	Steel (30 Km lead)	1.97	MT	**742.00**	1465.23			
	TOTAL (In Rs.)				**1248005.83**			
	TOTAL (In Rs.)				**1248005.83**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	43.77	Cum	**584.64**	25587.17	2558.72		
	Coarse Aggregate	87.54	Cum	**944.26**	82662.19	8266.22		
	Boulders	1.75	Cum	**694.61**	1213.83	121.38		
	Total					10946.32		
	For 1 nos. fall, Total Seigniorage charges					**10946.32**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH.1.700 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	95.215	Cum	**195.20**	18585.90			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.99	Cum	**6381.70**	95659.31	4.86	6.75	13.49
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	76.15	Cum	**6914.20**	526516.94	31.41	32.74	65.49
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.99	Cum	**8151.40**	8089.94	0.56	0.39	0.78
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.79	MT	**73574.90**	131944.41			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	227.53	Sqm	**578.60**	131650.69			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.96	Sqm	**680.10**	8814.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.75	Cum	**694.61**	1213.83			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.75	Cum	**1237.00**	2161.66			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.75	Cum	**1377.70**	2407.53			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.75	Cum	**516.50**	902.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.06	Sqm	**63.20**	698.94	0.017		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	21.33	Cum	**149.30**	3184.86			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	39.877	Cum	**1075.00**	42867.70			
	Coarse Aggregates (100 Km lead)	79.764	Cum	**1398.00**	111509.77			
	Cement (30 km lead)	36.848	MT	**742.00**	27341.12			
	Boulder (60 Km lead)	1.75	Cum	**1159.00**	2025.35			
	Brick (15 km lead)	777.00	No.	**3.18**	2470.86			
	Steel (30 Km lead)	1.79	MT	**742.00**	1330.65			
	TOTAL (In Rs.)				**1141730.94**			
	TOTAL (In Rs.)				**1141730.94**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	39.88	Cum	**584.64**	23313.65	2331.36		
	Coarse Aggregate	79.76	Cum	**944.26**	75317.75	7531.78		
	Boulders	1.75	Cum	**694.61**	1213.83	121.38		
	Total					9984.52		
	For 1 nos. fall, Total Seigniorage charges					**9984.52**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.3.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	88.642	Cum	**195.20**	17302.88			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.70	Cum	**6381.70**	93800.67	4.76	6.61	13.23
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	67.46	Cum	**6914.20**	466420.26	27.83	29.01	58.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.88	Cum	**8151.40**	7173.03	0.50	0.34	0.70
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.59	MT	**73574.90**	116884.27			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	217.33	Sqm	**578.60**	125749.31			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.96	Sqm	**680.10**	8814.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.75	Cum	**694.61**	1213.83			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.75	Cum	**1237.00**	2161.66			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.75	Cum	**1377.70**	2407.53			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.75	Cum	**516.50**	902.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.01	Sqm	**63.20**	695.64	0.017		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	20.39	Cum	**149.30**	3044.28			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	35.965	Cum	**1075.00**	38661.88			
	Coarse Aggregates (100 Km lead)	71.938	Cum	**1398.00**	100569.15			
	Cement (30 km lead)	33.104	MT	**742.00**	24563.38			
	Boulder (60 Km lead)	1.75	Cum	**1159.00**	2025.35			
	Brick (15 km lead)	777.00	No.	**3.18**	2470.86			
	Steel (30 Km lead)	1.59	MT	**742.00**	1178.77			
	TOTAL (In Rs.)				**1038394.22**			
	TOTAL (In Rs.)				**1038394.22**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	35.96	Cum	**584.64**	21026.31	2102.63		
	Coarse Aggregate	71.94	Cum	**944.26**	67928.06	6792.81		
	Boulders	1.75	Cum	**694.61**	1213.83	121.38		
	Total					9016.82		
	For 1 nos. fall, Total Seigniorage charges					**9016.82**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.3.800 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	71.272	Cum	**195.20**	13912.30			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.01	Cum	**6381.70**	83047.28	4.22	5.86	11.71
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	47.50	Cum	**6914.20**	328399.59	19.59	20.42	40.85
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.76	Cum	**8151.40**	6180.80	0.43	0.30	0.60
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.12	MT	**73574.90**	82296.48			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	169.21	Sqm	**578.60**	97903.76			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.96	Sqm	**680.10**	8814.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.75	Cum	**694.61**	1213.83			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.75	Cum	**1237.00**	2161.66			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.75	Cum	**1377.70**	2407.53			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.75	Cum	**516.50**	902.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.89	Sqm	**63.20**	625.11	0.015		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	16.34	Cum	**149.30**	2440.25			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	26.575	Cum	**1075.00**	28568.31			
	Coarse Aggregates (100 Km lead)	53.158	Cum	**1398.00**	74314.79			
	Cement (30 km lead)	24.253	MT	**742.00**	17995.99			
	Boulder (60 Km lead)	1.75	Cum	**1159.00**	2025.35			
	Brick (15 km lead)	777.00	No.	**3.18**	2470.86			
	Steel (30 Km lead)	1.12	MT	**742.00**	829.96			
	TOTAL (In Rs.)				**778865.32**			
	TOTAL (In Rs.)				**778865.32**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	26.58	Cum	**584.64**	15536.91	1553.69		
	Coarse Aggregate	53.16	Cum	**944.26**	50194.91	5019.49		
	Boulders	1.75	Cum	**694.61**	1213.83	121.38		
	Total					6694.56		
	For 1 nos. fall, Total Seigniorage charges					**6694.56**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.4.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	56.722	Cum	**195.20**	11072.07			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.18	Cum	**6381.70**	84138.69	4.27	5.93	11.87
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	50.02	Cum	**6914.20**	345826.34	20.63	21.51	43.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.77	Cum	**8151.40**	6253.79	0.44	0.30	0.61
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.18	MT	**73574.90**	86663.60			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	175.06	Sqm	**578.60**	101291.45			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.96	Sqm	**680.10**	8814.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.75	Cum	**694.61**	1213.83			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.75	Cum	**1237.00**	2161.66			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.75	Cum	**1377.70**	2407.53			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.75	Cum	**516.50**	902.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.07	Sqm	**63.20**	636.43	0.015		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	9.31	Cum	**149.30**	1390.17			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	27.739	Cum	**1075.00**	29819.87			
	Coarse Aggregates (100 Km lead)	55.486	Cum	**1398.00**	77570.12			
	Cement (30 km lead)	25.354	MT	**742.00**	18812.51			
	Boulder (60 Km lead)	1.75	Cum	**1159.00**	2025.35			
	Brick (15 km lead)	777.00	No.	**3.18**	2470.86			
	Steel (30 Km lead)	1.18	MT	**742.00**	874.00			
	TOTAL (In Rs.)				**806699.75**			
	TOTAL (In Rs.)				**806699.75**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	27.74	Cum	**584.64**	16217.57	1621.76		
	Coarse Aggregate	55.49	Cum	**944.26**	52393.68	5239.37		
	Boulders	1.75	Cum	**694.61**	1213.83	121.38		
	Total					6982.51		
	For 1 nos. fall, Total Seigniorage charges					**6982.51**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.5.060 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	49.703	Cum	**195.20**	9701.96			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.20	Cum	**6381.70**	77872.93	3.95	5.49	10.98
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	46.15	Cum	**6914.20**	319069.94	19.04	19.84	39.69
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.72	Cum	**8151.40**	5872.68	0.41	0.28	0.57
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.09	MT	**73574.90**	79958.48			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	165.49	Sqm	**578.60**	95753.35			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.18	Sqm	**680.10**	7602.16			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.38	Cum	**694.61**	961.17			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.38	Cum	**1237.00**	1711.70			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.38	Cum	**1377.70**	1906.39			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.38	Cum	**516.50**	714.71			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.64	Sqm	**63.20**	609.18	0.014		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	6.74	Cum	**149.30**	1006.42			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	25.615	Cum	**1075.00**	27536.50			
	Coarse Aggregates (100 Km lead)	52.622	Cum	**1398.00**	73565.07			
	Cement (30 km lead)	23.412	MT	**742.00**	17371.88			
	Boulder (60 Km lead)	1.38	Cum	**1159.00**	1603.77			
	Brick (15 km lead)	670.00	No.	**3.18**	2130.60			
	Steel (30 Km lead)	1.09	MT	**742.00**	806.38			
	TOTAL (In Rs.)				**748110.06**			
	TOTAL (In Rs.)				**748110.06**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.62	Cum	**584.64**	14975.76	1497.58		
	Coarse Aggregate	52.62	Cum	**944.26**	49688.52	4968.85		
	Boulders	1.38	Cum	**694.61**	961.17	96.12		
	Total					6562.54		
	For 1 nos. fall, Total Seigniorage charges					**6562.54**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.5.910 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	161.465	Cum	**195.20**	31517.91			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	16.21	Cum	**6381.70**	103427.84	5.25	7.29	14.59
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	96.91	Cum	**6914.20**	670043.46	39.97	41.67	83.34
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.94	Cum	**8151.40**	7639.49	0.53	0.37	0.74
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	2.28	MT	**73574.90**	167911.96			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	280.30	Sqm	**578.60**	162183.77			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.42	Sqm	**680.10**	8446.84			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.54	Cum	**694.61**	1067.96			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.54	Cum	**1237.00**	1901.89			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.54	Cum	**1377.70**	2118.21			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.54	Cum	**516.50**	794.12			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.38	Sqm	**63.20**	782.67	0.019		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	43.46	Cum	**149.30**	6487.94			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	49.329	Cum	**1075.00**	53028.90			
	Coarse Aggregates (100 Km lead)	98.668	Cum	**1398.00**	137937.56			
	Cement (30 km lead)	45.776	MT	**742.00**	33965.57			
	Boulder (60 Km lead)	1.54	Cum	**1159.00**	1781.96			
	Brick (15 km lead)	745.00	No.	**3.18**	2369.10			
	Steel (30 Km lead)	2.28	MT	**742.00**	1693.39			
	TOTAL (In Rs.)				**1417455.33**			
	TOTAL (In Rs.)				**1417455.33**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	49.33	Cum	**584.64**	28839.83	2883.98		
	Coarse Aggregate	98.67	Cum	**944.26**	93168.04	9316.80		
	Boulders	1.54	Cum	**694.61**	1067.96	106.80		
	Total					12307.58		
	For 1 nos. fall, Total Seigniorage charges					**12307.58**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.981 METER AT CH.7.190 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	217.384	Cum	**195.20**	42433.26			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.56	Cum	**6381.70**	118436.48	6.01	8.35	16.70
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	137.35	Cum	**6914.20**	949676.95	56.66	59.06	118.12
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.11	Cum	**8151.40**	9057.47	0.63	0.43	0.88
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	3.23	MT	**73574.90**	237987.72			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	352.56	Sqm	**578.60**	203991.07			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.42	Sqm	**680.10**	8446.84			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.54	Cum	**694.61**	1067.96			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.54	Cum	**1237.00**	1901.89			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.54	Cum	**1377.70**	2118.21			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.54	Cum	**516.50**	794.12			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.27	Sqm	**63.20**	902.06	0.021		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	56.01	Cum	**149.30**	8361.85			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	67.846	Cum	**1075.00**	72934.47			
	Coarse Aggregates (100 Km lead)	135.703	Cum	**1398.00**	189712.99			
	Cement (30 km lead)	63.322	MT	**742.00**	46984.95			
	Boulder (60 Km lead)	1.54	Cum	**1159.00**	1781.96			
	Brick (15 km lead)	745.00	No.	**3.18**	2369.10			
	Steel (30 Km lead)	3.23	MT	**742.00**	2400.10			
	TOTAL (In Rs.)				**1923714.25**			
	TOTAL (In Rs.)				**1923714.25**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	67.85	Cum	**584.64**	39665.49	3966.55		
	Coarse Aggregate	135.70	Cum	**944.26**	128139.05	12813.90		
	Boulders	1.54	Cum	**694.61**	1067.96	106.80		
	Total					16887.25		
	For 1 nos. fall, Total Seigniorage charges					**16887.25**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH.7.620 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	85.762	Cum	**195.20**	16740.76			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.64	Cum	**6381.70**	80642.56	4.09	5.69	11.37
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	58.14	Cum	**6914.20**	401962.72	23.98	25.00	50.00
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.87	Cum	**8151.40**	7062.62	0.49	0.34	0.68
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.37	MT	**73574.90**	100731.30			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	195.74	Sqm	**578.60**	113257.36			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.53	Sqm	**680.10**	7161.45			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.22	Cum	**694.61**	843.95			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.22	Cum	**1237.00**	1502.96			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.22	Cum	**1377.70**	1673.91			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.22	Cum	**516.50**	627.55			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.13	Sqm	**63.20**	640.13	0.015		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	22.22	Cum	**149.30**	3317.79			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	31.023	Cum	**1075.00**	33349.46			
	Coarse Aggregates (100 Km lead)	62.054	Cum	**1398.00**	86751.73			
	Cement (30 km lead)	28.582	MT	**742.00**	21207.64			
	Boulder (60 Km lead)	1.22	Cum	**1159.00**	1408.19			
	Brick (15 km lead)	631.00	No.	**3.18**	2006.58			
	Steel (30 Km lead)	1.37	MT	**742.00**	1015.87			
	TOTAL (In Rs.)				**904259.31**			
	TOTAL (In Rs.)				**904259.31**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	31.02	Cum	**584.64**	18137.14	1813.71		
	Coarse Aggregate	62.05	Cum	**944.26**	58595.27	5859.53		
	Boulders	1.22	Cum	**694.61**	843.95	84.40		
	Total					7757.64		
	For 1 nos. fall, Total Seigniorage charges					**7757.64**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH.8.100 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	86.134	Cum	**195.20**	16813.41			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.64	Cum	**6381.70**	80642.56	4.09	5.69	11.37
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	58.14	Cum	**6914.20**	401962.72	23.98	25.00	50.00
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.87	Cum	**8151.40**	7062.62	0.49	0.34	0.68
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.37	MT	**73574.90**	100731.30			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	195.74	Sqm	**578.60**	113257.36			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.53	Sqm	**680.10**	7161.45			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.22	Cum	**694.61**	843.95			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.22	Cum	**1237.00**	1502.96			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.22	Cum	**1377.70**	1673.91			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.22	Cum	**516.50**	627.55			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.13	Sqm	**63.20**	640.13	0.015		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	22.31	Cum	**149.30**	3331.56			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	31.023	Cum	**1075.00**	33349.46			
	Coarse Aggregates (100 Km lead)	62.054	Cum	**1398.00**	86751.73			
	Cement (30 km lead)	28.582	MT	**742.00**	21207.64			
	Boulder (60 Km lead)	1.22	Cum	**1159.00**	1408.19			
	Brick (15 km lead)	631.00	No.	**3.18**	2006.58			
	Steel (30 Km lead)	1.37	MT	**742.00**	1015.87			
	TOTAL (In Rs.)				**904345.73**			
	TOTAL (In Rs.)				**904345.73**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	31.02	Cum	**584.64**	18137.14	1813.71		
	Coarse Aggregate	62.05	Cum	**944.26**	58595.27	5859.53		
	Boulders	1.22	Cum	**694.61**	843.95	84.40		
	Total					7757.64		
	For 1 nos. fall, Total Seigniorage charges					**7757.64**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 9.800 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	72.242	Cum	**195.20**	14101.54			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.21	Cum	**6381.70**	77905.40	3.96	5.49	10.99
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	57.64	Cum	**6914.20**	398513.06	23.78	24.78	49.57
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	9.31	Cum	**8151.40**	75913.87	5.28	3.63	7.36
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.78	MT	**73574.90**	130814.34			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	210.55	Sqm	**578.60**	121826.40			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.93	Sqm	**680.10**	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.52	Cum	**694.61**	358.42			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.52	Cum	**1237.00**	638.29			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.52	Cum	**1377.70**	710.89			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.52	Cum	**516.50**	266.51			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.89	Sqm	**63.20**	435.76	0.010		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	7.44	Cum	**149.30**	1111.29			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	33.909	Cum	**1075.00**	36452.57			
	Coarse Aggregates (100 Km lead)	67.912	Cum	**1398.00**	94940.77			
	Cement (30 km lead)	33.021	MT	**742.00**	24501.80			
	Boulder (60 Km lead)	0.52	Cum	**1159.00**	598.04			
	Brick (15 km lead)	535.00	No.	**3.18**	1701.30			
	Steel (30 Km lead)	1.78	MT	**742.00**	1319.26			
	TOTAL (In Rs.)				**1010536.24**			
	TOTAL (In Rs.)				**1010536.24**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	33.91	Cum	**584.64**	19824.77	1982.48		
	Coarse Aggregate	67.91	Cum	**944.26**	64126.45	6412.64		
	Boulders	0.52	Cum	**694.61**	358.42	35.84		
	Total					8430.96		
	For 1 nos. fall, Total Seigniorage charges					**8430.96**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.11.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	29.905	Cum	**195.20**	5837.48			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	6.65	Cum	**6381.70**	42447.60	2.16	2.99	5.99
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	22.70	Cum	**6914.20**	156918.12	9.36	9.76	19.52
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.48	Cum	**8151.40**	3928.57	0.27	0.19	0.38
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.53	MT	**73574.90**	39323.46			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	104.43	Sqm	**578.60**	60422.71			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	4.23	Sqm	**680.10**	2875.12			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.08	Cum	**694.61**	57.31			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.08	Cum	**1237.00**	102.05			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.08	Cum	**1377.70**	113.66			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.08	Cum	**516.50**	42.61			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.16	Sqm	**63.20**	515.90	0.012		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	7.63	Cum	**149.30**	1139.45			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	12.940	Cum	**1075.00**	13910.49			
	Coarse Aggregates (100 Km lead)	25.885	Cum	**1398.00**	36186.94			
	Cement (30 km lead)	11.802	MT	**742.00**	8757.30			
	Boulder (60 Km lead)	0.08	Cum	**1159.00**	95.62			
	Brick (15 km lead)	253.00	No.	**3.18**	804.54			
	Steel (30 Km lead)	0.53	MT	**742.00**	396.58			
	TOTAL (In Rs.)				**396230.31**			
	TOTAL (In Rs.)				**396230.31**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	12.94	Cum	**584.64**	7565.23	756.52		
	Coarse Aggregate	25.88	Cum	**944.26**	24441.98	2444.20		
	Boulders	0.08	Cum	**694.61**	57.31	5.73		
	Total					3206.45		
	For 1 nos. fall, Total Seigniorage charges					**3206.45**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR PATOI DISTRIBUTARY							
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.0.475 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	71.760	Cum	**195.20**	14007.47			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	21.46	Cum	**6381.70**	136970.54	6.95	9.66	19.32
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	84.69	Cum	**6914.20**	585554.90	34.93	36.42	72.83
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.54	Cum	**8151.40**	12525.03	0.87	0.60	1.21
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.99	MT	**73574.90**	146739.24			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	260.48	Sqm	**578.60**	150711.56			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	28.22	Sqm	**680.10**	19191.06			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.61	Cum	**694.61**	2506.85			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.61	Cum	**1237.00**	4464.33			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	3.61	Cum	**1377.70**	4972.12			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	3.61	Cum	**516.50**	1864.05			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.06	Sqm	**63.20**	951.60	0.023		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	9.93	Cum	**149.30**	1481.94			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	46.674	Cum	**1075.00**	50174.30			
	Coarse Aggregates (100 Km lead)	93.363	Cum	**1398.00**	130521.35			
	Cement (30 km lead)	42.782	MT	**742.00**	31744.19			
	Boulder (60 Km lead)	3.61	Cum	**1159.00**	4182.83			
	Brick (15 km lead)	1693.00	No.	**3.18**	5383.74			
	Steel (30 Km lead)	1.99	MT	**742.00**	1479.86			
	TOTAL (In Rs.)				**1327781.78**			
	TOTAL (In Rs.)				**1327781.78**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	46.67	Cum	**584.64**	27287.35	2728.74		
	Coarse Aggregate	93.36	Cum	**944.26**	88158.86	8815.89		
	Boulders	3.61	Cum	**694.61**	2506.85	250.68		
	Total					11795.31		
	For 1 nos. fall, Total Seigniorage charges					**11795.31**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.4.510 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	128.085	Cum	**195.20**	25002.22			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	20.71	Cum	**6381.70**	132191.00	6.71	9.32	18.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	94.30	Cum	**6914.20**	652003.70	38.90	40.55	81.10
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.39	Cum	**8151.40**	11356.25	0.79	0.54	1.10
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	3.42	MT	**73574.90**	251268.81			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	272.08	Sqm	**578.60**	157422.97			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	20.05	Sqm	**680.10**	13632.60			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.55	Cum	**694.61**	1771.26			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.55	Cum	**1237.00**	3154.35			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.55	Cum	**1377.70**	3513.14			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.55	Cum	**516.50**	1317.08			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.06	Sqm	**63.20**	952.00	0.023		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	31.37	Cum	**149.30**	4683.45			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	50.413	Cum	**1075.00**	54194.33			
	Coarse Aggregates (100 Km lead)	100.841	Cum	**1398.00**	140975.16			
	Cement (30 km lead)	46.422	MT	**742.00**	34445.35			
	Boulder (60 Km lead)	2.55	Cum	**1159.00**	2955.45			
	Brick (15 km lead)	1202.00	No.	**3.18**	3822.36			
	Steel (30 Km lead)	3.42	MT	**742.00**	2534.04			
	TOTAL (In Rs.)				**1519550.32**			
	TOTAL (In Rs.)				**1519550.32**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	50.41	Cum	**584.64**	29473.65	2947.37		
	Coarse Aggregate	100.84	Cum	**944.26**	95219.74	9521.97		
	Boulders	2.55	Cum	**694.61**	1771.26	177.13		
	Total					12646.47		
	For 1 nos. fall, Total Seigniorage charges					**12646.47**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.6.950 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	128.085	Cum	**195.20**	25002.22			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	20.71	Cum	**6381.70**	132191.00	6.71	9.32	18.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	94.30	Cum	**6914.20**	652003.70	38.90	40.55	81.10
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.15	Cum	**8151.40**	9339.87	0.65	0.45	0.91
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	2.22	MT	**73574.90**	163391.22			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	272.08	Sqm	**578.60**	157422.97			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	20.05	Sqm	**680.10**	13632.60			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.55	Cum	**694.61**	1771.26			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.55	Cum	**1237.00**	3154.35			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.55	Cum	**1377.70**	3513.14			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.55	Cum	**516.50**	1317.08			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.12	Sqm	**63.20**	639.33	0.015		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	31.37	Cum	**149.30**	4683.45			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	50.317	Cum	**1075.00**	54090.63			
	Coarse Aggregates (100 Km lead)	100.645	Cum	**1398.00**	140701.96			
	Cement (30 km lead)	46.275	MT	**742.00**	34335.78			
	Boulder (60 Km lead)	2.55	Cum	**1159.00**	2955.45			
	Brick (15 km lead)	1202.00	No.	**3.18**	3822.36			
	Steel (30 Km lead)	2.22	MT	**742.00**	1647.79			
TOTAL (In Rs.)					**1427970.97**			
TOTAL (In Rs.)					**1427970.97**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	50.32	Cum	**584.64**	29417.25	2941.72		
	Coarse Aggregate	100.65	Cum	**944.26**	95035.22	9503.52		
	Boulders	2.55	Cum	**694.61**	1771.26	177.13		
	Total					12622.37		
	For 1 nos. fall, Total Seigniorage charges					**12622.37**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.7.900 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	75.151	Cum	**195.20**	14669.51			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.63	Cum	**6381.70**	99753.29	5.06	7.03	14.07
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	60.48	Cum	**6914.20**	418140.36	24.95	26.00	52.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.99	Cum	**8151.40**	8053.87	0.56	0.39	0.78
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.42	MT	**73574.90**	104785.39			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	198.31	Sqm	**578.60**	114743.26			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	14.33	Sqm	**680.10**	9747.19			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.47	Cum	**694.61**	1021.08			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.47	Cum	**1237.00**	1818.39			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.47	Cum	**1377.70**	2025.22			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.47	Cum	**516.50**	759.26			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.44	Sqm	**63.20**	786.25	0.019		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	18.61	Cum	**149.30**	2778.89			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	33.424	Cum	**1075.00**	35930.65			
	Coarse Aggregates (100 Km lead)	66.858	Cum	**1398.00**	93466.91			
	Cement (30 km lead)	30.590	MT	**742.00**	22697.45			
	Boulder (60 Km lead)	1.47	Cum	**1159.00**	1703.73			
	Brick (15 km lead)	859.00	No.	**3.18**	2731.62			
	Steel (30 Km lead)	1.42	MT	**742.00**	1056.76			
TOTAL (In Rs.)					**959023.88**			
TOTAL (In Rs.)					**959023.88**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	33.42	Cum	**584.64**	19540.92	1954.09		
	Coarse Aggregate	66.86	Cum	**944.26**	63130.95	6313.09		
	Boulders	1.47	Cum	**694.61**	1021.08	102.11		
	Total					8369.29		
	For 1 nos. fall, Total Seigniorage charges					**8369.29**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	WELL TYPE FALL OF HEIGHT 1.828 METER AT CH.8.382 KM							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	240.000	Sqm	**11.80**	2833.05			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	334.853	Cum	**195.20**	65363.37			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	37.61	Cum	**6381.70**	240003.34	12.19	16.92	33.85
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	92.84	Cum	**6914.20**	641930.84	38.30	39.92	79.84
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.04	MT	**73574.90**	297133.42			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	450.49	Sqm	**578.60**	260653.21			
7	Providing 1000 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	20.00	RM	**6002.82**	120056.40			
8	Labour for laying 1000 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	20.00	RM	**1713.33**	34266.61			
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	83.47	Sqm	**149.30**	12461.82			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	56.846	Cum	**1075.00**	61109.29			
	Coarse Aggregates (100 Km lead)	113.692	Cum	**1398.00**	158941.00			
	Cement (30 km lead)	50.482	MT	**742.00**	37458.01			
	Steel (30 Km lead)	4.04	MT	**742.00**	2996.58			
	Hume Pipe (30 km Lead)	20.00	RM	**919.00**	18380.00			
	TOTAL (In Rs.)				**1951983.48**			
	TOTAL (In Rs.)				**1951983.48**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	56.85	Cum	**584.64**	33234.36	3323.44		
	Coarse Aggregate	113.69	Cum	**944.26**	107354.53	10735.45		
	Total					14058.89		
	Total Seigniorage charges					**14058.89**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.9.240 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	66.402	Cum	**195.20**	12961.74			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.98	Cum	**6381.70**	89210.43	4.53	6.29	12.58
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	52.57	Cum	**6914.20**	363465.30	21.68	22.60	45.21
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.92	Cum	**8151.40**	7510.50	0.52	0.36	0.73
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.24	MT	**73574.90**	91083.90			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	181.69	Sqm	**578.60**	105126.78			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.74	Sqm	**680.10**	7986.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.17	Cum	**694.61**	809.57			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.17	Cum	**1237.00**	1441.72			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.17	Cum	**1377.70**	1605.71			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.17	Cum	**516.50**	601.98			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.66	Sqm	**63.20**	736.88	0.017		
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	13.42	Cum	**149.30**	2002.88			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	29.254	Cum	**1075.00**	31448.21			
	Coarse Aggregates (100 Km lead)	58.518	Cum	**1398.00**	81807.48			
	Cement (30 km lead)	26.753	MT	**742.00**	19851.03			
	Boulder (60 Km lead)	1.17	Cum	**1159.00**	1350.81			
	Brick (15 km lead)	704.00	No.	**3.18**	2238.72			
	Steel (30 Km lead)	1.24	MT	**742.00**	918.58			
TOTAL (In Rs.)					**844513.09**			
TOTAL (In Rs.)					**844513.09**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.25	Cum	**584.64**	17103.15	1710.31		
	Coarse Aggregate	58.52	Cum	**944.26**	55255.75	5525.57		
	Boulders	1.17	Cum	**694.61**	809.57	80.96		
	Total					7316.85		
	For 1 nos. fall, Total Seigniorage charges					**7316.85**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 10.025 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	181.819	Cum	**195.20**	35491.07			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	17.78	Cum	**6381.70**	113493.85	5.76	8.00	16.01
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	98.04	Cum	**6914.20**	677875.97	40.44	42.16	84.32
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.97	Cum	**8151.40**	7877.92	0.55	0.38	0.76
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	2.31	MT	**73574.90**	169874.78			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	275.06	Sqm	**578.60**	159149.84			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.74	Sqm	**680.10**	7986.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.17	Cum	**694.61**	809.57			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.17	Cum	**1237.00**	1441.72			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.17	Cum	**1377.70**	1605.71			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.17	Cum	**516.50**	601.98			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.31	Sqm	**63.20**	651.28			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	53.53	Cum	**149.30**	7991.39			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	50.538	Cum	**1075.00**	54327.83			
	Coarse Aggregates (100 Km lead)	101.085	Cum	**1398.00**	141316.42			
	Cement (30 km lead)	46.752	MT	**742.00**	34690.02			
	Boulder (60 Km lead)	1.17	Cum	**1159.00**	1350.81			
	Brick (15 km lead)	704.00	No.	**3.18**	2238.72			
	Steel (30 Km lead)	2.31	MT	**742.00**	1713.18			
	TOTAL (In Rs.)				**1442842.94**			
	TOTAL (In Rs.)				**1442842.94**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	50.54	Cum	**584.64**	29546.26	2954.63		
	Coarse Aggregate	101.08	Cum	**944.26**	95450.24	9545.02		
	Boulders	1.17	Cum	**694.61**	809.57	80.96		
	Total					12580.61		
	For 1 nos. fall, Total Seigniorage charges					**12580.61**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 11.125 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	78.994	Cum	**195.20**	15419.64			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.31	Cum	**6381.70**	84909.09	4.31	5.99	11.97
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	52.50	Cum	**6914.20**	363019.97	21.66	22.58	45.15
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.83	Cum	**8151.40**	6755.60	0.47	0.32	0.65
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.24	MT	**73574.90**	90972.30			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	177.79	Sqm	**578.60**	102868.64			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.15	Sqm	**680.10**	6900.63			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.95	Cum	**694.61**	656.41			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.95	Cum	**1237.00**	1168.97			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.95	Cum	**1377.70**	1301.93			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.95	Cum	**516.50**	488.09			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.54	Sqm	**63.20**	729.03			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	25.46	Cum	**149.30**	3801.48			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	28.887	Cum	**1075.00**	31053.56			
	Coarse Aggregates (100 Km lead)	57.782	Cum	**1398.00**	80779.72			
	Cement (30 km lead)	26.438	MT	**742.00**	19617.34			
	Boulder (60 Km lead)	0.95	Cum	**1159.00**	1095.26			
	Brick (15 km lead)	608.00	No.	**3.18**	1933.44			
	Steel (30 Km lead)	1.24	MT	**742.00**	917.45			
TOTAL (In Rs.)					**836743.34**			
TOTAL (In Rs.)					**836743.34**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	28.89	Cum	**584.64**	16888.51	1688.85		
	Coarse Aggregate	57.78	Cum	**944.26**	54561.56	5456.16		
	Boulders	0.95	Cum	**694.61**	656.41	65.64		
	Total					7210.65		
	For 1 nos. fall, Total Seigniorage charges					**7210.65**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.12.000 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	89.175	Cum	**195.20**	17406.93			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.79	Cum	**6381.70**	81620.07	4.14	5.76	11.51
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	54.74	Cum	**6914.20**	378464.10	22.58	23.54	47.07
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.85	Cum	**8151.40**	6959.95	0.48	0.33	0.67
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.29	MT	**73574.90**	94842.58			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	184.41	Sqm	**578.60**	106699.69			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.99	Sqm	**680.10**	7475.66			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.94	Cum	**694.61**	654.32			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.94	Cum	**1237.00**	1165.25			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.94	Cum	**1377.70**	1297.79			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.94	Cum	**516.50**	486.54			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.00	Sqm	**63.20**	695.24			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	25.89	Cum	**149.30**	3865.11			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	29.625	Cum	**1075.00**	31847.27			
	Coarse Aggregates (100 Km lead)	59.259	Cum	**1398.00**	82844.47			
	Cement (30 km lead)	27.207	MT	**742.00**	20187.66			
	Boulder (60 Km lead)	0.94	Cum	**1159.00**	1091.78			
	Brick (15 km lead)	659.00	No.	**3.18**	2095.62			
	Steel (30 Km lead)	1.29	MT	**742.00**	956.48			
TOTAL (In Rs.)					**863011.32**			
TOTAL (In Rs.)					**863011.32**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.63	Cum	**584.64**	17320.18	1732.02		
	Coarse Aggregate	59.26	Cum	**944.26**	55956.16	5595.62		
	Boulders	0.94	Cum	**694.61**	654.32	65.43		
	Total					7393.07		
	For 1 nos. fall, Total Seigniorage charges					**7393.07**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL / CULVERT OF HEIGHT 0.610 METER AT CH.12.689 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	53.976	Cum	**195.20**	10536.12			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.21	Cum	**6381.70**	77891.12	3.95	5.49	10.98
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	45.63	Cum	**6914.20**	315516.12	18.82	19.62	39.24
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.56	Cum	**8151.40**	86039.37	5.98	4.12	8.34
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.61	MT	**73574.90**	118597.52			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	180.88	Sqm	**578.60**	104655.01			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	6.30	Sqm	**680.10**	4281.23			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.53	Cum	**694.61**	364.67			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.53	Cum	**1237.00**	649.43			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.53	Cum	**1377.70**	723.29			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.53	Cum	**516.50**	271.16			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.72	Sqm	**63.20**	487.86			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	13.49	Cum	**149.30**	2013.56			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	29.231	Cum	**1075.00**	31423.49			
	Coarse Aggregates (100 Km lead)	58.568	Cum	**1398.00**	81877.87			
	Cement (30 km lead)	28.763	MT	**742.00**	21342.12			
	Boulder (60 Km lead)	0.53	Cum	**1159.00**	608.48			
	Brick (15 km lead)	377.00	No.	**3.18**	1198.86			
	Steel (30 Km lead)	1.61	MT	**742.00**	1196.05			
TOTAL (In Rs.)					**882028.13**			
TOTAL (In Rs.)					**882028.13**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.23	Cum	**584.64**	17089.70	1708.97		
	Coarse Aggregate	58.57	Cum	**944.26**	55303.29	5530.33		
	Boulders	0.53	Cum	**694.61**	364.67	36.47		
	Total					7275.77		
	For 1 nos. fall, Total Seigniorage charges					**7275.77**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.13.500 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	54.016	Cum	**195.20**	10543.90			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.11	Cum	**6381.70**	64549.39	3.28	4.55	9.10
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.84	Cum	**6914.20**	240892.26	14.37	14.98	29.96
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.69	Cum	**8151.40**	5633.51	0.39	0.27	0.55
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.82	MT	**73574.90**	60367.26			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	134.80	Sqm	**578.60**	77996.65			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.92	Sqm	**680.10**	4022.79			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.45	Cum	**694.61**	312.57			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.45	Cum	**1237.00**	556.65			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.45	Cum	**1377.70**	619.97			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.45	Cum	**516.50**	232.43			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.04	Sqm	**63.20**	634.67			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	15.71	Cum	**149.30**	2346.07			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	19.802	Cum	**1075.00**	21287.66			
	Coarse Aggregates (100 Km lead)	39.612	Cum	**1398.00**	55377.37			
	Cement (30 km lead)	18.041	MT	**742.00**	13386.15			
	Boulder (60 Km lead)	0.45	Cum	**1159.00**	521.55			
	Brick (15 km lead)	354.00	No.	**3.18**	1125.72			
	Steel (30 Km lead)	0.82	MT	**742.00**	608.80			
TOTAL (In Rs.)					**583370.17**			
TOTAL (In Rs.)					**583370.17**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.80	Cum	**584.64**	11577.32	1157.73		
	Coarse Aggregate	39.61	Cum	**944.26**	37403.89	3740.39		
	Boulders	0.45	Cum	**694.61**	312.57	31.26		
	Total					4929.38		
	For 1 nos. fall, Total Seigniorage charges					**4929.38**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.15.000 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	14.327	Cum	**195.20**	2796.61			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	2.58	Cum	**6381.70**	16438.41	0.83	1.16	2.32
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	14.54	Cum	**6914.20**	100548.49	6.00	6.25	12.51
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.29	Cum	**8151.40**	2388.44	0.17	0.11	0.23
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.34	MT	**73574.90**	25197.31			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	72.18	Sqm	**578.60**	41760.84			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.11	Sqm	**63.20**	322.96			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	3.19	Cum	**149.30**	475.77			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	7.527	Cum	**1075.00**	8091.11			
	Coarse Aggregates (100 Km lead)	15.056	Cum	**1398.00**	21048.50			
	Cement (30 km lead)	6.999	MT	**742.00**	5193.57			
	Steel (30 Km lead)	0.34	MT	**742.00**	254.11			
	TOTAL (In Rs.)				**235693.51**			
	TOTAL (In Rs.)				**235693.51**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	7.53	Cum	**584.64**	4400.36	440.04		
	Coarse Aggregate	15.06	Cum	**944.26**	14216.92	1421.69		
	Total					1861.73		
	For 1 nos. fall, Total Seigniorage charges					**1861.73**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF FALLS FOR ANGRA BRANCH CANAL							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	GLACIS TYPE FALL OF HEIGHT 2.438 METER AT CH. 1.676 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.18*	*1.740*	*0.525*	*2.157*	*Cum*
	Section 2-2	*2*	*7.00*	*1.920*	*0.525*	*14.112*	*Cum*
	Average Sec 1-1 & Sec 2-2	*2*	*5.23*	*1.830*	*0.525*	*10.042*	*Cum*
	Section 3-3	*2*	*6.00*	*1.740*	*0.325*	*6.786*	*Cum*
	Section 5-5	*2*	*9.51*	*1.890*	*0.525*	*18.868*	*Cum*
	Section 6-6	*2*	*5.34*	*1.740*	*0.325*	*6.034*	*Cum*
	Floor	*1*	*9.70*	*33.580*		*325.726*	*Cum*
	Toe Wall D/S Portion	*1*	*22.85*	*0.750*	*0.900*	*15.424*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*5.00*	*0.600*	*0.750*	*4.500*	*Cum*
						403.65	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*9.700*	*0.150*	*0.79*	*Cum*
		1	*1.68*	*9.700*	*0.150*	*2.44*	*Cum*
		1	*3.16*	*9.700*	*0.150*	*4.60*	*Cum*
		1	*6.40*	*9.700*	*0.150*	*9.31*	*Cum*
		1	*7.88*	*9.700*	*0.150*	*11.47*	*Cum*
		1	*0.42*	*9.700*	*0.150*	*0.62*	*Cum*
		1	*2.30*	*9.700*	*0.150*	*3.35*	*Cum*
		1	*0.56*	*9.700*	*0.150*	*0.81*	*Cum*
		1	*1.21*	*9.700*	*0.150*	*1.76*	*Cum*
		1	*2.72*	*9.700*	*0.150*	*3.95*	*Cum*
		1	*0.54*	*9.700*	*0.150*	*0.79*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.18*	*1.740*	*0.150*	*0.62*	*Cum*
	Section 2-2	*2*	*7.00*	*1.920*	*0.150*	*4.03*	*Cum*
	Average Sec 1-1 & Sec 2-2	*2*	*5.23*	*1.830*	*0.150*	*2.87*	*Cum*
	Section 3-3	*2*	*6.00*	*1.740*	*0.150*	*3.13*	*Cum*
	Section 5-5	*2*	*9.51*	*1.890*	*0.150*	*5.39*	*Cum*
	Section 6-6	*2*	*5.34*	*1.740*	*0.150*	*2.78*	*Cum*
	Toe Wall D/S Portion	*1*	*22.85*	*0.750*	*0.300*	*5.14*	*Cum*
	Toe Wall D/S Portion	*1*	*22.55*	*0.450*	*0.600*	*6.09*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*5.00*	*0.600*	*0.150*	*0.90*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*5.00*	*0.300*	*0.600*	*1.80*	*Cum*
	TOTAL					**72.63**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.15*	*0.450*	*0.450*	*0.46*	*Cum*
		2	*1.15*	*0.945*	*1.650*	*3.58*	*Cum*
		2	*1.15*	*1.590*	*0.500*	*1.82*	*Cum*
	Section 2-2	*2*	*7.00*	*0.450*	*0.450*	*2.84*	*Cum*
		2	*7.00*	*1.035*	*1.950*	*28.26*	*Cum*
		2	*7.00*	*1.770*	*1.450*	*35.93*	*Cum*
	Average Sec 1-1 & Sec 2-2	*2*	*5.23*	*0.450*	*0.450*	*2.12*	*Cum*
		2	*5.23*	*0.990*	*1.800*	*18.63*	*Cum*
		2	*5.23*	*1.680*	*0.975*	*17.12*	*Cum*
	Section 3-3	*2*	*5.28*	*0.450*	*0.450*	*2.14*	*Cum*
		2	*5.28*	*0.945*	*1.650*	*16.46*	*Cum*
		2	*5.28*	*1.590*	*0.750*	*12.59*	*Cum*
	Section 5-5	*2*	*9.46*	*0.450*	*0.450*	*3.83*	*Cum*
		2	*9.46*	*0.945*	*1.650*	*29.51*	*Cum*
		2	*9.46*	*1.590*	*0.500*	*15.05*	*Cum*
	Section 6-6	*2*	*6.13*	*0.450*	*0.450*	*2.48*	*Cum*
		2	*6.13*	*0.945*	*1.650*	*19.12*	*Cum*
		2	*6.13*	*1.590*	*0.500*	*9.75*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor	*1*	*9.700*	*29.508*		*286.23*	*Cum*
	Deflector	*1*	*0.45*	*9.700*	*0.200*	*0.87*	*Cum*
	Crest	*1*	*2.36*	*9.700*	*0.850*	*19.49*	*Cum*
	TOTAL					**528.27**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*9.700*	*0.200*	*1.75*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*38.10*	*0.450*	*0.050*	*0.86*	*Cum*
	On Abutment Top (Right Side)	*1*	*38.10*	*0.450*	*0.050*	*0.86*	*Cum*
	TOTAL					**3.46**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.25% of M-20	**528.27**	**0.003**	**1.321**	**7850.0**	**10367.25**	**Kg**
	Total Weight in Metric Tonne					**10.37**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.15*		*0.450*	*2.07*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.15*		*1.650*	*7.57*	*Sqm*
		4		*0.945*	*1.650*	*6.24*	*Sqm*
		4	*1.15*		*0.500*	*2.30*	*Sqm*
		4		*1.590*	*0.500*	*3.18*	*Sqm*
	Section 2-2	*4*	*7.00*		*0.450*	*12.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.00*		*1.950*	*54.60*	*Sqm*
		4		*1.035*	*1.950*	*8.07*	*Sqm*
		4	*7.00*		*1.450*	*40.60*	*Sqm*
		4		*1.770*	*1.450*	*10.27*	*Sqm*
	Average Sec 1-1 & Sec 2-2	*4*	*5.23*		*0.45*	*9.41*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*5.23*		*1.80*	*37.63*	*Sqm*
		4		*0.99*	*1.80*	*7.13*	*Sqm*
		4	*5.23*		*0.98*	*20.38*	*Sqm*
		4		*1.68*	*0.98*	*6.55*	*Sqm*
	Section 3-3	*4*	*5.28*		*0.450*	*9.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.28*		*1.650*	*34.84*	*Sqm*
		4		*0.945*	*1.650*	*6.24*	*Sqm*
		4	*5.28*		*0.750*	*15.84*	*Sqm*
		4		*1.590*	*0.750*	*4.77*	*Sqm*
	Section 5-5	*4*	*9.46*		*0.450*	*17.03*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*9.46*		*1.650*	*62.46*	*Sqm*
		4		*0.945*	*1.650*	*6.24*	*Sqm*
		4	*9.46*		*0.500*	*18.93*	*Sqm*
		4		*1.590*	*0.500*	*3.18*	*Sqm*
	Section 6-6	*4*	*6.13*		*0.450*	*11.03*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.13*		*1.650*	*40.46*	*Sqm*
		4		*0.945*	*1.650*	*6.24*	*Sqm*
		4	*6.13*		*0.500*	*12.26*	*Sqm*
		4		*1.590*	*0.500*	*3.18*	*Sqm*
	Floor	*2*	*9.70*		*29.508*	*572.46*	*Sqm*
	Crest	*2*	*2.36*		*0.850*	*4.02*	*Sqm*
		2		*9.700*	*0.850*	*16.49*	*Sqm*
	Toe Wall D/S Portion	*2*	*22.85*		*0.300*	*13.71*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*22.55*		*0.600*	*27.06*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*5.00*		*0.150*	*3.00*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*5.00*		*0.600*	*12.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**1136.44**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*5.00*	*7.175*		*71.75*	*Sqm*
	TOTAL					**71.75**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*5.00*	*9.100*	*0.300*	**13.65**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*5.00*	*9.100*	*0.150*	**13.65**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*38.10*	*0.450*		*17.15*	*Sqm*
	On Abutment Top (Right Side)	*1*	*38.10*	*0.450*		*17.15*	*Sqm*
	TOTAL					**34.29**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		*15.432*		*15.43*	**Cum**
	Abutment						
	Section 1-1	2	*1.18*	*2.031*		*4.795*	*Cum*
	Section 2-2	2	*7.00*	*2.678*		*37.492*	*Cum*
	Average Sec 1-1 & Sec 2-2	2	*5.23*	*2.355*		*24.609*	*Cum*
	Section 3-3	2	*6.00*	*2.069*		*24.828*	*Cum*
	Section 5-5	2	*9.51*	*2.031*		*38.619*	*Cum*
	Section 6-6	2	*5.34*	*2.069*		*22.076*	*Cum*
	Toe wall	2	*22.85*	*0.150*	*0.600*	*6.855*	*Cum*
		2	*5.00*	*0.150*	*0.600*	*0.900*	*Cum*
	TOTAL					**175.61**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 12.750 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*2.17*	*2.732*	*2.420*	*28.628*	*Cum*
	Section 2-2	*2*	*6.00*	*1.818*	*2.420*	*52.795*	*Cum*
	Section 3-3	*2*	*3.20*	*1.638*	*2.220*	*23.273*	*Cum*
	Section 5-5	*2*	*8.46*	*2.882*	*2.420*	*118.021*	*Cum*
	Section 6-6	*2*	*4.84*	*1.638*	*2.220*	*35.215*	*Cum*
	U/S Key Floor	*1*	*0.68*	*7.700*	*1.050*	*5.457*	*Cum*
	U/S Floor	*1*	*4.50*	*7.700*	*2.751*	*95.322*	*Cum*
	D/S Floor	*1*	*6.00*	*7.700*	*1.050*	*48.510*	*Cum*
		1	*8.05*	*7.700*	*0.450*	*27.893*	*Cum*
		1	*1.50*	*7.700*	*0.900*	*10.395*	*Cum*
		1	*2.00*	*7.700*	*0.850*	*13.090*	*Cum*
	D/S Key Floor	*1*	*0.93*	*7.700*	*1.200*	*8.547*	*Cum*
	Toe Wall D/S Portion	*1*	*20.66*	*0.750*	*0.900*	*13.946*	*Cum*
	Boulder Pitching toe (D/S Portion)	*2*	*4.50*	*0.600*	*0.750*	*4.050*	*Cum*
						485.14	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*7.700*	*0.150*	*0.63*	*Cum*
		1	*1.01*	*7.700*	*0.150*	*1.16*	*Cum*
		1	*1.17*	*7.700*	*0.150*	*1.35*	*Cum*
		1	*0.64*	*7.700*	*0.150*	*0.73*	*Cum*
		1	*8.36*	*7.700*	*0.150*	*9.65*	*Cum*
		1	*0.85*	*7.700*	*0.150*	*0.98*	*Cum*
		1	*0.49*	*7.700*	*0.150*	*0.57*	*Cum*
		1	*0.07*	*7.700*	*1.150*	*0.62*	*Cum*
		1	*0.40*	*7.700*	*2.150*	*6.54*	*Cum*
		1	*2.12*	*7.700*	*0.150*	*2.45*	*Cum*
		1	*0.54*	*7.700*	*0.150*	*0.63*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.17*	*2.732*	*0.150*	*1.77*	*Cum*
	Section 2-2	*2*	*6.00*	*1.818*	*0.150*	*3.27*	*Cum*
	Section 3-3	*2*	*3.20*	*1.638*	*0.150*	*1.57*	*Cum*
	Section 5-5	*2*	*8.46*	*2.882*	*0.150*	*7.32*	*Cum*
	Section 6-6	*2*	*4.84*	*1.638*	*0.150*	*2.38*	*Cum*
	Toe Wall D/S Portion	*1*	*20.66*	*0.750*	*0.300*	*4.65*	*Cum*
	Toe Wall D/S Portion	*1*	*20.36*	*0.450*	*0.600*	*5.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.600*	*0.150*	*0.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.300*	*0.600*	*1.62*	*Cum*
	TOTAL					**54.20**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.44*	*0.450*	*0.450*	*0.58*	*Cum*
		2	*1.44*	*1.441*	*3.304*	*13.71*	*Cum*
		2	*1.44*	*2.582*	*1.050*	*7.81*	*Cum*
	Section 2-2	*2*	*6.00*	*0.450*	*0.450*	*2.43*	*Cum*
		2	*6.00*	*0.984*	*1.780*	*21.02*	*Cum*
		2	*6.00*	*1.668*	*1.050*	*21.02*	*Cum*
	Section 3-3	*2*	*2.61*	*0.450*	*0.450*	*1.06*	*Cum*
		2	*2.61*	*0.894*	*1.480*	*6.90*	*Cum*
		2	*2.61*	*1.488*	*0.750*	*5.82*	*Cum*
	Section 5-5	*2*	*8.42*	*0.450*	*0.450*	*3.41*	*Cum*
		2	*8.42*	*1.441*	*3.304*	*80.15*	*Cum*
		2	*8.42*	*2.582*	*0.600*	*26.08*	*Cum*
	Section 6-6	*2*	*5.59*	*0.450*	*0.450*	*2.26*	*Cum*
		2	*5.59*	*0.894*	*1.480*	*14.78*	*Cum*
		2	*5.59*	*1.488*	*0.700*	*11.64*	*Cum*
	Floor	*1*	*0.675*	*7.700*	*0.900*	*4.68*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*10.50*	*7.700*	*0.600*	*48.51*	*Cum*
		1	*8.05*	*7.700*	*0.450*	*27.89*	*Cum*
		1	*0.71*	*7.700*	*0.600*	*3.27*	*Cum*
		1	*0.30*	*7.700*	*0.600*	*1.39*	*Cum*
		1	*1.20*	*7.700*	*0.750*	*6.93*	*Cum*
		1	*0.05*	*7.700*	*0.725*	*0.28*	*Cum*
		1	*1.95*	*7.700*	*0.700*	*10.51*	*Cum*
		1	*0.93*	*7.700*	*1.900*	*13.53*	*Cum*
	Crest	*1*	*1.44*	*7.700*	*2.424*	*26.83*	*Cum*
	TOTAL					**362.48**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.05*	*7.700*	*0.150*	*1.21*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*25.97*	*0.450*	*0.050*	*0.58*	*Cum*
	On Abutment Top (Right Side)	*1*	*25.97*	*0.450*	*0.050*	*0.58*	*Cum*
	TOTAL					**2.38**	**Cum**
		0.00					
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.25% of M-20	**362.48**	**0.002**	**0.725**	**7850.0**	**5690.87**	**Kg**
	Total Weight in Metric Tonne					**5.69**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.44*		*0.450*	*2.59*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.44*		*3.304*	*19.03*	*Sqm*
		4		*1.441*	*3.304*	*19.04*	*Sqm*
		4	*1.44*		*1.050*	*6.05*	*Sqm*
		4		*2.582*	*1.050*	*10.84*	*Sqm*
	Section 2-2	*4*	*6.00*		*0.450*	*10.80*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.00*		*1.780*	*42.72*	*Sqm*
		4		*0.984*	*1.780*	*7.01*	*Sqm*
		4	*6.00*		*1.050*	*25.20*	*Sqm*
		4		*1.668*	*1.050*	*7.01*	*Sqm*
	Section 3-3	*4*	*2.61*		*0.450*	*4.69*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.61*		*1.480*	*15.43*	*Sqm*
		4		*0.894*	*1.480*	*5.29*	*Sqm*
		4	*2.61*		*0.750*	*7.82*	*Sqm*
		4		*1.488*	*0.750*	*4.46*	*Sqm*
	Section 5-5	*4*	*8.42*		*0.450*	*15.15*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*8.42*		*3.304*	*111.25*	*Sqm*
		4		*1.441*	*3.304*	*19.04*	*Sqm*
		4	*8.42*		*0.600*	*20.20*	*Sqm*
		4		*2.582*	*0.600*	*6.20*	*Sqm*
	Section 6-6	*4*	*5.59*		*0.450*	*10.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.59*		*1.480*	*33.07*	*Sqm*
		4		*0.894*	*1.480*	*5.29*	*Sqm*
		4	*5.59*		*0.700*	*15.64*	*Sqm*
		4		*1.488*	*0.700*	*4.17*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*7.700*	*0.900*	*13.86*	*Sqm*
		2	*10.50*		*0.600*	*12.60*	*Sqm*
		2		*7.700*	*0.600*	*9.24*	*Sqm*
		2	*0.71*		*0.600*	*0.85*	*Sqm*
		2		*7.700*	*0.600*	*9.24*	*Sqm*
		2	*0.30*		*0.600*	*0.36*	*Sqm*
		2		*7.700*	*0.600*	*9.24*	*Sqm*
		2	*1.20*		*0.750*	*1.80*	*Sqm*
		2		*7.700*	*0.750*	*11.55*	*Sqm*
		2	*0.050*		*0.725*	*0.07*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*7.700*	*0.725*	*11.17*	*Sqm*
		2	*1.950*		*0.700*	*2.73*	*Sqm*
		2		*7.700*	*0.700*	*10.78*	*Sqm*
		2	*0.93*		*1.900*	*3.52*	*Sqm*
		2		*7.700*	*1.900*	*29.26*	*Sqm*
	Crest	*2*	*1.44*		*2.424*	*6.97*	*Sqm*
		2		*7.700*	*2.424*	*37.33*	*Sqm*
	Toe Wall D/S Portion	*2*	*20.66*		*0.300*	*12.40*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*20.36*		*0.600*	*24.43*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.150*	*2.70*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.600*	*10.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**656.27**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.50*	*6.778*		*61.00*	*Sqm*
	TOTAL					**61.00**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.50*	*7.100*	*0.300*	**9.59**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.50*	*7.100*	*0.150*	**9.59**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*25.97*	*0.450*		*11.69*	*Sqm*
	On Abutment Top (Right Side)	*1*	*25.97*	*0.450*		*11.69*	*Sqm*
	TOTAL					**23.37**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		54.469		54.47	**Cum**
	Abutment						
	Section 1-1	2	*2.17*	*0.970*		*4.200*	*Cum*
	Section 2-2	2	*6.00*	*0.970*		*11.640*	*Cum*
	Section 3-3	2	*3.20*	*0.635*		*4.064*	*Cum*
	Section 5-5	2	*8.46*	*0.903*		*15.272*	*Cum*
	Section 6-6	2	*4.84*	*0.635*		*6.149*	*Cum*
	D/S protection	2					
	Toe wall	2	*20.66*	*0.150*	*0.600*	*6.198*	*Cum*
		2	*4.50*	0.150	*0.600*	*0.810*	*Cum*
	TOTAL					**102.80**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 17.450 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.40*	*2.306*	*1.868*	*12.027*	*Cum*
	Section 2-2	*2*	*4.50*	*1.758*	*1.868*	*29.555*	*Cum*
	Section 3-3	*2*	*2.20*	*1.608*	*1.668*	*11.801*	*Cum*
	Section 5-5	*2*	*8.30*	*2.456*	*1.868*	*76.176*	*Cum*
	Section 6-6	*2*	*4.70*	*1.608*	*1.668*	*25.196*	*Cum*
	U/S Key Floor	*1*	*0.65*	*7.307*	*0.950*	*4.512*	*Cum*
	U/S Floor	*1*	*3.50*	*7.307*	*1.164*	*29.769*	*Cum*
	D/S Floor	*1*	*4.50*	*7.307*	*0.950*	*31.237*	*Cum*
		1	*2.50*	*7.307*	*0.700*	*12.787*	*Cum*
	D/S Key Floor	*1*	*0.79*	*7.307*	*0.900*	*5.179*	*Cum*
	Toe Wall D/S Portion	*1*	*19.92*	*0.750*	*0.900*	*13.443*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*4.50*	*0.600*	*0.750*	*4.050*	*Cum*
						255.73	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*7.307*	*0.150*	*0.59*	*Cum*
		1	*0.89*	*7.307*	*0.150*	*0.98*	*Cum*
		1	*0.78*	*7.307*	*0.150*	*0.85*	*Cum*
		1	*0.35*	*7.307*	*0.150*	*0.39*	*Cum*
		1	*6.50*	*7.307*	*0.150*	*7.12*	*Cum*
		1	*0.64*	*7.307*	*0.150*	*0.70*	*Cum*
		1	*0.36*	*7.307*	*0.150*	*0.40*	*Cum*
		1	*1.51*	*7.307*	*0.150*	*1.65*	*Cum*
		1	*0.54*	*7.307*	*0.150*	*0.59*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.40*	*2.306*	*0.150*	*0.97*	*Cum*
	Section 2-2	*2*	*4.50*	*1.758*	*0.150*	*2.37*	*Cum*
	Section 3-3	*2*	*2.20*	*1.608*	*0.150*	*1.06*	*Cum*
	Section 5-5	*2*	*8.30*	*2.456*	*0.150*	*6.12*	*Cum*
	Section 6-6	*2*	*4.70*	*1.608*	*0.150*	*2.27*	*Cum*
	Toe Wall D/S Portion	*1*	*19.92*	*0.750*	*0.300*	*4.48*	*Cum*
	Toe Wall D/S Portion	*1*	*19.62*	*0.450*	*0.600*	*5.30*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.600*	*0.150*	*0.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.300*	*0.600*	*1.62*	*Cum*
	TOTAL					**38.27**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.17*	*0.450*	*0.450*	*0.47*	*Cum*
		2	*1.17*	*1.228*	*2.594*	*7.45*	*Cum*
		2	*1.17*	*2.156*	*0.750*	*3.78*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.954*	*1.680*	*14.42*	*Cum*
		2	*4.50*	*1.608*	*0.750*	*10.85*	*Cum*
	Section 3-3	*2*	*1.62*	*0.450*	*0.450*	*0.66*	*Cum*
		2	*1.62*	*0.879*	*1.430*	*4.08*	*Cum*
		2	*1.62*	*1.458*	*0.550*	*2.60*	*Cum*
	Section 5-5	*2*	*8.26*	*0.450*	*0.450*	*3.34*	*Cum*
		2	*8.26*	*1.228*	*2.594*	*52.61*	*Cum*
		2	*8.26*	*2.156*	*0.500*	*17.80*	*Cum*
	Section 6-6	*2*	*5.43*	*0.450*	*0.450*	*2.20*	*Cum*
		2	*5.43*	*0.879*	*1.430*	*13.64*	*Cum*
		2	*5.43*	*1.458*	*0.550*	*8.70*	*Cum*
	Floor	*1*	*0.65*	*7.307*	*0.800*	*3.80*	*Cum*
		1	*8.00*	*7.307*	*0.500*	*29.23*	*Cum*
		1	*6.09*	*7.307*	*0.250*	*11.13*	*Cum*
		1	*0.63*	*7.307*	*0.450*	*2.08*	*Cum*
		1	*0.20*	*7.307*	*0.425*	*0.62*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*2.30*	*7.307*	*0.550*	*9.24*	*Cum*
		1	*0.79*	*7.307*	*1.350*	*7.77*	*Cum*
	Crest	*1*	*1.18*	*7.307*	*1.577*	*13.64*	*Cum*
	TOTAL					**221.95**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*7.307*	*0.200*	*1.32*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*22.69*	*0.450*	*0.050*	*0.51*	*Cum*
	On Abutment Top (Right Side)	*1*	*22.69*	*0.450*	*0.050*	*0.51*	*Cum*
	TOTAL					**2.34**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.25% of M-20	**221.95**	**0.003**	**0.555**	**7850.0**	**4355.76**	**Kg**
	Total Weight in Metric Tonne					**4.36**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.17*		*0.450*	*2.11*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.17*		*2.594*	*12.14*	*Sqm*
		4		*1.228*	*2.594*	*12.74*	*Sqm*
		4	*1.17*		*0.750*	*3.51*	*Sqm*
		4		*2.156*	*0.750*	*6.47*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*1.680*	*30.24*	*Sqm*
		4		*0.954*	*1.680*	*6.41*	*Sqm*
		4	*4.50*		*0.750*	*13.50*	*Sqm*
		4		*1.608*	*0.750*	*4.82*	*Sqm*
	Section 3-3	*4*	*1.62*		*0.450*	*2.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.62*		*1.430*	*9.27*	*Sqm*
		4		*0.879*	*1.430*	*5.03*	*Sqm*
		4	*1.62*		*0.550*	*3.57*	*Sqm*
		4		*1.458*	*0.550*	*3.21*	*Sqm*
	Section 5-5	*4*	*8.26*		*0.450*	*14.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*8.26*		*2.594*	*85.68*	*Sqm*
		4		*1.228*	*2.594*	*12.74*	*Sqm*
		4	*8.26*		*0.500*	*16.52*	*Sqm*
		4		*2.156*	*0.500*	*4.31*	*Sqm*
	Section 6-6	*4*	*5.43*		*0.450*	*9.77*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.43*		*1.430*	*31.04*	*Sqm*
		4		*0.879*	*1.430*	*5.03*	*Sqm*
		4	*5.43*		*0.550*	*11.94*	*Sqm*
		4		*1.458*	*0.550*	*3.21*	*Sqm*
	Floor	*2*	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*7.307*	*0.800*	*11.69*	*Sqm*
		2	*8.00*		*0.500*	*8.00*	*Sqm*
		2		*7.307*	*0.500*	*7.31*	*Sqm*
		2	*0.63*		*0.450*	*0.57*	*Sqm*
		2		*7.307*	*0.450*	*6.58*	*Sqm*
		2	*0.20*		*0.425*	*0.17*	*Sqm*
		2		*7.307*	*0.425*	*6.21*	*Sqm*
		2	*2.30*		*0.550*	*2.53*	*Sqm*
		2		*7.307*	*0.550*	*8.04*	*Sqm*
		2	*0.79*		*1.350*	*2.13*	*Sqm*
		2		*7.307*	*1.350*	*19.73*	*Sqm*
	Crest	*2*	*1.18*		*1.577*	*3.73*	*Sqm*
		2		*7.307*	*1.577*	*23.05*	*Sqm*
	Toe Wall D/S Portion	*2*	*19.92*		*0.300*	*11.95*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*19.62*		*0.600*	*23.54*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.150*	*2.70*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.600*	*10.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**475.00**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.50*	*6.338*		*57.04*	*Sqm*
	TOTAL					**57.04**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.50*	*6.707*	*0.300*	**9.05**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.50*	*6.707*	*0.150*	**9.05**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*22.69*	*0.450*		*10.21*	*Sqm*
	On Abutment Top (Right Side)	*1*	*22.69*	*0.450*		*10.21*	*Sqm*
	TOTAL					**20.42**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		*19.985*		*19.99*	**Cum**
	Abutment						
	Section 1-1	2	*1.40*	*3.836*		*10.710*	*Cum*
	Section 2-2	2	*4.50*	*2.117*		*19.053*	*Cum*
	Section 3-3	2	*2.20*	*1.703*		*7.493*	*Cum*
	Section 5-5	2	*8.30*	*3.799*		*63.079*	*Cum*
	Section 6-6	2	*4.70*	*1.703*		*15.998*	*Cum*
	Toe wall	2	*19.92*	*0.150*	*0.600*	*5.975*	*Cum*
		2	*4.50*	*0.150*	*0.600*	*0.810*	*Cum*
	TOTAL					**143.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.19.150 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.77*	*2.900*	*2.993*	*30.743*	*Cum*
	Section 2-2	*2*	*6.50*	*1.803*	*2.993*	*70.153*	*Cum*
	Section 3-3	*2*	*3.20*	*1.683*	*2.793*	*30.084*	*Cum*
	Section 5-5	*2*	*8.18*	*3.050*	*2.993*	*149.281*	*Cum*
	Section 6-6	*2*	*4.70*	*1.683*	*2.793*	*44.158*	*Cum*
	U/S Key Floor	*1*	*0.75*	*7.307*	*1.350*	*7.398*	*Cum*
	U/S Floor	*1*	*3.03*	*7.307*	*2.153*	*47.731*	*Cum*
	D/S Floor	*1*	*8.47*	*7.307*	*1.500*	*92.792*	*Cum*
		1	*3.50*	*7.307*	*1.300*	*33.247*	*Cum*
	D/S Key Floor	*1*	*0.99*	*7.307*	*2.300*	*16.596*	*Cum*
	Toe Wall D/S Portion	*1*	*9.96*	*0.750*	*0.900*	*6.722*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*4.50*	*0.600*	*0.750*	*4.050*	*Cum*
	TOTAL					**532.95**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*7.307*	*0.150*	*0.59*	*Cum*
		1	*1.34*	*7.307*	*0.150*	*1.47*	*Cum*
		1	*1.30*	*7.307*	*0.150*	*1.42*	*Cum*
		1	*0.78*	*7.307*	*0.150*	*0.85*	*Cum*
		1	*8.98*	*7.307*	*0.150*	*9.84*	*Cum*
		1	*0.88*	*7.307*	*0.150*	*0.97*	*Cum*
		1	*0.79*	*7.307*	*0.150*	*0.86*	*Cum*
		1	*2.40*	*7.307*	*0.150*	*2.63*	*Cum*
		1	*0.54*	*7.307*	*0.150*	*0.59*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.77*	*2.900*	*0.150*	*1.54*	*Cum*
	Section 2-2	*2*	*6.50*	*1.803*	*0.150*	*3.52*	*Cum*
	Section 3-3	*2*	*3.20*	*1.683*	*0.150*	*1.62*	*Cum*
	Section 5-5	*2*	*8.18*	*3.050*	*0.150*	*7.48*	*Cum*
	Section 6-6	*2*	*4.70*	*1.683*	*0.150*	*2.37*	*Cum*
	Toe Wall D/S Portion	*1*	*9.96*	*0.750*	*0.300*	*2.24*	*Cum*
	Toe Wall D/S Portion	*1*	*9.66*	*0.450*	*0.600*	*2.61*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.600*	*0.150*	*0.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.300*	*0.600*	*1.62*	*Cum*
	TOTAL					**43.04**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.62*	*0.450*	*0.450*	*0.66*	*Cum*
		2	*1.62*	*1.525*	*3.583*	*17.71*	*Cum*
		2	*1.62*	*2.750*	*1.150*	*10.25*	*Cum*
	Section 2-2	*2*	*6.50*	*0.450*	*0.450*	*2.63*	*Cum*
		2	*6.50*	*0.977*	*1.755*	*22.28*	*Cum*
		2	*6.50*	*1.653*	*1.150*	*24.71*	*Cum*
	Section 3-3	*2*	*2.62*	*0.450*	*0.450*	*1.06*	*Cum*
		2	*2.62*	*0.917*	*1.555*	*7.47*	*Cum*
		2	*2.62*	*1.533*	*0.850*	*6.83*	*Cum*
	Section 5-5	*2*	*8.13*	*0.450*	*0.450*	*3.29*	*Cum*
		2	*8.13*	*1.525*	*3.583*	*88.90*	*Cum*
		2	*8.13*	*2.750*	*0.600*	*26.84*	*Cum*
	Section 6-6	*2*	*5.43*	*0.450*	*0.450*	*2.20*	*Cum*
		2	*5.43*	*0.917*	*1.555*	*15.47*	*Cum*
		2	*5.43*	*1.533*	*0.850*	*14.14*	*Cum*
	Floor	*1*	*0.75*	*7.307*	*1.200*	*6.58*	*Cum*
		1	*2.50*	*7.307*	*0.600*	*10.94*	*Cum*
		1	*0.54*	*7.307*	*0.875*	*3.43*	*Cum*
		1	*8.47*	*7.307*	*1.150*	*71.13*	*Cum*
		1	*0.72*	*7.307*	*0.400*	*2.10*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*7.307*	*0.688*	*1.00*	*Cum*
		1	*3.18*	*7.307*	*0.850*	*19.72*	*Cum*
		1	*0.99*	*7.307*	*2.150*	*15.51*	*Cum*
	Crest	*1*	*1.53*	*7.307*	*2.723*	*30.50*	*Cum*
	TOTAL					**405.38**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.10*	*7.307*	*0.200*	*1.61*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*26.19*	*0.450*	*0.050*	*0.59*	*Cum*
	On Abutment Top (Right Side)	*1*	*26.19*	*0.450*	*0.050*	*0.59*	*Cum*
	TOTAL					**2.79**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.25% of M-20	**405.38**	**0.00**	**1.013**	**7850.0**	**7955.49**	**Kg**
	Total Weight in Metric Tonne					**7.96**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.62*		*0.450*	*2.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.62*		*3.583*	*23.23*	*Sqm*
		4		*1.525*	*3.583*	*21.86*	*Sqm*
		4	*1.62*		*1.150*	*7.46*	*Sqm*
		4		*2.750*	*1.150*	*12.65*	*Sqm*
	Section 2-2	*4*	*6.50*		*0.450*	*11.70*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.50*		*1.755*	*45.63*	*Sqm*
		4		*0.977*	*1.755*	*6.86*	*Sqm*
		4	*6.50*		*1.150*	*29.90*	*Sqm*
		4		*1.653*	*1.150*	*7.60*	*Sqm*
	Section 3-3	*4*	*2.62*		*0.450*	*4.72*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.62*		*1.555*	*16.30*	*Sqm*
		4		*0.917*	*1.555*	*5.70*	*Sqm*
		4	*2.62*		*0.850*	*8.91*	*Sqm*
		4		*1.533*	*0.850*	*5.21*	*Sqm*
	Section 5-5	*4*	*8.13*		*0.450*	*14.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*8.13*		*3.583*	*116.58*	*Sqm*
		4		*1.525*	*3.583*	*21.86*	*Sqm*
		4	*8.13*		*0.600*	*19.52*	*Sqm*
		4		*2.750*	*0.600*	*6.60*	*Sqm*
	Section 6-6	*4*	*5.43*		*0.450*	*9.77*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.43*		*1.555*	*33.75*	*Sqm*
		4		*0.917*	*1.555*	*5.70*	*Sqm*
		4	*5.43*		*0.850*	*18.45*	*Sqm*
		4		*1.533*	*0.850*	*5.21*	*Sqm*
	Floor	*2*	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*7.307*	*1.200*	*17.54*	*Sqm*
		2	*2.50*		*0.600*	*3.00*	*Sqm*
		2		*7.307*	*0.600*	*8.77*	*Sqm*
		2	*0.54*		*0.875*	*0.94*	*Sqm*
		2		*7.307*	*0.875*	*12.79*	*Sqm*
		2	*8.47*		*1.150*	*19.47*	*Sqm*
		2		*7.307*	*1.150*	*16.81*	*Sqm*
		2	*0.72*		*0.400*	*0.58*	*Sqm*
		2		*7.307*	*0.400*	*5.85*	*Sqm*
		2	*0.20*		*0.688*	*0.28*	*Sqm*
		2		*7.307*	*0.688*	*10.05*	*Sqm*
		2	*3.18*		*0.850*	*5.40*	*Sqm*
		2		*7.307*	*0.850*	*12.42*	*Sqm*
		2	*0.99*		*2.150*	*4.25*	*Sqm*
		2		*7.307*	*2.150*	*31.42*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.53*		*2.723*	*8.35*	*Sqm*
		2		*7.307*	*2.723*	*39.79*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.96*		*0.300*	*5.97*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.66*		*0.600*	*11.59*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.150*	*2.70*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.600*	*10.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**699.39**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.50*	*6.587*		*59.28*	*Sqm*
	TOTAL					**59.28**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.50*	*6.707*	*0.300*	**9.05**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.50*	*6.707*	*0.150*	**9.05**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*26.19*	*0.450*		*11.78*	*Sqm*
	On Abutment Top (Right Side)	*1*	*26.19*	*0.450*		*11.78*	*Sqm*
	TOTAL					**23.57**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		30.701		30.70	**Cum**
	Abutment						
	Section 1-1	2	*1.77*	*1.540*		*5.455*	*Cum*
	Section 2-2	2	*6.50*	*1.540*		*20.020*	*Cum*
	Section 3-3	2	*3.20*	*1.099*		*7.034*	*Cum*
	Section 5-5	2	*8.18*	*1.450*		*23.712*	*Cum*
	Section 6-6	2	*4.70*	*1.099*		*10.324*	*Cum*
	Toe wall	2	*9.96*	*0.150*	*0.600*	*2.987*	*Cum*
		2	*4.50*	0.150	*0.600*	*0.810*	*Cum*
	TOTAL					**101.04**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 19.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.40*	*2.306*	*1.723*	*11.093*	*Cum*
	Section 2-2	*2*	*4.50*	*1.758*	*1.723*	*27.261*	*Cum*
	Section 3-3	*2*	*2.20*	*1.608*	*1.523*	*10.776*	*Cum*
	Section 5-5	*2*	*8.30*	*2.456*	*1.723*	*70.263*	*Cum*
	Section 6-6	*2*	*4.70*	*1.608*	*1.523*	*23.006*	*Cum*
	U/S Key Floor	*1*	*0.65*	*7.307*	*0.950*	*4.512*	*Cum*
	U/S Floor	*1*	*3.50*	*7.307*	*1.164*	*29.769*	*Cum*
	D/S Floor	*1*	*-3.40*	*7.307*	*1.000*	*-24.844*	*Cum*
		1	*2.50*	*7.307*	*0.750*	*13.701*	*Cum*
	D/S Key Floor	*1*	*0.73*	*7.307*	*0.900*	*4.768*	*Cum*
	Toe Wall D/S Portion	*1*	*19.92*	*0.750*	*0.900*	*13.443*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*4.50*	*0.600*	*0.750*	*4.050*	*Cum*
						187.80	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*7.307*	*0.150*	*0.59*	*Cum*
		1	*0.89*	*7.307*	*0.150*	*0.98*	*Cum*
		1	*0.78*	*7.307*	*0.150*	*0.85*	*Cum*
		1	*0.35*	*7.307*	*0.150*	*0.39*	*Cum*
		1	*6.50*	*7.307*	*0.150*	*7.12*	*Cum*
		1	*0.64*	*7.307*	*0.150*	*0.70*	*Cum*
		1	*0.36*	*7.307*	*0.150*	*0.40*	*Cum*
		1	*1.51*	*7.307*	*0.150*	*1.65*	*Cum*
		1	*0.54*	*7.307*	*0.150*	*0.59*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.40*	*2.306*	*0.150*	*0.97*	*Cum*
	Section 2-2	*2*	*4.50*	*1.758*	*0.150*	*2.37*	*Cum*
	Section 3-3	*2*	*2.20*	*1.608*	*0.150*	*1.06*	*Cum*
	Section 5-5	*2*	*8.30*	*2.456*	*0.150*	*6.12*	*Cum*
	Section 6-6	*2*	*4.70*	*1.608*	*0.150*	*2.27*	*Cum*
	Toe Wall D/S Portion	*1*	*19.92*	*0.750*	*0.300*	*4.48*	*Cum*
	Toe Wall D/S Portion	*1*	*19.62*	*0.450*	*0.600*	*5.30*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.600*	*0.150*	*0.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.300*	*0.600*	*1.62*	*Cum*
	TOTAL					**38.27**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.17*	*0.450*	*0.450*	*0.47*	*Cum*
		2	*1.17*	*1.228*	*2.594*	*7.45*	*Cum*
		2	*1.17*	*2.156*	*0.750*	*3.78*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.954*	*1.680*	*14.42*	*Cum*
		2	*4.50*	*1.608*	*0.750*	*10.85*	*Cum*
	Section 3-3	*2*	*1.62*	*0.450*	*0.450*	*0.66*	*Cum*
		2	*1.62*	*0.879*	*1.430*	*4.08*	*Cum*
		2	*1.62*	*1.458*	*0.550*	*2.60*	*Cum*
	Section 5-5	*2*	*8.26*	*0.450*	*0.450*	*3.34*	*Cum*
		2	*8.26*	*1.228*	*2.594*	*52.61*	*Cum*
		2	*8.26*	*2.156*	*0.500*	*17.80*	*Cum*
	Section 6-6	*2*	*5.43*	*0.450*	*0.450*	*2.20*	*Cum*
		2	*5.43*	*0.879*	*1.430*	*13.64*	*Cum*
		2	*5.43*	*1.458*	*0.550*	*8.70*	*Cum*
	Floor	*1*	*0.65*	*7.307*	*0.800*	*3.80*	*Cum*
		1	*1.13*	*1.458*	*0.500*	*0.82*	*Cum*
		1	*0.10*	*7.307*	*0.550*	*0.40*	*Cum*
		1	*4.57*	*7.307*	*0.600*	*20.02*	*Cum*
		1	*0.63*	*7.307*	*0.450*	*2.08*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*7.307*	*0.425*	*0.62*	*Cum*
		1	*2.30*	*7.307*	*0.550*	*9.24*	*Cum*
		1	*0.73*	*7.307*	*1.100*	*5.83*	*Cum*
	Crest	*1*	*1.13*	*7.307*	*1.400*	*11.60*	*Cum*
	TOTAL					**198.85**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*7.307*	*0.200*	*1.32*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*22.69*	*0.450*	*0.050*	*0.51*	*Cum*
	On Abutment Top (Right Side)	*1*	*22.69*	*0.450*	*0.050*	*0.51*	*Cum*
	TOTAL					**2.34**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.25% of M-20	**198.85**	**0.003**	**0.497**	**7850.0**	**3902.39**	**Kg**
	Total Weight in Metric Tonne					**3.90**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.17*		*0.450*	*2.11*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.17*		*2.594*	*12.14*	*Sqm*
		4		*1.228*	*2.594*	*12.74*	*Sqm*
		4	*1.17*		*0.750*	*3.51*	*Sqm*
		4		*2.156*	*0.750*	*6.47*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*1.680*	*30.24*	*Sqm*
		4		*0.954*	*1.680*	*6.41*	*Sqm*
		4	*4.50*		*0.750*	*13.50*	*Sqm*
		4		*1.608*	*0.750*	*4.82*	*Sqm*
	Section 3-3	*4*	*1.62*		*0.450*	*2.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.62*		*1.430*	*9.27*	*Sqm*
		4		*0.879*	*1.430*	*5.03*	*Sqm*
		4	*1.62*		*0.550*	*3.57*	*Sqm*
		4		*1.458*	*0.550*	*3.21*	*Sqm*
	Section 5-5	*4*	*8.26*		*0.450*	*14.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*8.26*		*2.594*	*85.68*	*Sqm*
		4		*1.228*	*2.594*	*12.74*	*Sqm*
		4	*8.26*		*0.500*	*16.52*	*Sqm*
		4		*2.156*	*0.500*	*4.31*	*Sqm*
	Section 6-6	*4*	*5.43*		*0.450*	*9.77*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.43*		*1.430*	*31.04*	*Sqm*
		4		*0.879*	*1.430*	*5.03*	*Sqm*
		4	*5.43*		*0.550*	*11.94*	*Sqm*
		4		*1.458*	*0.550*	*3.21*	*Sqm*
	Floor	*2*	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*7.307*	*0.800*	*11.69*	*Sqm*
		2	*0.10*		*0.550*	*0.11*	*Sqm*
		2		*7.307*	*0.550*	*8.04*	*Sqm*
		2	*4.566*		*0.600*	*5.48*	*Sqm*
		2		*7.307*	*0.600*	*8.77*	*Sqm*
		2	*0.63*		*0.450*	*0.57*	*Sqm*
		2		*7.307*	*0.450*	*6.58*	*Sqm*
		2	*0.20*		*0.425*	*0.17*	*Sqm*
		2		*7.307*	*0.425*	*6.21*	*Sqm*
		2	*2.30*		*0.550*	*2.53*	*Sqm*
		2		*7.307*	*0.550*	*8.04*	*Sqm*
		2	*0.73*		*1.100*	*1.60*	*Sqm*
		2		*7.307*	*1.100*	*16.08*	*Sqm*
	Crest	*2*	*1.13*		*1.400*	*3.17*	*Sqm*
		2		*7.307*	*1.400*	*20.46*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*19.92*		*0.300*	*11.95*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*19.62*		*0.600*	*23.54*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.150*	*2.70*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.600*	*10.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**474.75**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.50*	*6.338*		*57.04*	*Sqm*
	TOTAL					**57.04**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.50*	*6.707*	*0.300*	**9.05**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.50*	*6.707*	*0.150*	**9.05**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*22.69*	*0.450*		*10.21*	*Sqm*
	On Abutment Top (Right Side)	*1*	*22.69*	*0.450*		*10.21*	*Sqm*
	TOTAL					**20.42**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		*19.985*		*19.99*	**Cum**
	Abutment						
	Section 1-1	2	*1.40*	*3.836*		*10.710*	*Cum*
	Section 2-2	2	*4.50*	*2.117*		*19.053*	*Cum*
	Section 3-3	2	*2.20*	*1.703*		*7.493*	*Cum*
	Section 5-5	2	*8.30*	*3.799*		*63.079*	*Cum*
	Section 6-6	2	*4.70*	*1.703*		*15.998*	*Cum*
	Toe wall	2	*19.92*	*0.150*	*0.600*	*5.975*	*Cum*
		2	*4.50*	*0.150*	*0.600*	*0.810*	*Cum*
	TOTAL					**143.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH.25.350 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.24*	*1.859*	*1.641*	*7.550*	*Cum*
	Section 2-2	*2*	*3.50*	*1.402*	*1.641*	*16.105*	*Cum*
	Section 3-3	*2*	*1.45*	*1.282*	*1.441*	*5.357*	*Cum*
	Section 5-5	*2*	*5.70*	*2.009*	*1.641*	*37.590*	*Cum*
	Section 6-6	*2*	*3.12*	*1.282*	*1.441*	*11.520*	*Cum*
	U/S Key Floor	*1*	*0.64*	*5.600*	*0.900*	*3.213*	*Cum*
	U/S Floor	*1*	*2.25*	*5.600*	*1.662*	*20.941*	*Cum*
	D/S Floor	*1*	*3.50*	*5.600*	*0.900*	*17.640*	*Cum*
		1	*1.75*	*5.600*	*0.700*	*6.860*	*Cum*
	D/S Key Floor	*1*	*0.69*	*5.600*	*0.650*	*2.503*	*Cum*
	Toe Wall D/S Portion	*1*	*14.40*	*0.750*	*0.900*	*9.720*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.75*	*0.600*	*0.750*	*2.475*	*Cum*
	TOTAL					**141.47**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
		1	*0.84*	*5.600*	*0.150*	*0.70*	*Cum*
		1	*5.05*	*5.600*	*0.150*	*4.24*	*Cum*
		1	*0.35*	*5.600*	*0.150*	*0.30*	*Cum*
		1	*0.26*	*5.600*	*0.150*	*0.22*	*Cum*
		1	*1.06*	*5.600*	*0.150*	*0.89*	*Cum*
		1	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.24*	*1.859*	*0.150*	*0.69*	*Cum*
	Section 2-2	*2*	*3.50*	*1.402*	*0.150*	*1.47*	*Cum*
	Section 3-3	*2*	*1.45*	*1.282*	*0.150*	*0.56*	*Cum*
	Section 5-5	*2*	*5.70*	*2.009*	*0.150*	*3.44*	*Cum*
	Section 6-6	*2*	*3.12*	*1.282*	*0.150*	*1.20*	*Cum*
	Toe Wall D/S Portion	*1*	*14.40*	*0.750*	*0.300*	*3.24*	*Cum*
	Toe Wall D/S Portion	*1*	*14.10*	*0.450*	*0.600*	*3.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.75*	*0.600*	*0.150*	*0.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.75*	*0.300*	*0.600*	*0.99*	*Cum*
	TOTAL					**23.15**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*0.450*	*0.450*	*0.44*	*Cum*
		2	*1.09*	*1.005*	*1.848*	*4.04*	*Cum*
		2	*1.09*	*1.709*	*0.550*	*2.05*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.776*	*1.086*	*5.90*	*Cum*
		2	*3.50*	*1.252*	*0.550*	*4.82*	*Cum*
	Section 3-3	*2*	*1.03*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.03*	*0.716*	*0.886*	*1.31*	*Cum*
		2	*1.03*	*1.132*	*0.500*	*1.17*	*Cum*
	Section 5-5	*2*	*5.66*	*0.450*	*0.450*	*2.29*	*Cum*
		2	*5.66*	*1.005*	*1.848*	*21.00*	*Cum*
		2	*5.66*	*1.709*	*0.550*	*10.63*	*Cum*
	Section 6-6	*2*	*3.76*	*0.450*	*0.450*	*1.52*	*Cum*
		2	*3.76*	*0.716*	*0.886*	*4.77*	*Cum*
		2	*3.76*	*1.132*	*0.500*	*4.25*	*Cum*
	Floor	*1*	*0.64*	*5.600*	*0.750*	*2.68*	*Cum*
		1	*5.75*	*5.600*	*0.550*	*17.71*	*Cum*
		1	*0.28*	*5.600*	*0.250*	*0.39*	*Cum*
		1	*0.20*	*5.600*	*0.400*	*0.45*	*Cum*
		1	*1.55*	*5.600*	*0.500*	*4.34*	*Cum*
		1	*0.69*	*5.600*	*0.950*	*3.66*	*Cum*
	Crest	*1*	*1.01*	*5.600*	*1.252*	*7.07*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**102.34**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*5.600*	*0.200*	*0.90*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*16.09*	*0.450*	*0.050*	*0.36*	*Cum*
	On Abutment Top (Right Side)	*1*	*16.09*	*0.450*	*0.050*	*0.36*	*Cum*
	TOTAL					**1.62**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**102.34**	**0.00**	**0.307**	**7850.0**	**2410.00**	**Kg**
	Total Weight in Metric Tonne					**2.41**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.09*		*0.450*	*1.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.09*		*1.848*	*8.04*	*Sqm*
		4		*1.005*	*1.848*	*7.43*	*Sqm*
		4	*1.09*		*0.550*	*2.39*	*Sqm*
		4		*1.709*	*0.550*	*3.76*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*1.086*	*15.20*	*Sqm*
		4		*0.776*	*1.086*	*3.37*	*Sqm*
		4	*3.50*		*0.550*	*7.70*	*Sqm*
		4		*1.252*	*0.550*	*2.75*	*Sqm*
	Section 3-3	*4*	*1.03*		*0.450*	*1.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.03*		*0.886*	*3.66*	*Sqm*
		4		*0.716*	*0.886*	*2.54*	*Sqm*
		4	*1.03*		*0.500*	*2.07*	*Sqm*
		4		*1.132*	*0.500*	*2.26*	*Sqm*
	Section 5-5	*4*	*5.66*		*0.450*	*10.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.66*		*1.848*	*41.82*	*Sqm*
		4		*1.005*	*1.848*	*7.43*	*Sqm*
		4	*5.66*		*0.550*	*12.45*	*Sqm*
		4		*1.709*	*0.550*	*3.76*	*Sqm*
	Section 6-6	*4*	*3.76*		*0.450*	*6.77*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.76*		*0.886*	*13.32*	*Sqm*
		4		*0.716*	*0.886*	*2.54*	*Sqm*
		4	*3.76*		*0.500*	*7.52*	*Sqm*
		4		*1.132*	*0.500*	*2.26*	*Sqm*
	Floor	*2*	*0.64*		*0.750*	*0.96*	*Sqm*
		2		*5.600*	*0.750*	*8.40*	*Sqm*
		2	*5.75*		*0.550*	*6.33*	*Sqm*
		2		*5.600*	*0.550*	*6.16*	*Sqm*
		2	*0.28*		*0.250*	*0.14*	*Sqm*
		2		*5.600*	*0.250*	*2.80*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*5.600*	*0.400*	*4.48*	*Sqm*
		2	*1.55*		*0.500*	*1.55*	*Sqm*
		2		*5.600*	*0.500*	*5.60*	*Sqm*
		2	*0.69*		*0.950*	*1.31*	*Sqm*
		2		*5.600*	*0.950*	*10.64*	*Sqm*
	Crest	*2*	*1.01*		*1.252*	*2.53*	*Sqm*
		2		*5.600*	*1.252*	*14.02*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.40*		*0.300*	*8.64*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.10*		*0.600*	*16.92*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.75*		*0.150*	*1.65*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.75*		*0.600*	*6.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**284.34**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.75*	*4.519*		*24.85*	*Sqm*
	TOTAL					**24.85**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.75*	*5.000*	*0.300*	**4.13**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.75*	*5.000*	*0.150*	**4.13**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*16.09*	*0.450*		*7.24*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.09*	*0.450*		*7.24*	*Sqm*
	TOTAL					**14.48**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		6.514		6.51	**Cum**
	Abutment						
	Section 1-1	2	*1.24*	*0.657*		*1.626*	*Cum*
	Section 2-2	2	*3.50*	*0.650*		*4.549*	*Cum*
	Section 3-3	2	*1.45*	*0.680*		*1.971*	*Cum*
	Section 5-5	2	*5.70*	*0.657*		*7.491*	*Cum*
	Section 6-6	2	*3.12*	*0.680*		*4.240*	*Cum*
	Toe wall	2	*14.40*	*0.150*	*0.600*	*4.320*	*Cum*
		2	*2.75*	0.150	*0.600*	*0.495*	*Cum*
	TOTAL					**31.21**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH.26.650 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.34*	*2.042*	*2.139*	*11.701*	*Cum*
	Section 2-2	*2*	*4.00*	*1.402*	*2.139*	*23.991*	*Cum*
	Section 3-3	*2*	*2.20*	*1.282*	*1.939*	*10.938*	*Cum*
	Section 5-5	*2*	*5.70*	*2.192*	*2.139*	*53.460*	*Cum*
	Section 6-6	*2*	*3.12*	*1.282*	*1.939*	*15.502*	*Cum*
	U/S Key Floor	*1*	*0.68*	*5.600*	*1.050*	*3.969*	*Cum*
	U/S Floor	*1*	*3.00*	*5.600*	*2.117*	*35.566*	*Cum*
	D/S Floor	*1*	*4.00*	*5.600*	*1.050*	*23.520*	*Cum*
		1	*2.50*	*5.600*	*0.850*	*11.900*	*Cum*
	D/S Key Floor	*1*	*0.78*	*5.600*	*0.650*	*2.821*	*Cum*
	Toe Wall D/S Portion	*1*	*14.40*	*0.750*	*0.900*	*9.720*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.75*	*0.600*	*0.750*	*2.475*	*Cum*
	TOTAL					**205.56**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
		1	*1.01*	*5.600*	*0.150*	*0.85*	*Cum*
		1	*0.43*	*5.600*	*0.150*	*0.36*	*Cum*
		1	*0.28*	*5.600*	*0.150*	*0.24*	*Cum*
		1	*5.45*	*5.600*	*0.150*	*4.58*	*Cum*
		1	*0.57*	*5.600*	*0.150*	*0.47*	*Cum*
		1	*0.84*	*5.600*	*0.150*	*0.70*	*Cum*
		1	*1.45*	*5.600*	*0.150*	*1.22*	*Cum*
		1	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.34*	*2.042*	*0.150*	*0.82*	*Cum*
	Section 2-2	*2*	*4.00*	*1.402*	*0.150*	*1.68*	*Cum*
	Section 3-3	*2*	*2.20*	*1.282*	*0.150*	*0.85*	*Cum*
	Section 5-5	*2*	*5.70*	*2.192*	*0.150*	*3.75*	*Cum*
	Section 6-6	*2*	*3.12*	*1.282*	*0.150*	*1.20*	*Cum*
	Toe Wall D/S Portion	*1*	*14.40*	*0.750*	*0.300*	*3.24*	*Cum*
	Toe Wall D/S Portion	*1*	*14.10*	*0.450*	*0.600*	*3.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.75*	*0.600*	*0.150*	*0.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.75*	*0.300*	*0.600*	*0.99*	*Cum*
	TOTAL					**26.16**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.19*	*0.450*	*0.450*	*0.48*	*Cum*
		2	*1.19*	*1.096*	*2.153*	*5.62*	*Cum*
		2	*1.19*	*1.892*	*0.550*	*2.48*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.776*	*1.086*	*6.74*	*Cum*
		2	*4.00*	*1.252*	*0.550*	*5.51*	*Cum*
	Section 3-3	*2*	*1.78*	*0.450*	*0.450*	*0.72*	*Cum*
		2	*1.78*	*0.716*	*0.886*	*2.26*	*Cum*
		2	*1.78*	*1.132*	*0.500*	*2.02*	*Cum*
	Section 5-5	*2*	*5.66*	*0.450*	*0.450*	*2.29*	*Cum*
		2	*5.66*	*1.096*	*2.153*	*26.70*	*Cum*
		2	*5.66*	*1.892*	*0.500*	*10.70*	*Cum*
	Section 6-6	*2*	*3.76*	*0.450*	*0.450*	*1.52*	*Cum*
		2	*3.76*	*0.716*	*0.886*	*4.77*	*Cum*
		2	*3.76*	*1.132*	*0.550*	*4.68*	*Cum*
	Floor	*1*	*0.68*	*5.600*	*0.900*	*3.40*	*Cum*
		1	*1.48*	*5.600*	*0.500*	*4.15*	*Cum*
		1	*0.20*	*5.600*	*0.600*	*0.67*	*Cum*
		1	*5.30*	*5.600*	*0.700*	*20.78*	*Cum*
		1	*0.21*	*5.600*	*0.400*	*0.46*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*5.600*	*0.400*	*0.45*	*Cum*
		1	*2.30*	*5.600*	*0.500*	*6.44*	*Cum*
		1	*0.78*	*5.600*	*1.300*	*5.64*	*Cum*
	Crest	*1*	*1.06*	*5.600*	*1.557*	*9.24*	*Cum*
	TOTAL					**129.34**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*5.600*	*0.200*	*0.90*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*17.45*	*0.450*	*0.050*	*0.39*	*Cum*
	On Abutment Top (Right Side)	*1*	*17.45*	*0.450*	*0.050*	*0.39*	*Cum*
	TOTAL					**1.68**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**129.34**	**0.00**	**0.388**	**7850.0**	**3046.00**	**Kg**
	Total Weight in Metric Tonne					**3.05**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.19*		*0.450*	*2.14*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.19*		*2.153*	*10.25*	*Sqm*
		4		*1.096*	*2.153*	*9.44*	*Sqm*
		4	*1.19*		*0.550*	*2.62*	*Sqm*
		4		*1.892*	*0.550*	*4.16*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*1.086*	*17.38*	*Sqm*
		4		*0.776*	*1.086*	*3.37*	*Sqm*
		4	*4.00*		*0.550*	*8.80*	*Sqm*
		4		*1.252*	*0.550*	*2.75*	*Sqm*
	Section 3-3	*4*	*1.78*		*0.450*	*3.21*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.78*		*0.886*	*6.32*	*Sqm*
		4		*0.716*	*0.886*	*2.54*	*Sqm*
		4	*1.78*		*0.500*	*3.57*	*Sqm*
		4		*1.132*	*0.500*	*2.26*	*Sqm*
	Section 5-5	*4*	*5.66*		*0.450*	*10.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.66*		*2.153*	*48.72*	*Sqm*
		4		*1.096*	*2.153*	*9.44*	*Sqm*
		4	*5.66*		*0.500*	*11.31*	*Sqm*
		4		*1.892*	*0.500*	*3.78*	*Sqm*
	Section 6-6	*4*	*3.76*		*0.450*	*6.77*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.76*		*0.886*	*13.32*	*Sqm*
		4		*0.716*	*0.886*	*2.54*	*Sqm*
		4	*3.76*		*0.550*	*8.27*	*Sqm*
		4		*1.132*	*0.550*	*2.49*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*5.600*	*0.900*	*10.08*	*Sqm*
		2	*1.48*		*0.500*	*1.48*	*Sqm*
		2		*5.600*	*0.500*	*5.60*	*Sqm*
		2	*0.20*		*0.600*	*0.24*	*Sqm*
		2		*5.600*	*0.600*	*6.72*	*Sqm*
		2	*5.30*		*0.700*	*7.42*	*Sqm*
		2		*5.600*	*0.700*	*7.84*	*Sqm*
		2	*0.21*		*0.400*	*0.17*	*Sqm*
		2		*5.600*	*0.400*	*4.48*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*5.600*	*0.400*	*4.48*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*5.600*	*0.500*	*5.60*	*Sqm*
		2	*0.78*		*1.300*	*2.02*	*Sqm*
		2		*5.600*	*1.300*	*14.56*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.06*		*1.557*	*3.30*	*Sqm*
		2		*5.600*	*1.557*	*17.44*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.40*		*0.300*	*8.64*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.10*		*0.600*	*16.92*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.75*		*0.150*	*1.65*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.75*		*0.600*	*6.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**337.86**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.75*	*4.519*		*24.85*	*Sqm*
	TOTAL					**24.85**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.75*	*5.000*	*0.300*	**4.13**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.75*	*5.000*	*0.150*	**4.13**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*17.45*	*0.450*		*7.85*	*Sqm*
	On Abutment Top (Right Side)	*1*	*17.45*	*0.450*		*7.85*	*Sqm*
	TOTAL					**15.71**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		16.244		16.24	**Cum**
	Abutment						
	Section 1-1	2	*1.34*	*1.118*		*2.994*	*Cum*
	Section 2-2	2	*4.00*	*1.070*		*8.563*	*Cum*
	Section 3-3	2	*2.20*	*0.967*		*4.253*	*Cum*
	Section 5-5	2	*5.70*	*1.118*		*12.744*	*Cum*
	Section 6-6	2	*3.12*	*0.967*		*6.030*	*Cum*
	Toe wall	2	*14.40*	*0.150*	*0.600*	*4.320*	*Cum*
		2	*2.75*	0.150	*0.600*	*0.495*	*Cum*
	TOTAL					**55.64**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.28.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.17*	*1.862*	*1.628*	*7.063*	*Cum*
	Section 2-2	*2*	*3.25*	*1.314*	*1.628*	*13.905*	*Cum*
	Section 3-3	*2*	*1.45*	*1.194*	*1.428*	*4.945*	*Cum*
	Section 5-5	*2*	*4.98*	*2.012*	*1.628*	*32.611*	*Cum*
	Section 6-6	*2*	*1.22*	*1.194*	*1.428*	*4.147*	*Cum*
	U/S Key Floor	*1*	*0.63*	*4.300*	*0.850*	*2.284*	*Cum*
	U/S Floor	*1*	*2.50*	*4.300*	*1.864*	*20.038*	*Cum*
	D/S Floor	*1*	*3.25*	*4.300*	*0.950*	*13.276*	*Cum*
		1	*1.75*	*4.300*	*0.750*	*5.644*	*Cum*
	D/S Key Floor	*1*	*0.73*	*4.300*	*0.650*	*2.026*	*Cum*
	Toe Wall D/S Portion	*1*	*9.12*	*0.750*	*0.900*	*6.156*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
	TOTAL					**114.12**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.300*	*0.150*	*0.35*	*Cum*
		1	*0.78*	*4.300*	*0.150*	*0.50*	*Cum*
		1	*0.30*	*4.300*	*0.150*	*0.19*	*Cum*
		1	*0.14*	*4.300*	*0.150*	*0.09*	*Cum*
		1	*4.60*	*4.300*	*0.150*	*2.97*	*Cum*
		1	*0.42*	*4.300*	*0.150*	*0.27*	*Cum*
		1	*0.22*	*4.300*	*0.150*	*0.14*	*Cum*
		1	*1.23*	*4.300*	*0.150*	*0.79*	*Cum*
		1	*0.54*	*4.300*	*0.150*	*0.35*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.17*	*1.862*	*0.150*	*0.65*	*Cum*
	Section 2-2	*2*	*3.25*	*1.314*	*0.150*	*1.28*	*Cum*
	Section 3-3	*2*	*1.45*	*1.194*	*0.150*	*0.52*	*Cum*
	Section 5-5	*2*	*4.98*	*2.012*	*0.150*	*3.00*	*Cum*
	Section 6-6	*2*	*1.22*	*1.194*	*0.150*	*0.44*	*Cum*
	Toe Wall D/S Portion	*1*	*9.12*	*0.750*	*0.300*	*2.05*	*Cum*
	Toe Wall D/S Portion	*1*	*8.82*	*0.450*	*0.600*	*2.38*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**17.20**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.02*	*0.450*	*0.450*	*0.41*	*Cum*
		2	*1.02*	*1.006*	*1.854*	*3.79*	*Cum*
		2	*1.02*	*1.712*	*0.600*	*2.09*	*Cum*
	Section 2-2	*2*	*3.25*	*0.450*	*0.450*	*1.32*	*Cum*
		2	*3.25*	*0.732*	*0.940*	*4.47*	*Cum*
		2	*3.25*	*1.164*	*0.600*	*4.54*	*Cum*
	Section 3-3	*2*	*1.08*	*0.450*	*0.450*	*0.44*	*Cum*
		2	*1.08*	*0.672*	*0.740*	*1.07*	*Cum*
		2	*1.08*	*1.044*	*0.500*	*1.13*	*Cum*
	Section 5-5	*2*	*4.93*	*0.450*	*0.450*	*2.00*	*Cum*
		2	*4.93*	*1.006*	*1.854*	*18.41*	*Cum*
		2	*4.93*	*1.712*	*0.500*	*8.45*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.672*	*0.740*	*1.80*	*Cum*
		2	*1.81*	*1.044*	*0.500*	*1.89*	*Cum*
	Floor	*1*	*0.63*	*4.300*	*0.700*	*1.88*	*Cum*
		1	*1.26*	*4.300*	*0.500*	*2.70*	*Cum*
		1	*0.10*	*4.300*	*0.550*	*0.24*	*Cum*
		1	*4.40*	*4.300*	*0.600*	*11.34*	*Cum*
		1	*0.23*	*4.300*	*0.300*	*0.29*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*4.300*	*0.400*	*0.34*	*Cum*
		1	*1.55*	*4.300*	*0.500*	*3.33*	*Cum*
		1	*0.73*	*4.300*	*1.100*	*3.43*	*Cum*
	Crest	*1*	*0.92*	*4.300*	*1.385*	*5.49*	*Cum*
	TOTAL					**81.58**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*4.300*	*0.150*	*0.45*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.06*	*0.450*	*0.050*	*0.29*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.06*	*0.450*	*0.050*	*0.29*	*Cum*
	TOTAL					**1.04**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**81.58**	**0.00**	**0.245**	**7850.0**	**1921.12**	**Kg**
	Total Weight in Metric Tonne					**1.92**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.02*		*0.450*	*1.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.02*		*1.854*	*7.53*	*Sqm*
		4		*1.006*	*1.854*	*7.46*	*Sqm*
		4	*1.02*		*0.600*	*2.44*	*Sqm*
		4		*1.712*	*0.600*	*4.11*	*Sqm*
	Section 2-2	*4*	*3.25*		*0.450*	*5.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.25*		*0.940*	*12.22*	*Sqm*
		4		*0.732*	*0.940*	*2.75*	*Sqm*
		4	*3.25*		*0.600*	*7.80*	*Sqm*
		4		*1.164*	*0.600*	*2.79*	*Sqm*
	Section 3-3	*4*	*1.08*		*0.450*	*1.94*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.08*		*0.740*	*3.19*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*1.08*		*0.500*	*2.16*	*Sqm*
		4		*1.044*	*0.500*	*2.09*	*Sqm*
	Section 5-5	*4*	*4.93*		*0.450*	*8.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.93*		*1.854*	*36.59*	*Sqm*
		4		*1.006*	*1.854*	*7.46*	*Sqm*
		4	*4.93*		*0.500*	*9.87*	*Sqm*
		4		*1.712*	*0.500*	*3.42*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.740*	*5.37*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*1.81*		*0.500*	*3.63*	*Sqm*
		4		*1.044*	*0.500*	*2.09*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.300*	*0.700*	*6.02*	*Sqm*
		2	*1.26*		*0.500*	*1.26*	*Sqm*
		2		*4.300*	*0.500*	*4.30*	*Sqm*
		2	*0.10*		*0.550*	*0.11*	*Sqm*
		2		*4.300*	*0.550*	*4.73*	*Sqm*
		2	*4.40*		*0.600*	*5.27*	*Sqm*
		2		*4.300*	*0.600*	*5.16*	*Sqm*
		2	*0.23*		*0.300*	*0.14*	*Sqm*
		2		*4.300*	*0.300*	*2.58*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.300*	*0.400*	*3.44*	*Sqm*
		2	*1.55*		*0.500*	*1.55*	*Sqm*
		2		*4.300*	*0.500*	*4.30*	*Sqm*
		2	*0.73*		*1.100*	*1.60*	*Sqm*
		2		*4.300*	*1.100*	*9.46*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*0.92*		*1.385*	*2.56*	*Sqm*
		2		*4.300*	*1.385*	*11.91*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.12*		*0.300*	*5.47*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.82*		*0.600*	*10.58*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**243.04**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*3.963*		*17.83*	*Sqm*
	TOTAL					**17.83**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*3.700*	*0.300*	**2.50**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*3.700*	*0.150*	**2.50**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.06*	*0.450*		*5.88*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.06*	*0.450*		*5.88*	*Sqm*
	TOTAL					**11.75**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		8.728		8.73	**Cum**
	Abutment						
	Section 1-1	2	*1.17*	*0.505*		*1.176*	*Cum*
	Section 2-2	2	*3.25*	*0.505*		*3.282*	*Cum*
	Section 3-3	2	*1.45*	*0.563*		*1.633*	*Cum*
	Section 5-5	2	*4.98*	*0.505*		*5.027*	*Cum*
	Section 6-6	2	*1.22*	*0.563*		*1.369*	*Cum*
	Toe wall	2	*9.12*	*0.150*	*0.600*	*2.736*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**24.36**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH. 34.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*1.598*	*1.269*	*4.607*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*1.269*	*6.662*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*1.069*	*3.877*	*Cum*
	Section 5-5	*2*	*2.86*	*1.748*	*1.269*	*12.668*	*Cum*
	Section 6-6	*2*	*1.42*	*0.930*	*1.069*	*2.823*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.200*	*0.850*	*1.169*	*Cum*
	U/S Floor	*1*	*2.25*	*2.200*	*1.714*	*8.484*	*Cum*
	D/S Floor	*1*	*2.50*	*2.200*	*0.950*	*5.225*	*Cum*
		1	*3.61*	*2.200*	*0.100*	*0.794*	*Cum*
		1	*2.25*	*2.200*	*0.650*	*3.218*	*Cum*
	D/S Key Floor	*1*	*0.93*	*2.200*	*0.650*	*1.323*	*Cum*
	Toe Wall D/S Portion	*1*	*6.90*	*0.750*	*0.900*	*4.658*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						56.86	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.200*	*0.150*	*0.18*	*Cum*
		1	*0.75*	*2.200*	*0.150*	*0.25*	*Cum*
		1	*0.06*	*2.200*	*0.150*	*0.02*	*Cum*
		1	*0.21*	*2.200*	*0.150*	*0.07*	*Cum*
		1	*3.93*	*2.200*	*0.150*	*1.30*	*Cum*
		1	*0.43*	*2.200*	*0.150*	*0.14*	*Cum*
		1	*0.70*	*2.200*	*0.150*	*0.23*	*Cum*
		1	*0.90*	*2.200*	*1.150*	*2.26*	*Cum*
		1	*0.54*	*2.200*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.14*	*1.598*	*0.150*	*0.54*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*0.150*	*0.54*	*Cum*
	Section 5-5	*2*	*2.86*	*1.748*	*0.150*	*1.50*	*Cum*
	Section 6-6	*2*	*1.42*	*0.930*	*0.150*	*0.40*	*Cum*
	Toe Wall D/S Portion	*1*	*6.90*	*0.750*	*0.300*	*1.55*	*Cum*
	Toe Wall D/S Portion	*1*	*6.60*	*0.450*	*0.600*	*1.78*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**12.54**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.91*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.91*	*0.874*	*1.414*	*2.25*	*Cum*
		2	*0.91*	*1.448*	*0.600*	*1.58*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.600*	*0.500*	*1.50*	*Cum*
		2	*2.50*	*0.900*	*0.500*	*2.25*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.540*	*0.300*	*0.55*	*Cum*
		2	*1.71*	*0.780*	*0.500*	*1.33*	*Cum*
	Section 5-5	*2*	*2.81*	*0.450*	*0.450*	*1.14*	*Cum*
		2	*2.81*	*0.874*	*1.414*	*6.95*	*Cum*
		2	*2.81*	*1.448*	*0.500*	*4.07*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.540*	*0.300*	*0.59*	*Cum*
		2	*1.81*	*0.780*	*0.500*	*1.41*	*Cum*
	Floor	*1*	*0.63*	*2.200*	*0.700*	*0.96*	*Cum*
		1	*4.75*	*2.200*	*0.500*	*5.23*	*Cum*
		1	*3.61*	*2.200*	*0.100*	*0.79*	*Cum*
		1	*0.40*	*2.200*	*0.300*	*0.26*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*2.200*	*0.400*	*0.18*	*Cum*
		1	*2.05*	*2.200*	*0.500*	*2.26*	*Cum*
		1	*0.93*	*2.200*	*1.900*	*3.87*	*Cum*
	Crest	*1*	*1.44*	*2.200*	*2.424*	*7.67*	*Cum*
	TOTAL					**47.64**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.05*	*2.200*	*0.150*	*0.35*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*25.97*	*0.450*	*0.050*	*0.58*	*Cum*
	On Abutment Top (Right Side)	*1*	*25.97*	*0.450*	*0.050*	*0.58*	*Cum*
	TOTAL					**1.52**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.15% of M-20	**47.64**	**0.00**	**0.071**	**7850.0**	**560.99**	**Kg**
	Total Weight in Metric Tonne					**0.56**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.91*		*0.450*	*1.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.91*		*1.414*	*5.15*	*Sqm*
		4		*0.874*	*1.414*	*4.94*	*Sqm*
		4	*0.91*		*0.600*	*2.19*	*Sqm*
		4		*1.448*	*0.600*	*3.48*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.300*	*2.05*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.71*		*0.500*	*3.42*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*2.81*		*0.450*	*5.06*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.81*		*1.414*	*15.90*	*Sqm*
		4		*0.874*	*1.414*	*4.94*	*Sqm*
		4	*2.81*		*0.500*	*5.62*	*Sqm*
		4		*1.448*	*0.500*	*2.90*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.300*	*2.17*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.81*		*0.500*	*3.62*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.200*	*0.700*	*3.08*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*2.200*	*0.500*	*2.20*	*Sqm*
		2	*0.40*		*0.300*	*0.24*	*Sqm*
		2		*2.200*	*0.300*	*1.32*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.200*	*0.400*	*1.76*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*2.200*	*0.500*	*2.20*	*Sqm*
		2	*0.93*		*1.900*	*3.52*	*Sqm*
		2		*2.200*	*1.900*	*8.36*	*Sqm*
	Crest	*2*	*1.44*		*2.424*	*6.97*	*Sqm*
		2		*2.200*	*2.424*	*10.67*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.90*		*0.300*	*4.14*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*6.60*		*0.600*	*7.92*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**162.16**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*2.291*		*6.87*	*Sqm*
	TOTAL					**6.87**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*1.600*	*0.300*	**0.72**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*1.600*	*0.150*	**0.72**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.48*	*0.450*		*4.72*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.48*	*0.450*		*4.72*	*Sqm*
	TOTAL					**9.43**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.610		4.61	**Cum**
	Abutment						
	Section 1-1	2	*1.14*	*0.320*		*0.727*	*Cum*
	Section 2-2	2	*2.50*	*0.320*		*1.600*	*Cum*
	Section 3-3	2	*1.95*	*0.210*		*0.819*	*Cum*
	Section 5-5	2	*2.86*	*0.320*		*1.828*	*Cum*
	Section 6-6	2	*1.42*	*0.210*		*0.596*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.90*	*0.150*	*0.600*	*2.070*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**12.52**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL CUM CULVERT OF HEIGHT 1.372 METER AT CH. 1.768 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.23*	*1.873*	*2.307*	*10.647*	*Cum*
	Section 2-2	*2*	*3.00*	*1.570*	*2.307*	*21.732*	*Cum*
	Section 3-3	*2*	*4.72*	*1.450*	*2.107*	*28.841*	*Cum*
	Section 5-5	*2*	*0.54*	*2.023*	*2.307*	*4.994*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*2.107*	*0.588*	*Cum*
	U/S Key Floor	*1*	*0.82*	*0.600*	*0.850*	*0.418*	*Cum*
	U/S Floor	*1*	*2.50*	*0.600*	*2.472*	*3.708*	*Cum*
	D/S Floor	*1*	*1.71*	*0.600*	*1.100*	*1.131*	*Cum*
		1	*5.50*	*0.600*	*0.750*	*2.475*	*Cum*
	D/S Key Floor	*1*	*0.70*	*0.600*	*1.150*	*0.483*	*Cum*
	TOTAL					**75.02**	***Cum***
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*0.08*	*0.600*	*0.150*	*0.01*	*Cum*
		1	*0.35*	*0.600*	*0.150*	*0.03*	*Cum*
		1	*4.44*	*0.600*	*0.150*	*0.40*	*Cum*
		1	*0.49*	*0.600*	*0.150*	*0.04*	*Cum*
		1	*3.95*	*0.600*	*0.150*	*0.36*	*Cum*
		1	*1.12*	*0.600*	*0.150*	*0.10*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.23*	*1.873*	*0.150*	*0.69*	*Cum*
	Section 2-2	*2*	*3.00*	*1.570*	*0.150*	*1.41*	*Cum*
	Section 3-3	*2*	*4.72*	*1.450*	*0.150*	*2.05*	*Cum*
	Section 5-5	*2*	*0.54*	*2.023*	*0.150*	*0.32*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**5.63**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.19*	*0.450*	*0.450*	*0.48*	*Cum*
		2	*1.19*	*1.012*	*1.872*	*4.50*	*Cum*
		2	*1.19*	*1.723*	*0.750*	*3.07*	*Cum*
	Section 2-2	*2*	*3.00*	*0.820*	*0.500*	*2.46*	*Cum*
		2	*3.00*	*0.970*	*0.500*	*2.91*	*Cum*
		2	*3.00*	*1.270*	*1.400*	*10.67*	*Cum*
	Section 3-3	*2*	*4.72*	*0.820*	*0.500*	*3.87*	*Cum*
		2	*4.72*	*0.910*	*0.300*	*2.58*	*Cum*
		2	*4.72*	*1.150*	*1.600*	*17.37*	*Cum*
	Section 5-5	*2*	*0.49*	*0.450*	*0.450*	*0.20*	*Cum*
		2	*0.49*	*1.012*	*1.872*	*1.86*	*Cum*
		2	*0.49*	*1.723*	*0.750*	*1.27*	*Cum*
	Section 6-6	*2*	*0.45*	*0.450*	*0.450*	*0.18*	*Cum*
		2	*0.45*	*0.540*	*0.300*	*0.15*	*Cum*
		2	*0.45*	*0.780*	*0.500*	*0.35*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
		1	*1.04*	*0.600*	*0.500*	*0.31*	*Cum*
		1	*0.20*	*0.600*	*0.625*	*0.08*	*Cum*
		1	*4.21*	*0.600*	*0.750*	*1.90*	*Cum*
		1	*0.27*	*0.600*	*0.350*	*0.06*	*Cum*
		1	*0.20*	*0.600*	*0.500*	*0.06*	*Cum*
		1	*5.30*	*0.600*	*0.600*	*1.91*	*Cum*
		1	*0.70*	*0.600*	*1.000*	*0.42*	*Cum*
	Crest	*1*	*0.96*	*0.600*	*1.582*	*0.91*	*Cum*
	TOTAL					**55.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*0.600*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*4.65*	*0.450*	*0.050*	*0.10*	*Cum*
	On Abutment Top (Right Side)	*1*	*4.65*	*0.450*	*0.050*	*0.10*	*Cum*
	Slab Bridge						
	Slab	*1*	*1.40*	*5.500*	*0.328*	*2.53*	*Cum*
	Wearing coat	*1*	*1.40*	*4.500*	*0.070*	*0.44*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
	300 mm thick pedastal	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**7.26**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*1.86*		*1.578*	*91.0*	*Kg*
a2	*10*	*7*	*5.90*		*0.616*	*25.5*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*1.78*		*0.616*	*20.8*	*Kg*
a5	*10*	*6*	*5.75*		*0.616*	*21.3*	*Kg*
x1	*12*	*24*	*2.50*		*0.888*	*53.3*	*Kg*
x2	*12*	*24*	*1.27*		*0.888*	*27.0*	*Kg*
x3	*12*	*24*	*1.30*		*0.888*	*27.7*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**55.10**	**0.003**	**0.165**	**7850.0**	**1297.7**	**Kg**
	Total Reinforcement Steel (in kg)					*1570.9*	*Kg*
	Total Weight in Metric Tonne					**1.57**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.19*		*0.450*	*2.14*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.19*		*1.872*	*8.90*	*Sqm*
		4		*1.012*	*1.872*	*7.57*	*Sqm*
		4	*1.19*		*0.750*	*3.56*	*Sqm*
		4		*1.723*	*0.750*	*5.17*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.970*	*0.500*	*1.94*	*Sqm*
		4	*3.00*		*1.400*	*16.80*	*Sqm*
		4		*1.270*	*1.400*	*7.11*	*Sqm*
	Section 3-3	*4*	*4.72*		*0.500*	*9.44*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*4.72*		*0.300*	*5.66*	*Sqm*
		4		*0.910*	*0.300*	*1.09*	*Sqm*
		4	*4.72*		*1.600*	*30.21*	*Sqm*
		4		*1.150*	*1.600*	*7.36*	*Sqm*
	Section 5-5	*4*	*0.49*		*0.450*	*0.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.49*		*1.872*	*3.68*	*Sqm*
		4		*1.012*	*1.872*	*7.57*	*Sqm*
		4	*0.49*		*0.750*	*1.47*	*Sqm*
		4		*1.723*	*0.750*	*5.17*	*Sqm*
	Section 6-6	*4*	*0.45*		*0.450*	*0.81*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.45*		*0.300*	*0.54*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.45*		*0.500*	*0.90*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
		2	*1.04*		*0.500*	*1.04*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.20*		*0.625*	*0.25*	*Sqm*
		2		*0.600*	*0.625*	*0.75*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*4.21*		*0.750*	*6.32*	*Sqm*
		2		*0.600*	*0.750*	*0.90*	*Sqm*
		2	*0.27*		*0.350*	*0.19*	*Sqm*
		2		*0.600*	*0.350*	*0.42*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*5.30*		*0.600*	*6.36*	*Sqm*
		2		*0.600*	*0.600*	*0.72*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*0.600*	*1.000*	*1.20*	*Sqm*
	Crest	*2*	*0.96*		*1.582*	*3.03*	*Sqm*
		2		*0.600*	*1.582*	*1.90*	*Sqm*
	Bridge Slab	*2*	*1.40*		*0.33*	*0.92*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*1.40*	*5.50*		*7.70*	*Sqm*
	Dirt Wall	*2*	*0.40*		*0.30*	*0.24*	*Sqm*
		2		5.50	0.30	*3.30*	*Sqm*
	TOTAL					**191.26**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*4.65*	*0.450*		*2.09*	*Sqm*
	On Abutment Top (Right Side)	*1*	*4.65*	*0.450*		*2.09*	*Sqm*
	TOTAL					**4.19**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		2.708		2.71	**Cum**
	Abutment						
	Section 1-1	2	1.23	*1.128*		*2.779*	*Cum*
	Section 2-2	2	3.00	*0.505*		*3.030*	*Cum*
	Section 3-3	2	4.72	*0.410*		*3.870*	*Cum*
	Section 5-5	2	0.54	*1.128*		*1.207*	*Cum*
	Section 6-6	2	0.15	*0.410*		*0.123*	*Cum*
	D/S protection	2					
	TOTAL					**13.72**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.4.084 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.97*	*1.416*	*1.501*	*4.125*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*1.501*	*7.880*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*1.301*	*4.719*	*Cum*
	Section 5-5	*2*	*2.04*	*1.566*	*1.501*	*9.609*	*Cum*
	Section 6-6	*2*	*0.82*	*0.930*	*1.301*	*1.984*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.520*	*0.850*	*0.276*	*Cum*
	U/S Floor	*1*	*2.00*	*0.520*	*1.460*	*1.518*	*Cum*
	D/S Floor	*1*	*2.50*	*0.520*	*0.850*	*1.105*	*Cum*
		1	*2.25*	*0.520*	*0.650*	*0.761*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.520*	*0.850*	*0.276*	*Cum*
	Toe Wall D/S Portion	*1*	*4.02*	*0.750*	*0.900*	*2.714*	*Cum*
	TOTAL					**34.97**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.520*	*0.150*	*0.04*	*Cum*
		1	*0.78*	*0.520*	*0.150*	*0.06*	*Cum*
		1	*3.78*	*0.520*	*0.150*	*0.29*	*Cum*
		1	*0.28*	*0.520*	*0.150*	*0.02*	*Cum*
		1	*0.99*	*0.520*	*0.150*	*0.08*	*Cum*
		1	*0.78*	*0.520*	*0.150*	*0.06*	*Cum*
		1	*0.54*	*0.520*	*0.150*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.97*	*1.416*	*0.150*	*0.41*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*0.150*	*0.54*	*Cum*
	Section 5-5	*2*	*2.04*	*1.566*	*0.150*	*0.96*	*Cum*
	Section 6-6	*2*	*0.82*	*0.930*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.02*	*0.750*	*0.300*	*0.90*	*Cum*
	Toe Wall D/S Portion	*1*	*3.72*	*0.450*	*0.600*	*1.00*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.25*	*0.600*	*0.300*	*0.23*	*Cum*
	TOTAL					**5.67**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.82*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.82*	*0.783*	*1.110*	*1.43*	*Cum*
		2	*0.82*	*1.266*	*0.600*	*1.25*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.600*	*0.500*	*1.50*	*Cum*
		2	*2.50*	*0.900*	*0.500*	*2.25*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.540*	*0.300*	*0.55*	*Cum*
		2	*1.71*	*0.780*	*0.500*	*1.33*	*Cum*
	Section 5-5	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.783*	*1.110*	*3.48*	*Cum*
		2	*2.00*	*1.266*	*0.500*	*2.53*	*Cum*
	Section 6-6	*2*	*1.29*	*0.450*	*0.450*	*0.52*	*Cum*
		2	*1.29*	*0.540*	*0.300*	*0.42*	*Cum*
		2	*1.29*	*0.780*	*0.500*	*1.00*	*Cum*
	Floor	*1*	*0.63*	*0.520*	*0.700*	*0.23*	*Cum*
		1	*4.50*	*0.520*	*0.500*	*1.17*	*Cum*
		1	*0.25*	*0.520*	*0.200*	*0.03*	*Cum*
		1	*0.20*	*0.520*	*0.400*	*0.04*	*Cum*
		1	*2.05*	*0.520*	*0.500*	*0.53*	*Cum*
		1	*0.63*	*0.520*	*0.700*	*0.23*	*Cum*
	Crest	*1*	*0.73*	*0.520*	*0.825*	*0.31*	*Cum*
	TOTAL					**21.64**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.520*	*0.150*	*0.05*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.82*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.82*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.44**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**21.64**	**0.00**	**0.065**	**7850.0**	**509.71**	**Kg**
	Total Weight in Metric Tonne					**0.51**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.82*		*0.450*	*1.48*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.82*		*1.110*	*3.64*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.82*		*0.600*	*1.97*	*Sqm*
		4		*1.266*	*0.600*	*3.04*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.300*	*2.05*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.71*		*0.500*	*3.42*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*1.110*	*8.88*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*2.00*		*0.500*	*4.00*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 6-6	*4*	*1.29*		*0.450*	*2.31*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.29*		*0.300*	*1.54*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.29*		*0.500*	*2.57*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.520*	*0.700*	*0.73*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*0.520*	*0.500*	*0.52*	*Sqm*
		2	*0.25*		*0.200*	*0.10*	*Sqm*
		2		*0.520*	*0.200*	*0.21*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.520*	*0.400*	*0.42*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*0.520*	*0.500*	*0.52*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.520*	*0.700*	*0.73*	*Sqm*
	Crest	*2*	*0.73*		*0.825*	*1.20*	*Sqm*
		2		*0.520*	*0.825*	*0.86*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.02*		*0.300*	*2.41*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.72*		*0.600*	*4.46*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.300*	*1.50*	*Sqm*
		4		*0.600*	*0.300*	*0.72*	*Sqm*
	TOTAL					**100.86**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.25*	*1.691*		*4.23*	*Sqm*
	TOTAL					**4.23**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.82*	*0.450*		*3.97*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.82*	*0.450*		*3.97*	*Sqm*
	TOTAL					**7.94**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.433		1.43	**Cum**
	Abutment						
	Section 1-1	2	*0.97*	*0.412*		*0.800*	*Cum*
	Section 2-2	2	*2.50*	*0.451*		*2.253*	*Cum*
	Section 3-3	2	*1.95*	*0.408*		*1.593*	*Cum*
	Section 5-5	2	*2.04*	*0.412*		*1.684*	*Cum*
	Section 6-6	2	*0.82*	*0.408*		*0.670*	*Cum*
	Toe wall	2	*4.02*	*0.150*	*0.600*	*1.206*	*Cum*
		2	*1.25*	0.150	*0.600*	*0.225*	*Cum*
	TOTAL					**9.86**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KAILASHPUR SUB DY.						
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.1.575 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.96*	*1.504*	*1.257*	*3.634*	*Cum*
	Section 2-2	*2*	*2.50*	*1.230*	*1.257*	*7.731*	*Cum*
	Section 3-3	*2*	*2.20*	*1.110*	*1.057*	*5.162*	*Cum*
	Section 5-5	*2*	*2.66*	*1.654*	*1.257*	*11.071*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*1.057*	*2.558*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.300*	*0.850*	*1.222*	*Cum*
	U/S Floor	*1*	*2.00*	*2.300*	*1.307*	*6.012*	*Cum*
	D/S Floor	*1*	*2.50*	*2.300*	*0.850*	*4.888*	*Cum*
		1	*2.50*	*2.300*	*0.650*	*3.738*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.300*	*0.850*	*1.222*	*Cum*
	Toe Wall D/S Portion	*1*	*6.70*	*0.750*	*0.900*	*4.523*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
	TOTAL					**53.56**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.300*	*0.150*	*0.19*	*Cum*
		1	*0.78*	*2.300*	*0.150*	*0.27*	*Cum*
		1	*4.07*	*2.300*	*0.150*	*1.40*	*Cum*
		1	*0.28*	*2.300*	*0.150*	*0.10*	*Cum*
		1	*0.95*	*2.300*	*0.150*	*0.33*	*Cum*
		1	*0.78*	*2.300*	*0.150*	*0.27*	*Cum*
		1	*0.54*	*2.300*	*0.150*	*0.19*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.96*	*1.504*	*0.150*	*0.43*	*Cum*
	Section 2-2	*2*	*2.50*	*1.230*	*0.150*	*0.92*	*Cum*
	Section 3-3	*2*	*2.20*	*1.110*	*0.150*	*0.73*	*Cum*
	Section 5-5	*2*	*2.66*	*1.654*	*0.150*	*1.32*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*0.150*	*0.36*	*Cum*
	Toe Wall D/S Portion	*1*	*6.70*	*0.750*	*0.300*	*1.51*	*Cum*
	Toe Wall D/S Portion	*1*	*6.40*	*0.450*	*0.600*	*1.73*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.83**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.81*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.81*	*0.827*	*1.257*	*1.69*	*Cum*
		2	*0.81*	*1.354*	*0.500*	*1.10*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.690*	*0.800*	*2.76*	*Cum*
		2	*2.50*	*1.080*	*0.500*	*2.70*	*Cum*
	Section 3-3	*2*	*1.87*	*0.450*	*0.450*	*0.76*	*Cum*
		2	*1.87*	*0.630*	*0.600*	*1.41*	*Cum*
		2	*1.87*	*0.960*	*0.500*	*1.80*	*Cum*
	Section 5-5	*2*	*2.62*	*0.450*	*0.450*	*1.06*	*Cum*
		2	*2.62*	*0.827*	*1.257*	*5.44*	*Cum*
		2	*2.62*	*1.354*	*0.500*	*3.55*	*Cum*
	Section 6-6	*2*	*1.65*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.65*	*0.630*	*0.600*	*1.24*	*Cum*
		2	*1.65*	*0.960*	*0.500*	*1.58*	*Cum*
	Floor	*1*	*0.63*	*2.300*	*0.700*	*1.01*	*Cum*
		1	*4.50*	*2.300*	*0.500*	*5.18*	*Cum*
		1	*0.50*	*2.300*	*0.200*	*0.23*	*Cum*
		1	*0.20*	*2.300*	*0.400*	*0.18*	*Cum*
		1	*2.30*	*2.300*	*0.500*	*2.65*	*Cum*
		1	*0.63*	*2.300*	*0.700*	*1.01*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.73*	*2.300*	*0.847*	*1.43*	*Cum*
	TOTAL					**38.76**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.300*	*0.150*	*0.21*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.18*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.18*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.67**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**38.76**	**0.00**	**0.116**	**7850.0**	**912.85**	**Kg**
	Total Weight in Metric Tonne					**0.91**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.81*		*0.450*	*1.46*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.81*		*1.257*	*4.08*	*Sqm*
		4		*0.827*	*1.257*	*4.16*	*Sqm*
		4	*0.81*		*0.500*	*1.62*	*Sqm*
		4		*1.354*	*0.500*	*2.71*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.800*	*8.00*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Section 3-3	*4*	*1.87*		*0.450*	*3.37*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.87*		*0.600*	*4.49*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*1.87*		*0.500*	*3.74*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Section 5-5	*4*	*2.62*		*0.450*	*4.71*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.62*		*1.257*	*13.17*	*Sqm*
		4		*0.827*	*1.257*	*4.16*	*Sqm*
		4	*2.62*		*0.500*	*5.24*	*Sqm*
		4		*1.354*	*0.500*	*2.71*	*Sqm*
	Section 6-6	*4*	*1.65*		*0.450*	*2.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.65*		*0.600*	*3.95*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*1.65*		*0.500*	*3.29*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.300*	*0.700*	*3.22*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*2.300*	*0.500*	*2.30*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*2.300*	*0.200*	*0.92*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.300*	*0.400*	*1.84*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*2.300*	*0.500*	*2.30*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.300*	*0.700*	*3.22*	*Sqm*
	Crest	*2*	*0.73*		*0.847*	*1.24*	*Sqm*
		2		*2.300*	*0.847*	*3.90*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.70*		*0.300*	*4.02*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.40*		*0.600*	*7.68*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**146.20**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.232*		*8.93*	*Sqm*
	TOTAL					**8.93**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.700*	*0.300*	**1.02**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*1.700*	*0.150*	**1.02**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.18*	*0.450*		*4.58*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.18*	*0.450*		*4.58*	*Sqm*
	TOTAL					**9.16**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.222		2.22	**Cum**
	Abutment						
	Section 1-1	2	*0.96*	*0.367*		*0.705*	*Cum*
	Section 2-2	2	*2.50*	*0.367*		*1.835*	*Cum*
	Section 3-3	2	*2.20*	*0.367*		*1.615*	*Cum*
	Section 5-5	2	*2.66*	*0.367*		*1.954*	*Cum*
	Section 6-6	2	*1.09*	*0.367*		*0.800*	*Cum*
	Toe wall	2	*6.70*	*0.150*	*0.600*	*2.010*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**11.50**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.2.250 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.99*	*1.566*	*1.160*	*3.593*	*Cum*
	Section 2-2	*2*	*2.50*	*1.200*	*1.160*	*6.960*	*Cum*
	Section 3-3	*2*	*2.20*	*1.080*	*0.960*	*4.562*	*Cum*
	Section 5-5	*2*	*2.54*	*1.716*	*1.160*	*10.120*	*Cum*
	Section 6-6	*2*	*1.05*	*1.080*	*0.960*	*2.167*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.050*	*0.850*	*1.089*	*Cum*
	U/S Floor	*1*	*2.00*	*2.050*	*1.460*	*5.986*	*Cum*
	D/S Floor	*1*	*2.50*	*2.050*	*0.850*	*4.356*	*Cum*
		1	*2.50*	*2.050*	*0.650*	*3.331*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.050*	*0.850*	*1.089*	*Cum*
	Toe Wall D/S Portion	*1*	*6.30*	*0.750*	*0.900*	*4.253*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
	TOTAL					**49.08**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.050*	*0.150*	*0.17*	*Cum*
		1	*0.78*	*2.050*	*0.150*	*0.24*	*Cum*
		1	*4.07*	*2.050*	*0.150*	*1.25*	*Cum*
		1	*0.28*	*2.050*	*0.150*	*0.09*	*Cum*
		1	*0.95*	*2.050*	*0.150*	*0.29*	*Cum*
		1	*0.78*	*2.050*	*0.150*	*0.24*	*Cum*
		1	*0.54*	*2.050*	*0.150*	*0.17*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.566*	*0.150*	*0.46*	*Cum*
	Section 2-2	*2*	*2.50*	*1.200*	*0.150*	*0.90*	*Cum*
	Section 3-3	*2*	*2.20*	*1.080*	*0.150*	*0.71*	*Cum*
	Section 5-5	*2*	*2.54*	*1.716*	*0.150*	*1.31*	*Cum*
	Section 6-6	*2*	*1.05*	*1.080*	*0.150*	*0.34*	*Cum*
	Toe Wall D/S Portion	*1*	*6.30*	*0.750*	*0.300*	*1.42*	*Cum*
	Toe Wall D/S Portion	*1*	*6.00*	*0.450*	*0.600*	*1.62*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**10.15**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.84*	*0.450*	*0.450*	*0.34*	*Cum*
		2	*0.84*	*0.858*	*1.360*	*1.96*	*Cum*
		2	*0.84*	*1.416*	*0.500*	*1.19*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.675*	*0.750*	*2.53*	*Cum*
		2	*2.50*	*1.050*	*0.500*	*2.63*	*Cum*
	Section 3-3	*2*	*1.89*	*0.450*	*0.450*	*0.76*	*Cum*
		2	*1.89*	*0.615*	*0.550*	*1.28*	*Cum*
		2	*1.89*	*0.930*	*0.500*	*1.75*	*Cum*
	Section 5-5	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.858*	*1.360*	*5.83*	*Cum*
		2	*2.50*	*1.416*	*0.500*	*3.54*	*Cum*
	Section 6-6	*2*	*1.63*	*0.450*	*0.450*	*0.66*	*Cum*
		2	*1.63*	*0.615*	*0.550*	*1.10*	*Cum*
		2	*1.63*	*0.930*	*0.500*	*1.52*	*Cum*
	Floor	*1*	*0.63*	*2.050*	*0.700*	*0.90*	*Cum*
		1	*4.50*	*2.050*	*0.500*	*4.61*	*Cum*
		1	*0.50*	*2.050*	*0.200*	*0.20*	*Cum*
		1	*0.20*	*2.050*	*0.400*	*0.16*	*Cum*
		1	*2.30*	*2.050*	*0.500*	*2.36*	*Cum*
		1	*0.63*	*2.050*	*0.700*	*0.90*	*Cum*
	Crest	*1*	*0.75*	*2.050*	*0.970*	*1.50*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**37.73**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.050*	*0.150*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.04*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.04*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.64**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**37.73**	**0.00**	**0.113**	**7850.0**	**888.63**	**Kg**
	Total Weight in Metric Tonne					**0.89**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.84*		*0.450*	*1.51*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.84*		*1.360*	*4.56*	*Sqm*
		4		*0.858*	*1.360*	*4.67*	*Sqm*
		4	*0.84*		*0.500*	*1.68*	*Sqm*
		4		*1.416*	*0.500*	*2.83*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.750*	*7.50*	*Sqm*
		4		*0.675*	*0.750*	*2.03*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.050*	*0.500*	*2.10*	*Sqm*
	Section 3-3	*4*	*1.89*		*0.450*	*3.39*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.89*		*0.550*	*4.15*	*Sqm*
		4		*0.615*	*0.550*	*1.35*	*Sqm*
		4	*1.89*		*0.500*	*3.77*	*Sqm*
		4		*0.930*	*0.500*	*1.86*	*Sqm*
	Section 5-5	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*1.360*	*13.59*	*Sqm*
		4		*0.858*	*1.360*	*4.67*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.416*	*0.500*	*2.83*	*Sqm*
	Section 6-6	*4*	*1.63*		*0.450*	*2.93*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.63*		*0.550*	*3.59*	*Sqm*
		4		*0.615*	*0.550*	*1.35*	*Sqm*
		4	*1.63*		*0.500*	*3.26*	*Sqm*
		4		*0.930*	*0.500*	*1.86*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.050*	*0.700*	*2.87*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*2.050*	*0.500*	*2.05*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*2.050*	*0.200*	*0.82*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.050*	*0.400*	*1.64*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*2.050*	*0.500*	*2.05*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.050*	*0.700*	*2.87*	*Sqm*
	Crest	*2*	*0.75*		*0.970*	*1.46*	*Sqm*
		2		*2.050*	*0.970*	*3.98*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.30*		*0.300*	*3.78*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.00*		*0.600*	*7.20*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**143.47**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.142*		*7.50*	*Sqm*
	TOTAL					**7.50**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*1.450*	*0.300*	**0.76**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*1.450*	*0.150*	**0.76**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.04*	*0.450*		*4.52*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.04*	*0.450*		*4.52*	*Sqm*
	TOTAL					**9.03**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.586		2.59	**Cum**
	Abutment						
	Section 1-1	2	*0.99*	*0.307*		*0.606*	*Cum*
	Section 2-2	2	*2.50*	*0.307*		*1.533*	*Cum*
	Section 3-3	2	*2.20*	*0.307*		*1.349*	*Cum*
	Section 5-5	2	*2.54*	*0.307*		*1.559*	*Cum*
	Section 6-6	2	*1.05*	*0.307*		*0.641*	*Cum*
	Toe wall	2	*6.30*	*0.150*	*0.600*	*1.890*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**10.48**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.5.400 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*1.458*	*1.367*	*3.896*	*Cum*
	Section 2-2	*2*	*2.50*	*1.092*	*1.367*	*7.464*	*Cum*
	Section 3-3	*2*	*2.20*	*0.972*	*1.167*	*4.991*	*Cum*
	Section 5-5	*2*	*2.57*	*1.608*	*1.367*	*11.281*	*Cum*
	Section 6-6	*2*	*1.06*	*0.972*	*1.167*	*2.412*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.500*	*0.850*	*0.797*	*Cum*
	U/S Floor	*1*	*2.00*	*1.500*	*1.460*	*4.380*	*Cum*
	D/S Floor	*1*	*2.50*	*1.500*	*0.850*	*3.188*	*Cum*
		1	*2.50*	*1.500*	*0.650*	*2.438*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.500*	*0.850*	*0.797*	*Cum*
	Toe Wall D/S Portion	*1*	*5.57*	*0.750*	*0.900*	*3.760*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.25*	*0.600*	*0.750*	*1.125*	*Cum*
	TOTAL					**46.53**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.500*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*1.500*	*0.150*	*0.18*	*Cum*
		1	*4.07*	*1.500*	*0.150*	*0.92*	*Cum*
		1	*0.28*	*1.500*	*0.150*	*0.06*	*Cum*
		1	*0.95*	*1.500*	*0.150*	*0.21*	*Cum*
		1	*0.78*	*1.500*	*0.150*	*0.18*	*Cum*
		1	*0.54*	*1.500*	*0.150*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.98*	*1.458*	*0.150*	*0.43*	*Cum*
	Section 2-2	*2*	*2.50*	*1.092*	*0.150*	*0.82*	*Cum*
	Section 3-3	*2*	*2.20*	*0.972*	*0.150*	*0.64*	*Cum*
	Section 5-5	*2*	*2.57*	*1.608*	*0.150*	*1.24*	*Cum*
	Section 6-6	*2*	*1.06*	*0.972*	*0.150*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*5.57*	*0.750*	*0.300*	*1.25*	*Cum*
	Toe Wall D/S Portion	*1*	*5.27*	*0.450*	*0.600*	*1.42*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.600*	*0.150*	*0.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.300*	*0.600*	*0.45*	*Cum*
	TOTAL					**8.57**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.80*	*0.450*	*0.450*	*0.32*	*Cum*
		2	*0.80*	*0.804*	*1.180*	*1.52*	*Cum*
		2	*0.80*	*1.308*	*0.500*	*1.05*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.621*	*0.570*	*1.77*	*Cum*
		2	*2.50*	*0.942*	*0.500*	*2.36*	*Cum*
	Section 3-3	*2*	*1.94*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.94*	*0.561*	*0.370*	*0.80*	*Cum*
		2	*1.94*	*0.822*	*0.500*	*1.59*	*Cum*
	Section 5-5	*2*	*2.52*	*0.450*	*0.450*	*1.02*	*Cum*
		2	*2.52*	*0.804*	*1.180*	*4.79*	*Cum*
		2	*2.52*	*1.308*	*0.500*	*3.30*	*Cum*
	Section 6-6	*2*	*1.55*	*0.450*	*0.450*	*0.63*	*Cum*
		2	*1.55*	*0.561*	*0.370*	*0.64*	*Cum*
		2	*1.55*	*0.822*	*0.500*	*1.27*	*Cum*
	Floor	*1*	*0.63*	*1.500*	*0.700*	*0.66*	*Cum*
		1	*4.50*	*1.500*	*0.500*	*3.38*	*Cum*
		1	*0.50*	*1.500*	*0.200*	*0.15*	*Cum*
		1	*0.20*	*1.500*	*0.400*	*0.12*	*Cum*
		1	*2.30*	*1.500*	*0.500*	*1.73*	*Cum*
		1	*0.63*	*1.500*	*0.700*	*0.66*	*Cum*
	Crest	*1*	*0.74*	*1.500*	*0.870*	*0.96*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**30.50**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.500*	*0.150*	*0.14*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.92*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.92*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.58**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**30.50**	**0.00**	**0.091**	**7850.0**	**718.25**	**Kg**
	Total Weight in Metric Tonne					**0.72**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.80*		*0.450*	*1.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.80*		*1.180*	*3.77*	*Sqm*
		4		*0.804*	*1.180*	*3.79*	*Sqm*
		4	*0.80*		*0.500*	*1.60*	*Sqm*
		4		*1.308*	*0.500*	*2.62*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.570*	*5.70*	*Sqm*
		4		*0.621*	*0.570*	*1.42*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.942*	*0.500*	*1.88*	*Sqm*
	Section 3-3	*4*	*1.94*		*0.450*	*3.49*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.94*		*0.370*	*2.87*	*Sqm*
		4		*0.561*	*0.370*	*0.83*	*Sqm*
		4	*1.94*		*0.500*	*3.88*	*Sqm*
		4		*0.822*	*0.500*	*1.64*	*Sqm*
	Section 5-5	*4*	*2.52*		*0.450*	*4.54*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.52*		*1.180*	*11.90*	*Sqm*
		4		*0.804*	*1.180*	*3.79*	*Sqm*
		4	*2.52*		*0.500*	*5.04*	*Sqm*
		4		*1.308*	*0.500*	*2.62*	*Sqm*
	Section 6-6	*4*	*1.55*		*0.450*	*2.79*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.55*		*0.370*	*2.29*	*Sqm*
		4		*0.561*	*0.370*	*0.83*	*Sqm*
		4	*1.55*		*0.500*	*3.10*	*Sqm*
		4		*0.822*	*0.500*	*1.64*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.500*	*0.700*	*2.10*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*1.500*	*0.500*	*1.50*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*1.500*	*0.200*	*0.60*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.500*	*0.400*	*1.20*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.500*	*0.500*	*1.50*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.500*	*0.700*	*2.10*	*Sqm*
	Crest	*2*	*0.74*		*0.870*	*1.28*	*Sqm*
		2		*1.500*	*0.870*	*2.61*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.57*		*0.300*	*3.34*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.27*		*0.600*	*6.32*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.150*	*0.75*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.600*	*3.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**124.32**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.25*	*1.817*		*4.54*	*Sqm*
	TOTAL					**4.54**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.25*	*0.900*	*0.300*	**0.34**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.25*	*0.900*	*0.150*	**0.34**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.92*	*0.450*		*4.46*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.92*	*0.450*		*4.46*	*Sqm*
	TOTAL					**8.92**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.232		2.23	**Cum**
	Abutment						
	Section 1-1	2	*0.98*	*0.444*		*0.868*	*Cum*
	Section 2-2	2	*2.50*	*0.437*		*2.185*	*Cum*
	Section 3-3	2	*2.20*	*0.408*		*1.795*	*Cum*
	Section 5-5	2	*2.57*	*0.444*		*2.279*	*Cum*
	Section 6-6	2	*1.06*	*0.408*		*0.867*	*Cum*
	Toe wall	2	*5.57*	*0.150*	*0.600*	*1.671*	*Cum*
		2	*1.25*	0.150	*0.600*	*0.225*	*Cum*
	TOTAL					**12.12**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.6.000 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.96*	*1.422*	*1.117*	*3.048*	*Cum*
	Section 2-2	*2*	*2.50*	*1.056*	*1.117*	*5.898*	*Cum*
	Section 3-3	*2*	*1.70*	*0.936*	*0.917*	*2.918*	*Cum*
	Section 5-5	*2*	*2.65*	*1.572*	*1.117*	*9.301*	*Cum*
	Section 6-6	*2*	*1.06*	*0.936*	*0.917*	*1.825*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.250*	*0.850*	*0.664*	*Cum*
	U/S Floor	*1*	*1.14*	*1.250*	*1.170*	*1.667*	*Cum*
	D/S Floor	*1*	*4.50*	*1.250*	*0.650*	*3.656*	*Cum*
		1	*2.00*	*1.250*	*0.500*	*1.250*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.250*	*0.850*	*0.664*	*Cum*
	Toe Wall D/S Portion	*1*	*4.78*	*0.750*	*0.900*	*3.227*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
	TOTAL					**35.47**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.250*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*1.250*	*0.150*	*0.15*	*Cum*
		1	*4.07*	*1.250*	*0.150*	*0.76*	*Cum*
		1	*0.28*	*1.250*	*0.150*	*0.05*	*Cum*
		1	*0.45*	*1.250*	*0.150*	*0.08*	*Cum*
		1	*0.78*	*1.250*	*0.150*	*0.15*	*Cum*
		1	*0.54*	*1.250*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.96*	*1.422*	*0.150*	*0.41*	*Cum*
	Section 2-2	*2*	*2.50*	*1.056*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*1.70*	*0.936*	*0.150*	*0.48*	*Cum*
	Section 5-5	*2*	*2.65*	*1.572*	*0.150*	*1.25*	*Cum*
	Section 6-6	*2*	*1.06*	*0.936*	*0.150*	*0.30*	*Cum*
	Toe Wall D/S Portion	*1*	*4.78*	*0.750*	*0.300*	*1.08*	*Cum*
	Toe Wall D/S Portion	*1*	*4.48*	*0.450*	*0.600*	*1.21*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**7.72**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.82*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.82*	*0.786*	*1.120*	*1.45*	*Cum*
		2	*0.82*	*1.272*	*0.500*	*1.05*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.603*	*0.510*	*1.54*	*Cum*
		2	*2.50*	*0.906*	*0.500*	*2.27*	*Cum*
	Section 3-3	*2*	*1.83*	*0.450*	*0.450*	*0.74*	*Cum*
		2	*1.83*	*0.543*	*0.310*	*0.61*	*Cum*
		2	*1.83*	*0.786*	*0.500*	*1.44*	*Cum*
	Section 5-5	*2*	*2.59*	*0.450*	*0.450*	*1.05*	*Cum*
		2	*2.59*	*0.786*	*1.120*	*4.56*	*Cum*
		2	*2.59*	*1.272*	*0.500*	*3.29*	*Cum*
	Section 6-6	*2*	*1.34*	*0.450*	*0.450*	*0.54*	*Cum*
		2	*1.34*	*0.543*	*0.310*	*0.45*	*Cum*
		2	*1.34*	*0.786*	*0.500*	*1.05*	*Cum*
	Floor	*1*	*0.63*	*1.250*	*0.700*	*0.55*	*Cum*
		1	*4.42*	*1.250*	*0.500*	*2.76*	*Cum*
		1	*0.20*	*1.250*	*0.425*	*0.11*	*Cum*
		1	*0.50*	*1.250*	*0.200*	*0.12*	*Cum*
		1	*1.80*	*1.250*	*0.500*	*1.13*	*Cum*
		1	*0.63*	*1.250*	*0.700*	*0.55*	*Cum*
	Crest	*1*	*0.73*	*1.250*	*0.830*	*0.76*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**27.36**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.250*	*0.150*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.13*	*0.450*	*0.050*	*0.21*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.13*	*0.450*	*0.050*	*0.21*	*Cum*
	TOTAL					**0.52**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**27.36**	**0.00**	**0.082**	**7850.0**	**644.21**	**Kg**
	Total Weight in Metric Tonne					**0.64**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.82*		*0.450*	*1.48*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.82*		*1.120*	*3.69*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*0.82*		*0.500*	*1.65*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.510*	*5.10*	*Sqm*
		4		*0.603*	*0.510*	*1.23*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.906*	*0.500*	*1.81*	*Sqm*
	Section 3-3	*4*	*1.83*		*0.450*	*3.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.83*		*0.310*	*2.26*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.83*		*0.500*	*3.65*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Section 5-5	*4*	*2.59*		*0.450*	*4.66*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.59*		*1.120*	*11.60*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*2.59*		*0.500*	*5.18*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 6-6	*4*	*1.34*		*0.450*	*2.41*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.34*		*0.310*	*1.66*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.34*		*0.500*	*2.68*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.250*	*0.700*	*1.75*	*Sqm*
		2	*4.42*		*0.500*	*4.42*	*Sqm*
		2		*1.250*	*0.500*	*1.25*	*Sqm*
		2	*0.20*		*0.425*	*0.17*	*Sqm*
		2		*1.250*	*0.425*	*1.06*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*1.250*	*0.200*	*0.50*	*Sqm*
		2	*1.8*		*0.500*	*1.80*	*Sqm*
		2		*1.25*	*0.500*	*1.25*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.250*	*0.700*	*1.75*	*Sqm*
	Crest	*2*	*0.73*		*0.830*	*1.21*	*Sqm*
		2		*1.250*	*0.830*	*2.08*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.78*		*0.300*	*2.87*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.48*		*0.600*	*5.38*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**116.54**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.709*		*5.13*	*Sqm*
	TOTAL					**5.13**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.650*	*0.300*	**0.29**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.650*	*0.150*	**0.29**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.13*	*0.450*		*4.11*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.13*	*0.450*		*4.11*	*Sqm*
	TOTAL					**8.22**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.052		2.05	**Cum**
	Abutment						
	Section 1-1	2	*0.96*	*0.281*		*0.538*	*Cum*
	Section 2-2	2	*2.50*	*0.281*		*1.403*	*Cum*
	Section 3-3	2	*1.70*	*0.273*		*0.928*	*Cum*
	Section 5-5	2	*2.65*	*0.281*		*1.486*	*Cum*
	Section 6-6	2	*1.06*	*0.273*		*0.580*	*Cum*
	Toe wall	2	*4.78*	*0.150*	*0.600*	*1.434*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**8.69**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 7.175 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.41*	*1.964*	*1.957*	*10.858*	*Cum*
	Section 2-2	*2*	*3.25*	*1.570*	*1.957*	*19.971*	*Cum*
	Section 3-3	*2*	*4.45*	*1.450*	*1.757*	*22.674*	*Cum*
	Section 5-5	*2*	*1.93*	*2.114*	*1.807*	*14.753*	*Cum*
	Section 6-6	*2*	*0.45*	*0.930*	*1.757*	*1.471*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*3.00*	*5.500*	*2.624*	*43.296*	*Cum*
	D/S Floor	*1*	*1.66*	*5.500*	*1.100*	*10.061*	*Cum*
		1	*4.75*	*1.000*	*0.750*	*3.563*	*Cum*
	D/S Key Floor	*1*	*0.74*	*5.500*	*1.300*	*5.273*	*Cum*
	Toe wall D/S Portion	*1*	*4.50*	*0.750*	*0.900*	*3.038*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*1.25*	*0.600*	*0.750*	*0.563*	*Cum*
	TOTAL					**137.55**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.000*	*0.150*	*0.08*	*Cum*
		1	*1.01*	*1.000*	*0.150*	*0.15*	*Cum*
		1	*0.38*	*1.000*	*0.150*	*0.06*	*Cum*
		1	*0.21*	*1.000*	*0.150*	*0.03*	*Cum*
		1	*4.89*	*1.000*	*0.150*	*0.73*	*Cum*
		1	*0.49*	*1.000*	*0.150*	*0.07*	*Cum*
		1	*3.11*	*1.000*	*0.150*	*0.47*	*Cum*
		1	*1.29*	*1.000*	*0.150*	*0.19*	*Cum*
		1	*0.54*	*1.000*	*0.150*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.41*	*1.964*	*0.150*	*0.83*	*Cum*
	Section 2-2	*2*	*3.25*	*1.570*	*0.150*	*1.53*	*Cum*
	Section 3-3	*2*	*4.45*	*1.450*	*0.150*	*1.94*	*Cum*
	Section 5-5	*2*	*1.93*	*2.114*	*0.150*	*1.22*	*Cum*
	Section 6-6	*2*	*0.45*	*0.930*	*0.150*	*0.13*	*Cum*
	Toe Wall D/S Portion	*1*	*4.50*	*0.750*	*0.300*	*1.01*	*Cum*
	Toe Wall D/S Portion	*1*	*4.20*	*0.450*	*0.600*	*1.13*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.600*	*0.150*	*0.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.300*	*0.600*	*0.45*	*Cum*
	TOTAL					**10.34**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.26*	*0.450*	*0.450*	*0.51*	*Cum*
		2	*1.26*	*1.057*	*2.024*	*5.40*	*Cum*
		2	*1.26*	*1.814*	*0.750*	*3.43*	*Cum*
	Section 2-2	*2*	*3.25*	*0.820*	*0.500*	*2.67*	*Cum*
		2	*3.25*	*0.970*	*0.500*	*3.15*	*Cum*
		2	*3.25*	*1.270*	*1.550*	*12.80*	*Cum*
	Section 3-3	*2*	*4.21*	*0.820*	*0.500*	*3.45*	*Cum*
		2	*4.21*	*0.910*	*0.300*	*2.30*	*Cum*
		2	*4.21*	*1.150*	*1.750*	*16.95*	*Cum*
	Section 5-5	*2*	*1.89*	*0.450*	*0.450*	*0.76*	*Cum*
		2	*1.89*	*1.057*	*2.024*	*8.07*	*Cum*
		2	*1.89*	*1.814*	*0.600*	*4.11*	*Cum*
	Section 6-6	*2*	*1.10*	*0.450*	*0.450*	*0.45*	*Cum*
		2	*1.10*	*0.540*	*0.300*	*0.36*	*Cum*
		2	*1.10*	*0.780*	*0.600*	*1.03*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.68*	*1.000*	*0.900*	*0.61*	*Cum*
		1	*1.44*	*1.000*	*0.600*	*0.86*	*Cum*
		1	*0.15*	*1.000*	*0.625*	*0.09*	*Cum*
		1	*4.66*	*1.000*	*0.750*	*3.50*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.28*	*1.000*	*0.350*	*0.10*	*Cum*
		1	*0.20*	*1.000*	*0.500*	*0.10*	*Cum*
		1	*4.55*	*1.000*	*0.600*	*2.73*	*Cum*
		1	*0.74*	*1.000*	*1.150*	*0.85*	*Cum*
	Crest	*1*	*1.13*	*1.000*	*1.739*	*1.97*	*Cum*
	TOTAL					**73.53**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.85*	*1.000*	*0.150*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.29*	*0.450*	*0.050*	*0.16*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.29*	*0.450*	*0.050*	*0.16*	*Cum*
	Slab Bridge						
	Slab	*1*	*1.80*	*5.500*	*0.328*	*3.25*	*Cum*
	Wearing coat	*1*	*1.80*	*4.500*	*0.070*	*0.57*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
	300 mm thick pedastal	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**8.30**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.26*		*1.578*	*110.6*	*Kg*
a2	*10*	*9*	*5.90*		*0.616*	*32.7*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.18*		*0.616*	*25.5*	*Kg*
a5	*10*	*7*	*5.75*		*0.616*	*24.8*	*Kg*
x1	*12*	*30*	*2.50*		*0.888*	*66.6*	*Kg*
x2	*12*	*30*	*1.27*		*0.888*	*33.7*	*Kg*
x3	*12*	*24*	*1.70*		*0.888*	*36.2*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**73.53**	**0.003**	**0.221**	**7850.0**	**1731.6**	**Kg**
	Total Reinforcement Steel (in kg)					*2068.4*	*Kg*
	Total Weight in Metric Tonne					**2.07**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.26*		*0.450*	*2.27*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.26*		*2.024*	*10.22*	*Sqm*
		4		*1.057*	*2.024*	*8.56*	*Sqm*
		4	*1.26*		*0.750*	*3.79*	*Sqm*
		4		*1.814*	*0.750*	*5.44*	*Sqm*
	Section 2-2	*4*	*3.25*		*0.500*	*6.50*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.25*		*0.500*	*6.50*	*Sqm*
		4		*0.970*	*0.500*	*1.94*	*Sqm*
		4	*3.25*		*1.550*	*20.15*	*Sqm*
		4		*1.270*	*1.550*	*7.87*	*Sqm*
	Section 3-3	*4*	*4.21*		*0.500*	*8.42*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*4.21*		*0.300*	*5.05*	*Sqm*
		4		*0.910*	*0.300*	*1.09*	*Sqm*
		4	*4.21*		*1.750*	*29.47*	*Sqm*
		4		*1.150*	*1.750*	*8.05*	*Sqm*
	Section 5-5	*4*	*1.89*		*0.450*	*3.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.89*		*2.024*	*15.27*	*Sqm*
		4		*1.057*	*2.024*	*8.56*	*Sqm*
		4	*1.89*		*0.600*	*4.53*	*Sqm*
		4		*1.814*	*0.600*	*4.35*	*Sqm*
	Section 6-6	*4*	*1.10*		*0.450*	*1.98*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.10*		*0.300*	*1.32*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.10*		*0.600*	*2.64*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.780*	*0.600*	*1.87*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*1.000*	*0.900*	*1.80*	*Sqm*
		2	*1.44*		*0.600*	*1.72*	*Sqm*
		2		*1.000*	*0.600*	*1.20*	*Sqm*
		2	*0.15*		*0.625*	*0.19*	*Sqm*
		2		*1.000*	*0.625*	*1.25*	*Sqm*
		2	*4.66*		*0.750*	*6.99*	*Sqm*
		2		*1.000*	*0.750*	*1.50*	*Sqm*
		2	*0.28*		*0.350*	*0.20*	*Sqm*
		2		*1.000*	*0.350*	*0.70*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*1.000*	*0.500*	*1.00*	*Sqm*
		2	*4.55*		*0.600*	*5.46*	*Sqm*
		2		*1.000*	*0.600*	*1.20*	*Sqm*
		2	*0.74*		*1.150*	*1.70*	*Sqm*
		2		*1.000*	*1.150*	*2.30*	*Sqm*
	Crest	*2*	*1.13*		*1.739*	*3.94*	*Sqm*
		2		*1.000*	*1.739*	*3.48*	*Sqm*
	Bridge Slab	*2*	*1.80*		*0.33*	*1.18*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*1.80*	*5.50*		*9.90*	*Sqm*
	Dirt Wall	*2*	*0.40*		*0.30*	*0.24*	*Sqm*
		2		5.50	0.30	*3.30*	*Sqm*
	TOTAL					**229.87**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.25*	*1.817*		*4.54*	*Sqm*
	TOTAL					**4.54**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.25*	*0.400*	*0.300*	**0.15**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.25*	*0.400*	*0.150*	**0.15**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.29*	*0.450*		*3.28*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.29*	*0.450*		*3.28*	*Sqm*
	TOTAL					**6.56**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		7.902		7.90	**Cum**
	Abutment						
	Section 1-1	2	1.41	*0.631*		*1.783*	*Cum*
	Section 2-2	2	3.25	*0.226*		*1.469*	*Cum*
	Section 3-3	2	4.45	*0.226*		*2.011*	*Cum*
	Section 5-5	2	1.93	*0.631*		*2.438*	*Cum*
	Section 6-6	2	0.45	*0.226*		*0.203*	*Cum*
	Toe wall	2	*4.50*	*0.150*	*0.600*	*1.350*	*Cum*
		2	*1.25*	0.150	*0.600*	*0.225*	*Cum*
	TOTAL					**17.38**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH.1.700 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.10*	*2.020*	*1.635*	*7.273*	*Cum*
	Section 2-2	*2*	*3.89*	*1.380*	*1.635*	*17.545*	*Cum*
	Section 3-3	*2*	*1.95*	*1.230*	*1.435*	*6.884*	*Cum*
	Section 5-5	*2*	*2.98*	*2.170*	*1.635*	*21.142*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*1.435*	*4.483*	*Cum*
	U/S Key Floor	*1*	*0.66*	*2.930*	*1.000*	*1.941*	*Cum*
	U/S Floor	*1*	*2.50*	*2.930*	*1.635*	*11.976*	*Cum*
	D/S Floor	*1*	*3.75*	*2.930*	*0.800*	*8.790*	*Cum*
		1	*2.25*	*2.930*	*0.650*	*4.285*	*Cum*
	D/S Key Floor	*1*	*0.78*	*2.930*	*1.450*	*3.293*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.900*	*5.353*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**95.21**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
		1	*0.95*	*2.930*	*0.150*	*0.42*	*Cum*
		1	*5.35*	*2.930*	*0.150*	*2.35*	*Cum*
		1	*0.57*	*2.930*	*0.150*	*0.25*	*Cum*
		1	*0.59*	*2.930*	*0.150*	*0.26*	*Cum*
		1	*1.45*	*2.930*	*0.150*	*0.64*	*Cum*
		1	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.10*	*2.020*	*0.150*	*0.67*	*Cum*
	Section 2-2	*2*	*3.89*	*1.380*	*0.150*	*1.61*	*Cum*
	Section 3-3	*2*	*1.95*	*1.230*	*0.150*	*0.72*	*Cum*
	Section 5-5	*2*	*2.98*	*2.170*	*0.150*	*1.94*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*0.150*	*0.47*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.300*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*7.63*	*0.450*	*0.600*	*2.06*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**14.99**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.95*	*0.450*	*0.450*	*0.39*	*Cum*
		2	*0.95*	*1.085*	*2.116*	*4.37*	*Cum*
		2	*0.95*	*1.870*	*0.650*	*2.31*	*Cum*
	Section 2-2	*2*	*3.89*	*0.450*	*0.450*	*1.57*	*Cum*
		2	*3.89*	*0.765*	*1.050*	*6.25*	*Cum*
		2	*3.89*	*1.230*	*0.650*	*6.22*	*Cum*
	Section 3-3	*2*	*1.56*	*0.450*	*0.450*	*0.63*	*Cum*
		2	*1.56*	*0.690*	*0.800*	*1.72*	*Cum*
		2	*1.56*	*1.080*	*0.500*	*1.68*	*Cum*
	Section 5-5	*2*	*2.94*	*0.450*	*0.450*	*1.19*	*Cum*
		2	*2.94*	*1.085*	*2.116*	*13.48*	*Cum*
		2	*2.94*	*1.870*	*0.650*	*7.14*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.690*	*0.800*	*2.00*	*Cum*
		2	*1.81*	*1.080*	*0.500*	*1.95*	*Cum*
	Floor	*1*	*0.66*	*2.930*	*0.850*	*1.65*	*Cum*
		1	*6.25*	*2.930*	*0.650*	*11.90*	*Cum*
		1	*0.25*	*2.930*	*0.375*	*0.27*	*Cum*
		1	*0.21*	*2.930*	*0.400*	*0.24*	*Cum*
		1	*2.00*	*2.930*	*0.500*	*2.93*	*Cum*
		1	*0.78*	*2.930*	*1.300*	*2.95*	*Cum*
	Crest	*1*	*1.00*	*2.930*	*1.556*	*4.56*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**76.15**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*2.930*	*0.200*	*0.44*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.29*	*0.450*	*0.050*	*0.28*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.29*	*0.450*	*0.050*	*0.28*	*Cum*
	TOTAL					**0.99**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**76.15**	**0.00**	**0.228**	**7850.0**	**1793.33**	**Kg**
	Total Weight in Metric Tonne					**1.79**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.95*		*0.450*	*1.71*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.95*		*2.116*	*8.05*	*Sqm*
		4		*1.085*	*2.116*	*9.18*	*Sqm*
		4	*0.95*		*0.650*	*2.47*	*Sqm*
		4		*1.870*	*0.650*	*4.86*	*Sqm*
	Section 2-2	*4*	*3.89*		*0.450*	*7.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.89*		*1.050*	*16.33*	*Sqm*
		4		*0.765*	*1.050*	*3.21*	*Sqm*
		4	*3.89*		*0.650*	*10.11*	*Sqm*
		4		*1.230*	*0.650*	*3.20*	*Sqm*
	Section 3-3	*4*	*1.56*		*0.450*	*2.81*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.56*		*0.800*	*4.99*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.56*		*0.500*	*3.12*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Section 5-5	*4*	*2.94*		*0.450*	*5.28*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.94*		*2.116*	*24.85*	*Sqm*
		4		*1.085*	*2.116*	*9.18*	*Sqm*
		4	*2.94*		*0.650*	*7.63*	*Sqm*
		4		*1.870*	*0.650*	*4.86*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.800*	*5.79*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.81*		*0.500*	*3.62*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Floor	*2*	*0.66*		*0.850*	*1.13*	*Sqm*
		2		*2.930*	*0.850*	*4.98*	*Sqm*
		2	*6.25*		*0.650*	*8.13*	*Sqm*
		2		*2.930*	*0.650*	*3.81*	*Sqm*
		2	*0.25*		*0.375*	*0.19*	*Sqm*
		2		*2.930*	*0.375*	*2.20*	*Sqm*
		2	*0.21*		*0.400*	*0.17*	*Sqm*
		2		*2.930*	*0.400*	*2.34*	*Sqm*
		2	*2*		*0.500*	*2.00*	*Sqm*
		2		*2.93*	*0.500*	*2.93*	*Sqm*
		2	*0.78*		*1.300*	*2.02*	*Sqm*
		2		*2.930*	*1.300*	*7.62*	*Sqm*
	Crest	*2*	*1.00*		*1.556*	*3.12*	*Sqm*
		2		*2.930*	*1.556*	*9.12*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.93*		*0.300*	*4.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.63*		*0.600*	*9.16*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**227.53**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.592*		*12.96*	*Sqm*
	TOTAL					**12.96**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*2.330*	*0.300*	**1.75**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*2.330*	*0.150*	**1.75**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*12.29*	*0.450*		*5.53*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.29*	*0.450*		*5.53*	*Sqm*
	TOTAL					**11.06**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		7.339		7.34	**Cum**
	Abutment						
	Section 1-1	2	*1.10*	*0.557*		*1.227*	*Cum*
	Section 2-2	2	*3.89*	*0.557*		*4.333*	*Cum*
	Section 3-3	2	*1.95*	*0.355*		*1.383*	*Cum*
	Section 5-5	2	*2.98*	*0.557*		*3.320*	*Cum*
	Section 6-6	2	*1.27*	*0.355*		*0.901*	*Cum*
	Toe wall	2	*7.93*	*0.150*	*0.600*	*2.379*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**21.33**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.3.800 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.94*	*1.533*	*1.555*	*4.489*	*Cum*
	Section 2-2	*2*	*2.75*	*1.350*	*1.555*	*11.546*	*Cum*
	Section 3-3	*2*	*2.05*	*1.230*	*1.355*	*6.833*	*Cum*
	Section 5-5	*2*	*3.08*	*1.683*	*1.555*	*16.124*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*1.355*	*4.233*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.930*	*0.850*	*1.557*	*Cum*
	U/S Floor	*1*	*1.90*	*2.930*	*1.554*	*8.651*	*Cum*
	D/S Floor	*1*	*2.75*	*2.930*	*0.650*	*5.237*	*Cum*
		1	*2.35*	*2.930*	*0.500*	*3.443*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.930*	*0.850*	*1.557*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.900*	*5.353*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**71.27**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
		1	*0.78*	*2.930*	*0.150*	*0.34*	*Cum*
		1	*4.00*	*2.930*	*0.150*	*1.76*	*Cum*
		1	*0.28*	*2.930*	*0.150*	*0.12*	*Cum*
		1	*1.02*	*2.930*	*0.150*	*0.45*	*Cum*
		1	*0.78*	*2.930*	*0.150*	*0.34*	*Cum*
		1	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.94*	*1.533*	*0.150*	*0.43*	*Cum*
	Section 2-2	*2*	*2.75*	*1.350*	*0.150*	*1.11*	*Cum*
	Section 3-3	*2*	*2.05*	*1.230*	*0.150*	*0.76*	*Cum*
	Section 5-5	*2*	*3.08*	*1.683*	*0.150*	*1.56*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*0.150*	*0.47*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.300*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*7.63*	*0.450*	*0.600*	*2.06*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**13.01**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.79*	*0.450*	*0.450*	*0.32*	*Cum*
		2	*0.79*	*0.842*	*1.305*	*1.74*	*Cum*
		2	*0.79*	*1.383*	*0.500*	*1.09*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.750*	*1.000*	*4.13*	*Cum*
		2	*2.75*	*1.200*	*0.500*	*3.30*	*Cum*
	Section 3-3	*2*	*1.66*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.66*	*0.690*	*0.800*	*1.83*	*Cum*
		2	*1.66*	*1.080*	*0.500*	*1.79*	*Cum*
	Section 5-5	*2*	*3.04*	*0.450*	*0.450*	*1.23*	*Cum*
		2	*3.04*	*0.842*	*1.305*	*6.67*	*Cum*
		2	*3.04*	*1.383*	*0.500*	*4.20*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.690*	*0.800*	*2.00*	*Cum*
		2	*1.81*	*1.080*	*0.500*	*1.95*	*Cum*
	Floor	*1*	*0.63*	*2.930*	*0.700*	*1.28*	*Cum*
		1	*4.65*	*2.930*	*0.500*	*6.81*	*Cum*
		1	*0.20*	*2.930*	*0.400*	*0.23*	*Cum*
		1	*0.28*	*2.930*	*0.300*	*0.24*	*Cum*
		1	*2.15*	*2.930*	*0.500*	*3.15*	*Cum*
		1	*0.63*	*2.930*	*0.700*	*1.28*	*Cum*
	Crest	*1*	*0.73*	*2.930*	*0.810*	*1.72*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**47.50**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.930*	*0.150*	*0.26*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.99*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.99*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.76**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**47.50**	**0.00**	**0.142**	**7850.0**	**1118.54**	**Kg**
	Total Weight in Metric Tonne					**1.12**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.79*		*0.450*	*1.42*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.79*		*1.305*	*4.12*	*Sqm*
		4		*0.842*	*1.305*	*4.39*	*Sqm*
		4	*0.79*		*0.500*	*1.58*	*Sqm*
		4		*1.383*	*0.500*	*2.77*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*1.000*	*11.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*1.200*	*0.500*	*2.40*	*Sqm*
	Section 3-3	*4*	*1.66*		*0.450*	*2.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.66*		*0.800*	*5.31*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.66*		*0.500*	*3.32*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Section 5-5	*4*	*3.04*		*0.450*	*5.47*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.04*		*1.305*	*15.85*	*Sqm*
		4		*0.842*	*1.305*	*4.39*	*Sqm*
		4	*3.04*		*0.500*	*6.07*	*Sqm*
		4		*1.383*	*0.500*	*2.77*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.800*	*5.79*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.81*		*0.500*	*3.62*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.930*	*0.700*	*4.10*	*Sqm*
		2	*4.65*		*0.500*	*4.65*	*Sqm*
		2		*2.930*	*0.500*	*2.93*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.930*	*0.400*	*2.34*	*Sqm*
		2	*0.28*		*0.300*	*0.17*	*Sqm*
		2		*2.930*	*0.300*	*1.76*	*Sqm*
		2	*2.15*		*0.500*	*2.15*	*Sqm*
		2		*2.93*	*0.500*	*2.93*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.930*	*0.700*	*4.10*	*Sqm*
	Crest	*2*	*0.73*		*0.810*	*1.18*	*Sqm*
		2		*2.930*	*0.810*	*4.75*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.93*		*0.300*	*4.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.63*		*0.600*	*9.16*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**169.21**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.592*		*12.96*	*Sqm*
	TOTAL					**12.96**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*2.330*	*0.300*	**1.75**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*2.330*	*0.150*	**1.75**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.99*	*0.450*		*4.95*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.99*	*0.450*		*4.95*	*Sqm*
	TOTAL					**9.89**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.603		1.60	**Cum**
	Abutment						
	Section 1-1	2	*0.94*	*0.591*		*1.113*	*Cum*
	Section 2-2	2	*2.75*	*0.588*		*3.234*	*Cum*
	Section 3-3	2	*2.05*	*0.591*		*2.423*	*Cum*
	Section 5-5	2	*3.08*	*0.591*		*3.641*	*Cum*
	Section 6-6	2	*1.27*	*0.591*		*1.501*	*Cum*
	Toe wall	2	*7.93*	*0.150*	*0.600*	*2.379*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**16.34**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.4.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.97*	*1.624*	*1.098*	*3.468*	*Cum*
	Section 2-2	*2*	*2.75*	*1.350*	*1.098*	*8.153*	*Cum*
	Section 3-3	*2*	*2.20*	*1.230*	*0.898*	*4.860*	*Cum*
	Section 5-5	*2*	*3.06*	*1.774*	*1.098*	*11.927*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*0.898*	*2.806*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.930*	*0.850*	*1.557*	*Cum*
	U/S Floor	*1*	*1.90*	*2.930*	*1.098*	*6.113*	*Cum*
	D/S Floor	*1*	*2.75*	*2.930*	*0.650*	*5.237*	*Cum*
		1	*2.35*	*2.930*	*0.500*	*3.443*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.930*	*0.850*	*1.557*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.900*	*5.353*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**56.72**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
		1	*0.78*	*2.930*	*0.150*	*0.34*	*Cum*
		1	*3.90*	*2.930*	*0.150*	*1.71*	*Cum*
		1	*0.28*	*2.930*	*0.150*	*0.12*	*Cum*
		1	*1.12*	*2.930*	*0.150*	*0.49*	*Cum*
		1	*0.78*	*2.930*	*0.150*	*0.34*	*Cum*
		1	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.97*	*1.624*	*0.150*	*0.47*	*Cum*
	Section 2-2	*2*	*2.75*	*1.350*	*0.150*	*1.11*	*Cum*
	Section 3-3	*2*	*2.20*	*1.230*	*0.150*	*0.81*	*Cum*
	Section 5-5	*2*	*3.06*	*1.774*	*0.150*	*1.63*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*0.150*	*0.47*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.300*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*7.63*	*0.450*	*0.600*	*2.06*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**13.18**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.82*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.82*	*0.887*	*1.457*	*2.13*	*Cum*
		2	*0.82*	*1.474*	*0.500*	*1.21*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.750*	*1.000*	*4.13*	*Cum*
		2	*2.75*	*1.200*	*0.500*	*3.30*	*Cum*
	Section 3-3	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.690*	*0.800*	*2.00*	*Cum*
		2	*1.81*	*1.080*	*0.500*	*1.95*	*Cum*
	Section 5-5	*2*	*3.02*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.02*	*0.887*	*1.457*	*7.80*	*Cum*
		2	*3.02*	*1.474*	*0.500*	*4.45*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.690*	*0.800*	*2.00*	*Cum*
		2	*1.81*	*1.080*	*0.500*	*1.95*	*Cum*
	Floor	*1*	*0.63*	*2.930*	*0.700*	*1.28*	*Cum*
		1	*4.65*	*2.930*	*0.500*	*6.81*	*Cum*
		1	*0.20*	*2.930*	*0.400*	*0.23*	*Cum*
		1	*0.18*	*2.930*	*0.200*	*0.10*	*Cum*
		1	*2.15*	*2.930*	*0.500*	*3.15*	*Cum*
		1	*0.63*	*2.930*	*0.700*	*1.28*	*Cum*
	Crest	*1*	*0.75*	*2.930*	*0.957*	*2.11*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**50.02**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.930*	*0.150*	*0.26*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.19*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.19*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.77**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**50.02**	**0.00**	**0.150**	**7850.0**	**1177.90**	**Kg**
	Total Weight in Metric Tonne					**1.18**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.82*		*0.450*	*1.48*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.82*		*1.457*	*4.79*	*Sqm*
		4		*0.887*	*1.457*	*5.17*	*Sqm*
		4	*0.82*		*0.500*	*1.65*	*Sqm*
		4		*1.474*	*0.500*	*2.95*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*1.000*	*11.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*1.200*	*0.500*	*2.40*	*Sqm*
	Section 3-3	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.800*	*5.79*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.81*		*0.500*	*3.62*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Section 5-5	*4*	*3.02*		*0.450*	*5.43*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.02*		*1.457*	*17.58*	*Sqm*
		4		*0.887*	*1.457*	*5.17*	*Sqm*
		4	*3.02*		*0.500*	*6.03*	*Sqm*
		4		*1.474*	*0.500*	*2.95*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.800*	*5.79*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.81*		*0.500*	*3.62*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.930*	*0.700*	*4.10*	*Sqm*
		2	*4.65*		*0.500*	*4.65*	*Sqm*
		2		*2.930*	*0.500*	*2.93*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.930*	*0.400*	*2.34*	*Sqm*
		2	*0.18*		*0.200*	*0.07*	*Sqm*
		2		*2.930*	*0.200*	*1.17*	*Sqm*
		2	*2.15*		*0.500*	*2.15*	*Sqm*
		2		*2.93*	*0.500*	*2.93*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.930*	*0.700*	*4.10*	*Sqm*
	Crest	*2*	*0.75*		*0.957*	*1.44*	*Sqm*
		2		*2.930*	*0.957*	*5.61*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.93*		*0.300*	*4.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.63*		*0.600*	*9.16*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**175.06**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.592*		*12.96*	*Sqm*
	TOTAL					**12.96**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*2.330*	*0.300*	**1.75**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*2.330*	*0.150*	**1.75**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.19*	*0.450*		*5.04*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.19*	*0.450*		*5.04*	*Sqm*
	TOTAL					**10.07**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		0.955		0.96	Cum
	Abutment						
	Section 1-1	2	*0.97*	*0.270*		*0.524*	*Cum*
	Section 2-2	2	*2.75*	*0.270*		*1.482*	*Cum*
	Section 3-3	2	*2.20*	*0.270*		*1.186*	*Cum*
	Section 5-5	2	*3.06*	*0.270*		*1.650*	*Cum*
	Section 6-6	2	*1.27*	*0.270*		*0.685*	*Cum*
	Toe wall	2	*7.93*	*0.150*	*0.600*	*2.379*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**9.31**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.5.910 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.39*	*2.228*	*2.521*	*15.564*	*Cum*
	Section 2-2	*2*	*4.50*	*1.314*	*2.521*	*29.813*	*Cum*
	Section 3-3	*2*	*2.70*	*1.194*	*2.321*	*14.965*	*Cum*
	Section 5-5	*2*	*2.81*	*2.378*	*2.521*	*33.686*	*Cum*
	Section 6-6	*2*	*1.22*	*1.194*	*2.321*	*6.740*	*Cum*
	U/S Key Floor	*1*	*0.69*	*2.650*	*1.100*	*2.004*	*Cum*
	U/S Floor	*1*	*3.50*	*2.650*	*2.724*	*25.265*	*Cum*
	D/S Floor	*1*	*4.50*	*2.650*	*1.200*	*14.310*	*Cum*
		1	*3.00*	*2.650*	*1.000*	*7.950*	*Cum*
	D/S Key Floor	*1*	*1.95*	*2.650*	*0.750*	*3.876*	*Cum*
	Toe Wall D/S Portion	*1*	*7.47*	*0.750*	*0.900*	*5.042*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**161.46**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.650*	*0.150*	*0.22*	*Cum*
		1	*1.06*	*2.650*	*0.150*	*0.42*	*Cum*
		1	*0.68*	*2.650*	*0.150*	*0.27*	*Cum*
		1	*0.42*	*2.650*	*0.150*	*0.17*	*Cum*
		1	*6.14*	*2.650*	*0.150*	*2.44*	*Cum*
		1	*0.57*	*2.650*	*0.150*	*0.22*	*Cum*
		1	*0.52*	*2.650*	*0.150*	*0.21*	*Cum*
		1	*0.07*	*2.650*	*0.150*	*0.03*	*Cum*
		1	*0.52*	*2.650*	*0.150*	*0.21*	*Cum*
		1	*1.85*	*2.650*	*0.150*	*0.73*	*Cum*
		1	*0.54*	*2.650*	*0.150*	*0.22*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.39*	*2.228*	*0.150*	*0.93*	*Cum*
	Section 2-2	*2*	*4.50*	*1.314*	*0.150*	*1.77*	*Cum*
	Section 3-3	*2*	*2.70*	*1.194*	*0.150*	*0.97*	*Cum*
	Section 5-5	*2*	*2.81*	*2.378*	*0.150*	*2.00*	*Cum*
	Section 6-6	*2*	*1.22*	*1.194*	*0.150*	*0.44*	*Cum*
	Toe Wall D/S Portion	*1*	*7.47*	*0.750*	*0.300*	*1.68*	*Cum*
	Toe Wall D/S Portion	*1*	*7.17*	*0.450*	*0.600*	*1.94*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**16.21**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.24*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.24*	*1.189*	*2.464*	*7.24*	*Cum*
		2	*1.24*	*2.078*	*0.850*	*4.36*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.732*	*0.940*	*6.19*	*Cum*
		2	*4.50*	*1.164*	*0.850*	*8.90*	*Cum*
	Section 3-3	*2*	*2.33*	*0.450*	*0.450*	*0.94*	*Cum*
		2	*2.33*	*0.672*	*0.740*	*2.32*	*Cum*
		2	*2.33*	*1.044*	*0.650*	*3.16*	*Cum*
	Section 5-5	*2*	*2.77*	*0.450*	*0.450*	*1.12*	*Cum*
		2	*2.77*	*1.189*	*2.464*	*16.20*	*Cum*
		2	*2.77*	*2.078*	*0.550*	*6.32*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.672*	*0.740*	*1.80*	*Cum*
		2	*1.81*	*1.044*	*0.600*	*2.27*	*Cum*
	Floor	*1*	*0.69*	*2.650*	*0.950*	*1.73*	*Cum*
		1	*1.76*	*2.650*	*0.550*	*2.56*	*Cum*
		1	*0.30*	*2.650*	*0.700*	*0.56*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*5.94*	*2.650*	*0.850*	*13.38*	*Cum*
		1	*0.28*	*2.650*	*0.400*	*0.29*	*Cum*
		1	*0.20*	*2.650*	*0.550*	*0.29*	*Cum*
		1	*0.80*	*2.650*	*0.650*	*1.38*	*Cum*
		1	*0.05*	*2.650*	*0.625*	*0.08*	*Cum*
		1	*1.95*	*2.650*	*0.600*	*3.10*	*Cum*
		1	*0.86*	*2.650*	*1.650*	*3.77*	*Cum*
	Crest	*1*	*1.12*	*2.650*	*1.974*	*5.86*	*Cum*
	TOTAL					**96.91**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*2.650*	*0.150*	*0.32*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.76*	*0.450*	*0.050*	*0.31*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.76*	*0.450*	*0.050*	*0.31*	*Cum*
	TOTAL					**0.94**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**96.91**	**0.00**	**0.291**	**7850.0**	**2282.19**	**Kg**
	Total Weight in Metric Tonne					**2.28**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.24*		*0.450*	*2.22*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.24*		*2.464*	*12.18*	*Sqm*
		4		*1.189*	*2.464*	*11.72*	*Sqm*
		4	*1.24*		*0.850*	*4.20*	*Sqm*
		4		*2.078*	*0.850*	*7.07*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*0.940*	*16.92*	*Sqm*
		4		*0.732*	*0.940*	*2.75*	*Sqm*
		4	*4.50*		*0.850*	*15.30*	*Sqm*
		4		*1.164*	*0.850*	*3.96*	*Sqm*
	Section 3-3	*4*	*2.33*		*0.450*	*4.19*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.33*		*0.740*	*6.89*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*2.33*		*0.650*	*6.05*	*Sqm*
		4		*1.044*	*0.650*	*2.71*	*Sqm*
	Section 5-5	*4*	*2.77*		*0.450*	*4.98*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.77*		*2.464*	*27.26*	*Sqm*
		4		*1.189*	*2.464*	*11.72*	*Sqm*
		4	*2.77*		*0.550*	*6.08*	*Sqm*
		4		*2.078*	*0.550*	*4.57*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.740*	*5.37*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*1.81*		*0.600*	*4.35*	*Sqm*
		4		*1.044*	*0.600*	*2.51*	*Sqm*
	Floor	*2*	*0.69*		*0.950*	*1.31*	*Sqm*
		2		*2.650*	*0.950*	*5.04*	*Sqm*
		2	*1.76*		*0.550*	*1.93*	*Sqm*
		2		*2.650*	*0.550*	*2.92*	*Sqm*
		2	*0.30*		*0.700*	*0.42*	*Sqm*
		2		*2.650*	*0.700*	*3.71*	*Sqm*
		2	*5.94*		*0.850*	*10.10*	*Sqm*
		2		*2.650*	*0.850*	*4.51*	*Sqm*
		2	*0.28*		*0.400*	*0.22*	*Sqm*
		2		*2.650*	*0.400*	*2.12*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*2.650*	*0.550*	*2.92*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.80*		*0.650*	*1.04*	*Sqm*
		2		*2.650*	*0.650*	*3.45*	*Sqm*
		2	*0.05*		*0.625*	*0.06*	*Sqm*
		2		*2.650*	*0.625*	*3.31*	*Sqm*
		2	*1.95*		*0.600*	*2.34*	*Sqm*
		2		*2.650*	*0.600*	*3.18*	*Sqm*
		2	*0.86*		*1.650*	*2.85*	*Sqm*
		2		*2.650*	*1.650*	*8.75*	*Sqm*
	Crest	*2*	*1.12*		*1.974*	*4.42*	*Sqm*
		2		*2.650*	*1.974*	*10.46*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.47*		*0.300*	*4.48*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.17*		*0.600*	*8.60*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**280.30**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.484*		*12.42*	*Sqm*
	TOTAL					**12.42**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*2.050*	*0.300*	**1.54**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*2.050*	*0.150*	**1.54**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.76*	*0.450*		*6.19*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.76*	*0.450*		*6.19*	*Sqm*
	TOTAL					**12.38**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		18.215		18.21	Cum
	Abutment						
	Section 1-1	2	*1.39*	*0.940*		*2.605*	*Cum*
	Section 2-2	2	*4.50*	*0.917*		*8.253*	*Cum*
	Section 3-3	2	*2.70*	*0.819*		*4.420*	*Cum*
	Section 5-5	2	*2.81*	*0.940*		*5.282*	*Cum*
	Section 6-6	2	*1.22*	*0.819*		*1.991*	*Cum*
	Toe wall	2	*7.47*	*0.150*	*0.600*	*2.241*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**43.46**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.981 METER AT CH.7.190 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.67*	*2.533*	*2.680*	*22.694*	*Cum*
	Section 2-2	*2*	*5.50*	*1.344*	*2.680*	*39.621*	*Cum*
	Section 3-3	*2*	*3.45*	*1.224*	*2.480*	*20.945*	*Cum*
	Section 5-5	*2*	*2.75*	*2.683*	*2.680*	*39.497*	*Cum*
	Section 6-6	*2*	*1.22*	*1.224*	*2.480*	*7.382*	*Cum*
	U/S Key Floor	*1*	*0.74*	*2.650*	*1.300*	*2.541*	*Cum*
	U/S Floor	*1*	*4.25*	*2.650*	*3.431*	*38.642*	*Cum*
	D/S Floor	*1*	*5.50*	*2.650*	*1.400*	*20.405*	*Cum*
		1	*3.75*	*2.650*	*1.200*	*11.925*	*Cum*
	D/S Key Floor	*1*	*2.70*	*2.650*	*0.900*	*6.440*	*Cum*
	Toe Wall D/S Portion	*1*	*7.47*	*0.750*	*0.900*	*5.042*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**217.38**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.650*	*0.150*	*0.22*	*Cum*
		1	*1.29*	*2.650*	*0.150*	*0.51*	*Cum*
		1	*0.83*	*2.650*	*0.150*	*0.33*	*Cum*
		1	*0.64*	*2.650*	*0.150*	*0.25*	*Cum*
		1	*7.49*	*2.650*	*0.150*	*2.98*	*Cum*
		1	*0.71*	*2.650*	*0.150*	*0.28*	*Cum*
		1	*0.42*	*2.650*	*0.150*	*0.17*	*Cum*
		1	*0.07*	*2.650*	*0.150*	*0.03*	*Cum*
		1	*1.35*	*2.650*	*0.150*	*0.53*	*Cum*
		1	*1.68*	*2.650*	*0.150*	*0.67*	*Cum*
		1	*0.54*	*2.650*	*0.150*	*0.22*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.67*	*2.533*	*0.150*	*1.27*	*Cum*
	Section 2-2	*2*	*5.50*	*1.344*	*0.150*	*2.22*	*Cum*
	Section 3-3	*2*	*3.45*	*1.224*	*0.150*	*1.27*	*Cum*
	Section 5-5	*2*	*2.75*	*2.683*	*0.150*	*2.21*	*Cum*
	Section 6-6	*2*	*1.22*	*1.224*	*0.150*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*7.47*	*0.750*	*0.300*	*1.68*	*Cum*
	Toe Wall D/S Portion	*1*	*7.17*	*0.450*	*0.600*	*1.94*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**18.56**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.52*	*0.450*	*0.450*	*0.62*	*Cum*
		2	*1.52*	*1.342*	*2.971*	*12.13*	*Cum*
		2	*1.52*	*2.383*	*1.050*	*7.61*	*Cum*
	Section 2-2	*2*	*5.50*	*0.450*	*0.450*	*2.23*	*Cum*
		2	*5.50*	*0.747*	*0.990*	*8.13*	*Cum*
		2	*5.50*	*1.194*	*1.050*	*13.79*	*Cum*
	Section 3-3	*2*	*3.08*	*0.450*	*0.450*	*1.25*	*Cum*
		2	*3.08*	*0.687*	*0.790*	*3.34*	*Cum*
		2	*3.08*	*1.074*	*0.800*	*5.29*	*Cum*
	Section 5-5	*2*	*2.70*	*0.450*	*0.450*	*1.09*	*Cum*
		2	*2.70*	*1.342*	*2.971*	*21.54*	*Cum*
		2	*2.70*	*2.383*	*0.600*	*7.73*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.687*	*0.790*	*1.97*	*Cum*
		2	*1.81*	*1.074*	*0.750*	*2.92*	*Cum*
	Floor	*1*	*0.74*	*2.650*	*1.150*	*2.25*	*Cum*
		1	*2.01*	*2.650*	*0.600*	*3.20*	*Cum*
		1	*0.45*	*2.650*	*0.825*	*0.98*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*7.29*	*2.650*	*1.050*	*20.28*	*Cum*
		1	*0.33*	*2.650*	*0.500*	*0.43*	*Cum*
		1	*0.20*	*2.650*	*0.675*	*0.36*	*Cum*
		1	*0.75*	*2.650*	*0.800*	*1.59*	*Cum*
		1	*0.05*	*2.650*	*0.775*	*0.10*	*Cum*
		1	*2.70*	*2.650*	*0.750*	*5.37*	*Cum*
		1	*0.83*	*2.650*	*1.500*	*3.28*	*Cum*
	Crest	*1*	*1.40*	*2.650*	*2.471*	*9.13*	*Cum*
	TOTAL					**137.35**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.00*	*2.650*	*0.150*	*0.40*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.86*	*0.450*	*0.050*	*0.36*	*Cum*
	On Abutment Top (Right Side)	*1*	*15.86*	*0.450*	*0.050*	*0.36*	*Cum*
	TOTAL					**1.11**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**137.35**	**0.00**	**0.412**	**7850.0**	**3234.63**	**Kg**
	Total Weight in Metric Tonne					**3.23**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.52*		*0.450*	*2.74*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.52*		*2.971*	*18.08*	*Sqm*
		4		*1.342*	*2.971*	*15.94*	*Sqm*
		4	*1.52*		*1.050*	*6.39*	*Sqm*
		4		*2.383*	*1.050*	*10.01*	*Sqm*
	Section 2-2	*4*	*5.50*		*0.450*	*9.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.50*		*0.990*	*21.78*	*Sqm*
		4		*0.747*	*0.990*	*2.96*	*Sqm*
		4	*5.50*		*1.050*	*23.10*	*Sqm*
		4		*1.194*	*1.050*	*5.01*	*Sqm*
	Section 3-3	*4*	*3.08*		*0.450*	*5.54*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.08*		*0.790*	*9.73*	*Sqm*
		4		*0.687*	*0.790*	*2.17*	*Sqm*
		4	*3.08*		*0.800*	*9.85*	*Sqm*
		4		*1.074*	*0.800*	*3.44*	*Sqm*
	Section 5-5	*4*	*2.70*		*0.450*	*4.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.70*		*2.971*	*32.12*	*Sqm*
		4		*1.342*	*2.971*	*15.94*	*Sqm*
		4	*2.70*		*0.600*	*6.49*	*Sqm*
		4		*2.383*	*0.600*	*5.72*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.790*	*5.73*	*Sqm*
		4		*0.687*	*0.790*	*2.17*	*Sqm*
		4	*1.81*		*0.750*	*5.44*	*Sqm*
		4		*1.074*	*0.750*	*3.22*	*Sqm*
	Floor	*2*	*0.74*		*1.150*	*1.70*	*Sqm*
		2		*2.650*	*1.150*	*6.10*	*Sqm*
		2	*2.01*		*0.600*	*2.41*	*Sqm*
		2		*2.650*	*0.600*	*3.18*	*Sqm*
		2	*0.45*		*0.825*	*0.74*	*Sqm*
		2		*2.650*	*0.825*	*4.37*	*Sqm*
		2	*7.29*		*1.050*	*15.31*	*Sqm*
		2		*2.650*	*1.050*	*5.57*	*Sqm*
		2	*0.33*		*0.500*	*0.33*	*Sqm*
		2		*2.650*	*0.500*	*2.65*	*Sqm*
		2	*0.20*		*0.675*	*0.27*	*Sqm*
		2		*2.650*	*0.675*	*3.58*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.75*		*0.800*	*1.20*	*Sqm*
		2		*2.650*	*0.800*	*4.24*	*Sqm*
		2	*0.05*		*0.775*	*0.08*	*Sqm*
		2		*2.650*	*0.775*	*4.11*	*Sqm*
		2	*2.70*		*0.750*	*4.05*	*Sqm*
		2		*2.650*	*0.750*	*3.98*	*Sqm*
		2	*0.83*		*1.500*	*2.48*	*Sqm*
		2		*2.650*	*1.500*	*7.95*	*Sqm*
	Crest	*2*	*1.40*		*2.471*	*6.89*	*Sqm*
		2		*2.650*	*2.471*	*13.10*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.47*		*0.300*	*4.48*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.17*		*0.600*	*8.60*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**352.56**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.484*		*12.42*	*Sqm*
	TOTAL					**12.42**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*2.050*	*0.300*	**1.54**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*2.050*	*0.150*	**1.54**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*15.86*	*0.450*		*7.14*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.86*	*0.450*		*7.14*	*Sqm*
	TOTAL					**14.27**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		30.039		30.04	**Cum**
	Abutment						
	Section 1-1	2	*1.67*	*0.790*		*2.641*	*Cum*
	Section 2-2	2	*5.50*	*0.768*		*8.448*	*Cum*
	Section 3-3	2	*3.45*	*0.841*		*5.803*	*Cum*
	Section 5-5	2	*2.75*	*0.790*		*4.339*	*Cum*
	Section 6-6	2	*1.22*	*0.841*		*2.045*	*Cum*
	Toe wall	2	*7.47*	*0.150*	*0.600*	*2.241*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**56.01**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 9.800 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*1.802*	*0.906*	*3.724*	*Cum*
	Section 2-2	*2*	*3.00*	*1.750*	*0.906*	*9.513*	*Cum*
	Section 3-3	*2*	*4.20*	*1.630*	*0.706*	*9.667*	*Cum*
	Section 5-5	*2*	*2.84*	*1.952*	*0.856*	*9.494*	*Cum*
	Section 6-6	*2*	*0.72*	*1.110*	*0.706*	*1.128*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*2.25*	*5.500*	*0.906*	*11.212*	*Cum*
	D/S Floor	*1*	*3.00*	*5.500*	*0.700*	*11.550*	*Cum*
		1	*4.50*	*1.460*	*0.650*	*4.271*	*Cum*
	D/S Key Floor	*1*	*0.68*	*5.500*	*1.050*	*3.898*	*Cum*
	Toe Wall D/S Portion	*1*	*5.86*	*0.750*	*0.900*	*3.956*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
	TOTAL					**72.24**	***Cum***
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.460*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*1.460*	*0.150*	*0.17*	*Cum*
		1	*0.14*	*1.460*	*0.150*	*0.03*	*Cum*
		1	*0.07*	*1.460*	*0.150*	*0.02*	*Cum*
		1	*3.31*	*1.460*	*0.150*	*0.72*	*Cum*
		1	*0.35*	*1.460*	*0.150*	*0.08*	*Cum*
		1	*3.12*	*1.460*	*0.150*	*0.68*	*Cum*
		1	*1.01*	*1.460*	*0.150*	*0.22*	*Cum*
		1	*0.54*	*1.460*	*0.150*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.14*	*1.802*	*0.150*	*0.62*	*Cum*
	Section 2-2	*2*	*3.00*	*1.750*	*0.150*	*1.58*	*Cum*
	Section 3-3	*2*	*4.20*	*1.630*	*0.150*	*2.05*	*Cum*
	Section 5-5	*2*	*2.84*	*1.952*	*0.150*	*1.66*	*Cum*
	Section 6-6	*2*	*0.72*	*1.110*	*0.150*	*0.24*	*Cum*
	Toe Wall D/S Portion	*1*	*5.86*	*0.750*	*0.300*	*1.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.56*	*0.450*	*0.600*	*1.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**12.21**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.99*	*0.450*	*0.450*	*0.40*	*Cum*
		2	*0.99*	*0.976*	*1.754*	*3.39*	*Cum*
		2	*0.99*	*1.652*	*0.550*	*1.80*	*Cum*
	Section 2-2	*2*	*3.00*	*0.820*	*0.500*	*2.46*	*Cum*
		2	*3.00*	*1.060*	*0.800*	*5.09*	*Cum*
		2	*3.00*	*1.450*	*0.550*	*4.79*	*Cum*
	Section 3-3	*2*	*3.87*	*0.820*	*0.500*	*3.17*	*Cum*
		2	*3.87*	*1.000*	*0.600*	*4.64*	*Cum*
		2	*3.87*	*1.330*	*0.550*	*5.66*	*Cum*
	Section 5-5	*2*	*2.80*	*0.450*	*0.450*	*1.13*	*Cum*
		2	*2.80*	*0.976*	*1.754*	*9.58*	*Cum*
		2	*2.80*	*1.652*	*0.500*	*4.62*	*Cum*
	Section 6-6	*2*	*1.39*	*0.450*	*0.450*	*0.56*	*Cum*
		2	*1.39*	*0.630*	*0.600*	*1.05*	*Cum*
		2	*1.39*	*0.960*	*0.500*	*1.33*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*1.460*	*0.700*	*0.64*	*Cum*
		1	*1.09*	*1.460*	*0.500*	*0.80*	*Cum*
		1	*0.05*	*1.460*	*0.525*	*0.04*	*Cum*
		1	*4.11*	*1.460*	*0.550*	*3.30*	*Cum*
		1	*0.20*	*1.460*	*0.250*	*0.07*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.40*	*1.460*	*0.200*	*0.12*	*Cum*
		1	*4.30*	*1.460*	*0.500*	*3.14*	*Cum*
		1	*0.68*	*1.460*	*0.900*	*0.89*	*Cum*
	Crest	*1*	*0.90*	*1.460*	*1.274*	*1.68*	*Cum*
	TOTAL					**57.64**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*1.460*	*0.150*	*0.15*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.66*	*0.450*	*0.050*	*0.17*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.66*	*0.450*	*0.050*	*0.17*	*Cum*
	Slab Bridge						
	Slab	*1*	*2.26*	*5.500*	*0.328*	*4.08*	*Cum*
	Wearing coat	*1*	*2.26*	*4.500*	*0.070*	*0.71*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
	300 mm thick pedastal	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**9.31**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.72*		*1.578*	*133.1*	*Kg*
a2	*10*	*12*	*5.90*		*0.616*	*43.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.64*		*0.616*	*30.9*	*Kg*
a5	*10*	*9*	*5.75*		*0.616*	*31.9*	*Kg*
x1	*12*	*30*	*2.50*		*0.888*	*66.6*	*Kg*
x2	*16*	*30*	*1.27*		*1.578*	*59.9*	*Kg*
x3	*10*	*36*	*2.16*		*0.616*	*47.9*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**57.64**	**0.003**	**0.173**	**7850.0**	**1357.3**	**Kg**
	Total Reinforcement Steel (in kg)					*1778.0*	*Kg*
	Total Weight in Metric Tonne					**1.78**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.99*		*0.450*	*1.78*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.99*		*1.754*	*6.95*	*Sqm*
		4		*0.976*	*1.754*	*6.85*	*Sqm*
		4	*0.99*		*0.550*	*2.18*	*Sqm*
		4		*1.652*	*0.550*	*3.63*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.00*		*0.800*	*9.60*	*Sqm*
		4		*1.060*	*0.800*	*3.39*	*Sqm*
		4	*3.00*		*0.550*	*6.60*	*Sqm*
		4		*1.450*	*0.550*	*3.19*	*Sqm*
	Section 3-3	*4*	*3.87*		*0.500*	*7.74*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.87*		*0.600*	*9.29*	*Sqm*
		4		*1.000*	*0.600*	*2.40*	*Sqm*
		4	*3.87*		*0.550*	*8.51*	*Sqm*
		4		*1.330*	*0.550*	*2.93*	*Sqm*
	Section 5-5	*4*	*2.80*		*0.450*	*5.03*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.80*		*1.754*	*19.62*	*Sqm*
		4		*0.976*	*1.754*	*6.85*	*Sqm*
		4	*2.80*		*0.500*	*5.59*	*Sqm*
		4		*1.652*	*0.500*	*3.30*	*Sqm*
	Section 6-6	*4*	*1.39*		*0.450*	*2.49*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.39*		*0.600*	*3.32*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*1.39*		*0.500*	*2.77*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*5.860*		*0.300*	*3.52*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.560*		*0.600*	*6.67*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.000*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.000*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	Floor	*2*	*0.625*		*0.700*	*0.88*	*Sqm*
		2		*1.460*	*1.274*	*3.72*	*Sqm*
		2	*1.09*		*0.500*	*1.09*	*Sqm*
		2		*1.460*	*0.500*	*1.46*	*Sqm*
		2	*0.05*		*0.525*	*0.05*	*Sqm*
		2		*1.460*	*0.525*	*1.53*	*Sqm*
		2	*4.11*		*0.550*	*4.52*	*Sqm*
		2		*1.460*	*0.550*	*1.61*	*Sqm*
		2	*0.20*		*0.250*	*0.10*	*Sqm*
		2		*1.460*	*0.250*	*0.73*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*1.460*	*0.200*	*0.58*	*Sqm*
		2	*4.30*		*0.500*	*4.30*	*Sqm*
		2		*1.460*	*0.500*	*1.46*	*Sqm*
		2	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*1.460*	*0.900*	*2.63*	*Sqm*
	Crest	*2*	*0.90*		*1.274*	*2.30*	*Sqm*
		2		*1.460*	*1.274*	*3.72*	*Sqm*
	Bridge Slab	*2*	*2.26*		*0.33*	*1.48*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*2.26*	*5.50*		*12.43*	*Sqm*
	Dirt Wall	*2*	*0.40*		*0.30*	*0.24*	*Sqm*
		2		5.50	0.30	*3.30*	*Sqm*
	TOTAL					**210.55**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.232*		*8.93*	*Sqm*
	TOTAL					**8.93**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.860*	*0.300*	**0.52**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.860*	*0.150*	**0.52**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.66*	*0.450*		*3.45*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.66*	*0.450*		*3.45*	*Sqm*
	TOTAL					**6.89**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		4.547		4.55	Cum
	Abutment						
	Section 1-1	2	1.14	*0.157*		*0.358*	*Cum*
	Section 2-2	2	3.00	*0.157*		*0.942*	*Cum*
	Section 3-3	2	4.20	*0.076*		*0.638*	*Cum*
	Section 5-5	2	2.84	*0.150*		*0.849*	*Cum*
	Section 6-6	2	0.72	*0.076*		*0.109*	*Cum*
	TOTAL					**7.44**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.11.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.99*	*1.326*	*1.112*	*2.922*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*1.112*	*5.838*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*0.912*	*3.308*	*Cum*
	Section 5-5	*2*	*2.30*	*1.476*	*1.112*	*7.537*	*Cum*
	Section 6-6	*2*	*0.82*	*0.930*	*0.912*	*1.391*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.820*	*0.850*	*0.436*	*Cum*
	U/S Floor	*1*	*2.00*	*0.820*	*1.062*	*1.742*	*Cum*
	D/S Floor	*1*	*2.50*	*0.820*	*0.650*	*1.333*	*Cum*
		1	*2.25*	*0.820*	*0.500*	*0.923*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.820*	*0.850*	*0.436*	*Cum*
	Toe Wall D/S Portion	*1*	*4.32*	*0.750*	*0.900*	*2.916*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.25*	*0.600*	*0.750*	*1.125*	*Cum*
	TOTAL					**29.91**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.820*	*0.150*	*0.07*	*Cum*
		1	*0.78*	*0.820*	*0.150*	*0.10*	*Cum*
		1	*3.80*	*0.820*	*0.150*	*0.47*	*Cum*
		1	*0.28*	*0.820*	*0.150*	*0.03*	*Cum*
		1	*0.98*	*0.820*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*0.820*	*0.150*	*0.10*	*Cum*
		1	*0.54*	*0.820*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.326*	*0.150*	*0.39*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*0.150*	*0.54*	*Cum*
	Section 5-5	*2*	*2.30*	*1.476*	*0.150*	*1.02*	*Cum*
	Section 6-6	*2*	*0.82*	*0.930*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.32*	*0.750*	*0.300*	*0.97*	*Cum*
	Toe Wall D/S Portion	*1*	*4.02*	*0.450*	*0.600*	*1.09*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.600*	*0.150*	*0.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.300*	*0.600*	*0.45*	*Cum*
	TOTAL					**6.65**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.86*	*0.450*	*0.450*	*0.35*	*Cum*
		2	*0.86*	*0.738*	*0.960*	*1.21*	*Cum*
		2	*0.86*	*1.176*	*0.550*	*1.11*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.600*	*0.500*	*1.50*	*Cum*
		2	*2.50*	*0.900*	*0.550*	*2.48*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.540*	*0.300*	*0.55*	*Cum*
		2	*1.71*	*0.780*	*0.500*	*1.33*	*Cum*
	Section 5-5	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*0.738*	*0.960*	*3.19*	*Cum*
		2	*2.25*	*1.176*	*0.500*	*2.65*	*Cum*
	Section 6-6	*2*	*1.21*	*0.450*	*0.450*	*0.49*	*Cum*
		2	*1.21*	*0.540*	*0.300*	*0.39*	*Cum*
		2	*1.21*	*0.780*	*0.500*	*0.94*	*Cum*
	Floor	*1*	*0.63*	*0.820*	*0.700*	*0.36*	*Cum*
		1	*4.50*	*0.820*	*0.500*	*1.85*	*Cum*
		1	*0.20*	*0.820*	*0.400*	*0.07*	*Cum*
		1	*0.23*	*0.820*	*0.200*	*0.04*	*Cum*
		1	*2.05*	*0.820*	*0.500*	*0.84*	*Cum*
		1	*0.63*	*0.820*	*0.700*	*0.36*	*Cum*
	Crest	*1*	*0.73*	*0.820*	*0.630*	*0.38*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**22.70**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.820*	*0.150*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.07*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.07*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.48**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**22.70**	**0.00**	**0.068**	**7850.0**	**534.47**	**Kg**
	Total Weight in Metric Tonne					**0.53**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.86*		*0.450*	*1.54*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.86*		*0.960*	*3.29*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*0.86*		*0.550*	*1.88*	*Sqm*
		4		*1.176*	*0.550*	*2.59*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.50*		*0.550*	*5.50*	*Sqm*
		4		*0.900*	*0.550*	*1.98*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.300*	*2.05*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.71*		*0.500*	*3.42*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*0.960*	*8.65*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*1.176*	*0.500*	*2.35*	*Sqm*
	Section 6-6	*4*	*1.21*		*0.450*	*2.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.21*		*0.300*	*1.45*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.21*		*0.500*	*2.42*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.820*	*0.700*	*1.15*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*0.820*	*0.500*	*0.82*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.820*	*0.400*	*0.66*	*Sqm*
		2	*0.23*		*0.200*	*0.09*	*Sqm*
		2		*0.820*	*0.200*	*0.33*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*0.82*	*0.500*	*0.82*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.820*	*0.700*	*1.15*	*Sqm*
	Crest	*2*	*0.73*		*0.630*	*0.92*	*Sqm*
		2		*0.820*	*0.630*	*1.03*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.32*		*0.300*	*2.59*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.02*		*0.600*	*4.82*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.150*	*0.75*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.600*	*3.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**104.43**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.25*	*1.691*		*4.23*	*Sqm*
	TOTAL					**4.23**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.25*	*0.220*	*0.300*	**0.08**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.25*	*0.220*	*0.150*	**0.08**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.07*	*0.450*		*4.08*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.07*	*0.450*		*4.08*	*Sqm*
	TOTAL					**8.16**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.190		1.19	**Cum**
	Abutment						
	Section 1-1	2	*0.99*	*0.257*		*0.509*	*Cum*
	Section 2-2	2	*2.50*	*0.374*		*1.870*	*Cum*
	Section 3-3	2	*1.95*	*0.246*		*0.958*	*Cum*
	Section 5-5	2	*2.30*	*0.257*		*1.180*	*Cum*
	Section 6-6	2	*0.82*	*0.246*		*0.403*	*Cum*
	Toe wall	2	*4.32*	*0.150*	*0.600*	*1.296*	*Cum*
		2	*1.25*	0.150	*0.600*	*0.225*	*Cum*
	TOTAL					**7.63**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR PATOI DISTRIBUTARY						
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.0.475 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.96*	*1.653*	*0.755*	*2.385*	*Cum*
	Section 2-2	*2*	*3.00*	*1.470*	*0.755*	*6.659*	*Cum*
	Section 3-3	*2*	*1.95*	*1.350*	*0.555*	*2.922*	*Cum*
	Section 5-5	*2*	*6.31*	*1.803*	*0.755*	*17.175*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.555*	*5.170*	*Cum*
	U/S Key Floor	*1*	*0.63*	*4.610*	*0.850*	*2.449*	*Cum*
	U/S Floor	*1*	*1.75*	*4.610*	*0.754*	*6.083*	*Cum*
	D/S Floor	*1*	*3.00*	*4.610*	*0.650*	*8.990*	*Cum*
		1	*2.25*	*4.610*	*0.500*	*5.186*	*Cum*
	D/S Key Floor	*1*	*0.63*	*4.610*	*0.850*	*2.449*	*Cum*
	Toe Wall D/S Portion	*1*	*14.21*	*0.750*	*0.900*	*9.592*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.00*	*0.600*	*0.750*	*2.700*	*Cum*
	TOTAL					**71.76**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.610*	*0.150*	*0.37*	*Cum*
		1	*0.78*	*4.610*	*0.150*	*0.54*	*Cum*
		1	*4.00*	*4.610*	*0.150*	*2.76*	*Cum*
		1	*0.28*	*4.610*	*0.150*	*0.20*	*Cum*
		1	*1.02*	*4.610*	*0.150*	*0.70*	*Cum*
		1	*0.78*	*4.610*	*0.150*	*0.54*	*Cum*
		1	*0.54*	*4.610*	*0.150*	*0.37*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.96*	*1.653*	*0.150*	*0.47*	*Cum*
	Section 2-2	*2*	*3.00*	*1.470*	*0.150*	*1.32*	*Cum*
	Section 3-3	*2*	*1.95*	*1.350*	*0.150*	*0.79*	*Cum*
	Section 5-5	*2*	*6.31*	*1.803*	*0.150*	*3.41*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*14.21*	*0.750*	*0.300*	*3.20*	*Cum*
	Toe Wall D/S Portion	*1*	*13.91*	*0.450*	*0.600*	*3.76*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.600*	*0.150*	*0.54*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.300*	*0.600*	*1.08*	*Cum*
	TOTAL					**21.46**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.81*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.81*	*0.902*	*1.505*	*2.19*	*Cum*
		2	*0.81*	*1.503*	*0.500*	*1.21*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.810*	*1.200*	*5.83*	*Cum*
		2	*3.00*	*1.320*	*0.500*	*3.96*	*Cum*
	Section 3-3	*2*	*1.50*	*0.450*	*0.450*	*0.61*	*Cum*
		2	*1.50*	*0.750*	*1.000*	*2.25*	*Cum*
		2	*1.50*	*1.200*	*0.600*	*2.16*	*Cum*
	Section 5-5	*2*	*6.26*	*0.450*	*0.450*	*2.54*	*Cum*
		2	*6.26*	*0.902*	*1.505*	*17.00*	*Cum*
		2	*6.26*	*1.503*	*0.500*	*9.42*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.500*	*4.86*	*Cum*
	Floor	*1*	*0.63*	*4.610*	*0.700*	*2.02*	*Cum*
		1	*4.75*	*4.610*	*0.500*	*10.95*	*Cum*
		1	*0.20*	*4.610*	*0.400*	*0.37*	*Cum*
		1	*0.17*	*4.610*	*0.200*	*0.16*	*Cum*
		1	*2.05*	*4.610*	*0.500*	*4.73*	*Cum*
		1	*0.63*	*4.610*	*0.700*	*2.02*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.75*	*4.610*	*0.925*	*3.18*	*Cum*
	TOTAL					**84.69**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.85*	*4.610*	*0.200*	*0.78*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*16.73*	*0.450*	*0.050*	*0.38*	*Cum*
	On Abutment Top (Right Side)	*1*	*16.73*	*0.450*	*0.050*	*0.38*	*Cum*
	TOTAL					**1.54**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**84.69**	**0.00**	**0.254**	**7850.0**	**1994.42**	**Kg**
	Total Weight in Metric Tonne					**1.99**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.81*		*0.450*	*1.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.81*		*1.505*	*4.85*	*Sqm*
		4		*0.902*	*1.505*	*5.43*	*Sqm*
		4	*0.81*		*0.500*	*1.61*	*Sqm*
		4		*1.503*	*0.500*	*3.01*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*1.200*	*14.40*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*1.320*	*0.500*	*2.64*	*Sqm*
	Section 3-3	*4*	*1.50*		*0.450*	*2.70*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.50*		*1.000*	*6.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Section 5-5	*4*	*6.26*		*0.450*	*11.28*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.26*		*1.505*	*37.71*	*Sqm*
		4		*0.902*	*1.505*	*5.43*	*Sqm*
		4	*6.26*		*0.500*	*12.53*	*Sqm*
		4		*1.503*	*0.500*	*3.01*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.500*	*8.10*	*Sqm*
		4		*1.200*	*0.500*	*2.40*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.610*	*0.700*	*6.45*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*4.610*	*0.500*	*4.61*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.610*	*0.400*	*3.69*	*Sqm*
		2	*0.17*		*0.200*	*0.07*	*Sqm*
		2		*4.610*	*0.200*	*1.84*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*4.61*	*0.500*	*4.61*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.610*	*0.700*	*6.45*	*Sqm*
	Crest	*2*	*0.75*		*0.925*	*1.38*	*Sqm*
		2		*4.610*	*0.925*	*8.53*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.21*		*0.300*	*8.53*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.91*		*0.600*	*16.69*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.150*	*1.80*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.600*	*7.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**260.48**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*4.703*		*28.22*	*Sqm*
	TOTAL					**28.22**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.00*	*4.010*	*0.300*	**3.61**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.00*	*4.010*	*0.150*	**3.61**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*16.73*	*0.450*		*7.53*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.73*	*0.450*		*7.53*	*Sqm*
	TOTAL					**15.06**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.695		1.70	Cum
	Abutment						
	Section 1-1	2	*0.96*	*0.109*		*0.209*	*Cum*
	Section 2-2	2	*3.00*	*0.109*		*0.656*	*Cum*
	Section 3-3	2	*1.95*	*0.109*		*0.427*	*Cum*
	Section 5-5	2	*6.31*	*0.109*		*1.381*	*Cum*
	Section 6-6	2	*3.45*	*0.109*		*0.755*	*Cum*
	Toe wall	2	*14.21*	*0.150*	*0.600*	*4.263*	*Cum*
		2	*3.00*	0.150	*0.600*	*0.540*	*Cum*
	TOTAL					**9.93**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.4.510 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.26*	*1.870*	*1.655*	*7.808*	*Cum*
	Section 2-2	*2*	*3.25*	*1.321*	*1.655*	*14.211*	*Cum*
	Section 3-3	*2*	*3.00*	*1.201*	*1.455*	*10.485*	*Cum*
	Section 5-5	*2*	*4.81*	*2.020*	*1.655*	*32.167*	*Cum*
	Section 6-6	*2*	*2.36*	*1.201*	*1.455*	*8.253*	*Cum*
	U/S Key Floor	*1*	*0.63*	*4.000*	*0.850*	*2.125*	*Cum*
	U/S Floor	*1*	*3.00*	*4.000*	*1.850*	*22.200*	*Cum*
	D/S Floor	*1*	*3.25*	*4.000*	*0.700*	*9.100*	*Cum*
		1	*3.75*	*4.000*	*0.550*	*8.250*	*Cum*
	D/S Key Floor	*1*	*0.70*	*4.000*	*1.150*	*3.220*	*Cum*
	Toe Wall D/S Portion	*1*	*11.88*	*0.750*	*0.900*	*8.016*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**128.09**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
		1	*0.78*	*4.000*	*0.150*	*0.47*	*Cum*
		1	*0.70*	*4.000*	*0.150*	*0.42*	*Cum*
		1	*0.14*	*4.000*	*0.150*	*0.08*	*Cum*
		1	*4.70*	*4.000*	*0.150*	*2.82*	*Cum*
		1	*0.42*	*4.000*	*0.150*	*0.25*	*Cum*
		1	*2.26*	*4.000*	*0.150*	*1.36*	*Cum*
		1	*1.12*	*4.000*	*0.150*	*0.67*	*Cum*
		1	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.26*	*1.870*	*0.150*	*0.71*	*Cum*
	Section 2-2	*2*	*3.25*	*1.321*	*0.150*	*1.29*	*Cum*
	Section 3-3	*2*	*3.00*	*1.201*	*0.150*	*1.08*	*Cum*
	Section 5-5	*2*	*4.81*	*2.020*	*0.150*	*2.92*	*Cum*
	Section 6-6	*2*	*2.36*	*1.201*	*0.150*	*0.85*	*Cum*
	Toe Wall D/S Portion	*1*	*11.88*	*0.750*	*0.300*	*2.67*	*Cum*
	Toe Wall D/S Portion	*1*	*11.58*	*0.450*	*0.600*	*3.13*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**20.71**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.11*	*0.450*	*0.450*	*0.45*	*Cum*
		2	*1.11*	*1.010*	*1.866*	*4.19*	*Cum*
		2	*1.11*	*1.720*	*0.600*	*2.29*	*Cum*
	Section 2-2	*2*	*3.25*	*0.450*	*0.450*	*1.32*	*Cum*
		2	*3.25*	*0.736*	*0.952*	*4.55*	*Cum*
		2	*3.25*	*1.171*	*0.600*	*4.57*	*Cum*
	Section 3-3	*2*	*3.07*	*0.450*	*0.450*	*1.25*	*Cum*
		2	*3.07*	*0.676*	*0.752*	*3.12*	*Cum*
		2	*3.07*	*1.051*	*0.500*	*3.23*	*Cum*
	Section 5-5	*2*	*4.99*	*0.450*	*0.450*	*2.02*	*Cum*
		2	*4.99*	*1.010*	*1.866*	*18.82*	*Cum*
		2	*4.99*	*1.720*	*0.500*	*8.59*	*Cum*
	Section 6-6	*2*	*3.07*	*0.450*	*0.450*	*1.24*	*Cum*
		2	*3.07*	*0.676*	*0.752*	*3.12*	*Cum*
		2	*3.07*	*1.051*	*0.550*	*3.55*	*Cum*
	Floor	*1*	*0.63*	*4.000*	*0.700*	*1.75*	*Cum*
		1	*1.66*	*4.000*	*0.500*	*3.31*	*Cum*
		1	*0.10*	*4.000*	*0.550*	*0.22*	*Cum*
		1	*4.49*	*4.000*	*0.600*	*10.78*	*Cum*
		1	*0.20*	*4.000*	*0.400*	*0.32*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.23*	*4.000*	*0.300*	*0.27*	*Cum*
		1	*3.55*	*4.000*	*0.500*	*7.10*	*Cum*
		1	*0.70*	*4.000*	*1.000*	*2.80*	*Cum*
	Crest	*1*	*1.02*	*4.000*	*1.329*	*5.43*	*Cum*
	TOTAL					**94.30**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*4.000*	*0.200*	*0.64*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*16.74*	*0.450*	*0.050*	*0.38*	*Cum*
	On Abutment Top (Right Side)	*1*	*16.74*	*0.450*	*0.050*	*0.38*	*Cum*
	Slab Bridge						
	Slab	*1*	*4.80*	*5.500*	*0.328*	*8.66*	*Cum*
	Wearing coat	*1*	*4.80*	*4.500*	*0.070*	*1.51*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
	300 mm thick pedastal	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**1.39**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*20*	*34*	*5.26*		*2.466*	*441.0*	*Kg*
a2	*10*	*38*	*5.90*		*0.616*	*138.2*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*25*	*5.18*		*0.616*	*79.8*	*Kg*
a5	*10*	*21*	*5.75*		*0.616*	*74.4*	*Kg*
x1	*12*	*80*	*2.45*		*0.888*	*174.0*	*Kg*
x2	*16*	*80*	*1.39*		*1.578*	*176.0*	*Kg*
x3	*10*	*36*	*4.70*		*0.616*	*104.3*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**94.30**	**0.003**	**0.283**	**7850.0**	**2220.75**	**Kg**
	Total reinforcement (in Kg)					**3415.14**	**Kg**
	Total Weight in Metric Tonne					**3.42**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.11*		*0.450*	*2.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.11*		*1.866*	*8.30*	*Sqm*
		4		*1.010*	*1.866*	*7.54*	*Sqm*
		4	*1.11*		*0.600*	*2.67*	*Sqm*
		4		*1.720*	*0.600*	*4.13*	*Sqm*
	Section 2-2	*4*	*3.25*		*0.450*	*5.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.25*		*0.952*	*12.38*	*Sqm*
		4		*0.736*	*0.952*	*2.80*	*Sqm*
		4	*3.25*		*0.600*	*7.80*	*Sqm*
		4		*1.171*	*0.600*	*2.81*	*Sqm*
	Section 3-3	*4*	*3.07*		*0.450*	*5.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.07*		*0.752*	*9.25*	*Sqm*
		4		*0.676*	*0.752*	*2.03*	*Sqm*
		4	*3.07*		*0.500*	*6.15*	*Sqm*
		4		*1.051*	*0.500*	*2.10*	*Sqm*
	Section 5-5	*4*	*4.99*		*0.450*	*8.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.99*		*1.866*	*37.26*	*Sqm*
		4		*1.010*	*1.866*	*7.54*	*Sqm*
		4	*4.99*		*0.500*	*9.98*	*Sqm*
		4		*1.720*	*0.500*	*3.44*	*Sqm*
	Section 6-6	*4*	*3.07*		*0.450*	*5.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.07*		*0.752*	*9.24*	*Sqm*
		4		*0.676*	*0.752*	*2.03*	*Sqm*
		4	*3.07*		*0.550*	*6.76*	*Sqm*
		4		*1.051*	*0.550*	*2.31*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.000*	*0.700*	*5.60*	*Sqm*
		2	*1.66*		*0.500*	*1.66*	*Sqm*
		2		*4.000*	*0.500*	*4.00*	*Sqm*
		2	*0.10*		*0.550*	*0.11*	*Sqm*
		2		*4.000*	*0.550*	*4.40*	*Sqm*
		2	*4.49*		*0.600*	*5.39*	*Sqm*
		2		*4.000*	*0.600*	*4.80*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.000*	*0.400*	*3.20*	*Sqm*
		2	*0.23*		*0.300*	*0.14*	*Sqm*
		2		*4.000*	*0.300*	*2.40*	*Sqm*
		2	*3.55*		*0.500*	*3.55*	*Sqm*
		2		*4*	*0.500*	*4.00*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*4.000*	*1.000*	*8.00*	*Sqm*
	Crest	*2*	*1.02*		*1.329*	*2.72*	*Sqm*
		2		*4.000*	*1.329*	*10.63*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.88*		*0.300*	*7.13*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.58*		*0.600*	*13.89*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**272.08**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*4.009*		*20.05*	*Sqm*
	TOTAL					**20.05**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*3.400*	*0.300*	**2.55**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*3.400*	*0.150*	**2.55**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*16.74*	*0.450*		*7.53*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.74*	*0.450*		*7.53*	*Sqm*
	TOTAL					**15.06**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		11.514		11.51	Cum
	Abutment						
	Section 1-1	2	*1.26*	*0.607*		*1.531*	*Cum*
	Section 2-2	2	*3.25*	*0.607*		*3.946*	*Cum*
	Section 3-3	2	*3.00*	*0.436*		*2.613*	*Cum*
	Section 5-5	2	*4.81*	*0.592*		*5.696*	*Cum*
	Section 6-6	2	*2.36*	*0.436*		*2.056*	*Cum*
	Toe wall	2	*11.88*	*0.150*	*0.600*	*3.563*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**31.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.6.950 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.26*	*1.870*	*1.655*	*7.808*	*Cum*
	Section 2-2	*2*	*3.25*	*1.321*	*1.655*	*14.211*	*Cum*
	Section 3-3	*2*	*3.00*	*1.201*	*1.455*	*10.485*	*Cum*
	Section 5-5	*2*	*4.81*	*2.020*	*1.655*	*32.167*	*Cum*
	Section 6-6	*2*	*2.36*	*1.201*	*1.455*	*8.253*	*Cum*
	U/S Key Floor	*1*	*0.63*	*4.000*	*0.850*	*2.125*	*Cum*
	U/S Floor	*1*	*3.00*	*4.000*	*1.850*	*22.200*	*Cum*
	D/S Floor	*1*	*3.25*	*4.000*	*0.700*	*9.100*	*Cum*
		1	*3.75*	*4.000*	*0.550*	*8.250*	*Cum*
	D/S Key Floor	*1*	*0.70*	*4.000*	*1.150*	*3.220*	*Cum*
	Toe Wall D/S Portion	*1*	*11.88*	*0.750*	*0.900*	*8.016*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**128.09**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
		1	*0.78*	*4.000*	*0.150*	*0.47*	*Cum*
		1	*0.70*	*4.000*	*0.150*	*0.42*	*Cum*
		1	*0.14*	*4.000*	*0.150*	*0.08*	*Cum*
		1	*4.70*	*4.000*	*0.150*	*2.82*	*Cum*
		1	*0.42*	*4.000*	*0.150*	*0.25*	*Cum*
		1	*2.26*	*4.000*	*0.150*	*1.36*	*Cum*
		1	*1.12*	*4.000*	*0.150*	*0.67*	*Cum*
		1	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.26*	*1.870*	*0.150*	*0.71*	*Cum*
	Section 2-2	*2*	*3.25*	*1.321*	*0.150*	*1.29*	*Cum*
	Section 3-3	*2*	*3.00*	*1.201*	*0.150*	*1.08*	*Cum*
	Section 5-5	*2*	*4.81*	*2.020*	*0.150*	*2.92*	*Cum*
	Section 6-6	*2*	*2.36*	*1.201*	*0.150*	*0.85*	*Cum*
	Toe Wall D/S Portion	*1*	*11.88*	*0.750*	*0.300*	*2.67*	*Cum*
	Toe Wall D/S Portion	*1*	*11.58*	*0.450*	*0.600*	*3.13*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**20.71**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.11*	*0.450*	*0.450*	*0.45*	*Cum*
		2	*1.11*	*1.010*	*1.866*	*4.19*	*Cum*
		2	*1.11*	*1.720*	*0.600*	*2.29*	*Cum*
	Section 2-2	*2*	*3.25*	*0.450*	*0.450*	*1.32*	*Cum*
		2	*3.25*	*0.736*	*0.952*	*4.55*	*Cum*
		2	*3.25*	*1.171*	*0.600*	*4.57*	*Cum*
	Section 3-3	*2*	*3.07*	*0.450*	*0.450*	*1.25*	*Cum*
		2	*3.07*	*0.676*	*0.752*	*3.12*	*Cum*
		2	*3.07*	*1.051*	*0.500*	*3.23*	*Cum*
	Section 5-5	*2*	*4.99*	*0.450*	*0.450*	*2.02*	*Cum*
		2	*4.99*	*1.010*	*1.866*	*18.82*	*Cum*
		2	*4.99*	*1.720*	*0.500*	*8.59*	*Cum*
	Section 6-6	*2*	*3.07*	*0.450*	*0.450*	*1.24*	*Cum*
		2	*3.07*	*0.676*	*0.752*	*3.12*	*Cum*
		2	*3.07*	*1.051*	*0.550*	*3.55*	*Cum*
	Floor	*1*	*0.63*	*4.000*	*0.700*	*1.75*	*Cum*
		1	*1.66*	*4.000*	*0.500*	*3.31*	*Cum*
		1	*0.10*	*4.000*	*0.550*	*0.22*	*Cum*
		1	*4.49*	*4.000*	*0.600*	*10.78*	*Cum*
		1	*0.20*	*4.000*	*0.400*	*0.32*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.23*	*4.000*	*0.300*	*0.27*	*Cum*
		1	*3.55*	*4.000*	*0.500*	*7.10*	*Cum*
		1	*0.70*	*4.000*	*1.000*	*2.80*	*Cum*
	Crest	*1*	*1.02*	*4.000*	*1.329*	*5.43*	*Cum*
	TOTAL					**94.30**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*4.000*	*0.200*	*0.64*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.24*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.24*	*0.450*	*0.050*	*0.25*	*Cum*
	Slab Bridge						
	TOTAL					**1.15**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**94.30**	**0.003**	**0.283**	**7850.0**	**2220.7**	**Kg**
	Total Reinforcement Steel (in kg)					*2220.7*	*Kg*
	Total Weight in Metric Tonne					**2.22**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.11*		*0.450*	*2.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.11*		*1.866*	*8.30*	*Sqm*
		4		*1.010*	*1.866*	*7.54*	*Sqm*
		4	*1.11*		*0.600*	*2.67*	*Sqm*
		4		*1.720*	*0.600*	*4.13*	*Sqm*
	Section 2-2	*4*	*3.25*		*0.450*	*5.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.25*		*0.952*	*12.38*	*Sqm*
		4		*0.736*	*0.952*	*2.80*	*Sqm*
		4	*3.25*		*0.600*	*7.80*	*Sqm*
		4		*1.171*	*0.600*	*2.81*	*Sqm*
	Section 3-3	*4*	*3.07*		*0.450*	*5.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.07*		*0.752*	*9.25*	*Sqm*
		4		*0.676*	*0.752*	*2.03*	*Sqm*
		4	*3.07*		*0.500*	*6.15*	*Sqm*
		4		*1.051*	*0.500*	*2.10*	*Sqm*
	Section 5-5	*4*	*4.99*		*0.450*	*8.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.99*		*1.866*	*37.26*	*Sqm*
		4		*1.010*	*1.866*	*7.54*	*Sqm*
		4	*4.99*		*0.500*	*9.98*	*Sqm*
		4		*1.720*	*0.500*	*3.44*	*Sqm*
	Section 6-6	*4*	*3.07*		*0.450*	*5.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.07*		*0.752*	*9.24*	*Sqm*
		4		*0.676*	*0.752*	*2.03*	*Sqm*
		4	*3.07*		*0.550*	*6.76*	*Sqm*
		4		*1.051*	*0.550*	*2.31*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.000*	*0.700*	*5.60*	*Sqm*
		2	*1.66*		*0.500*	*1.66*	*Sqm*
		2		*4.000*	*0.500*	*4.00*	*Sqm*
		2	*0.10*		*0.550*	*0.11*	*Sqm*
		2		*4.000*	*0.550*	*4.40*	*Sqm*
		2	*4.49*		*0.600*	*5.39*	*Sqm*
		2		*4.000*	*0.600*	*4.80*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.000*	*0.400*	*3.20*	*Sqm*
		2	*0.23*		*0.300*	*0.14*	*Sqm*
		2		*4.000*	*0.300*	*2.40*	*Sqm*
		2	*3.55*		*0.500*	*3.55*	*Sqm*
		2		*4*	*0.500*	*4.00*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*4.000*	*1.000*	*8.00*	*Sqm*
	Crest	*2*	*1.02*		*1.329*	*2.72*	*Sqm*
		2		*4.000*	*1.329*	*10.63*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.88*		*0.300*	*7.13*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.58*		*0.600*	*13.89*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**272.08**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*4.009*		*20.05*	*Sqm*
	TOTAL					**20.05**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*3.400*	*0.300*	**2.55**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*3.400*	*0.150*	**2.55**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.24*	*0.450*		*5.06*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.24*	*0.450*		*5.06*	*Sqm*
	TOTAL					**10.12**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		11.514		11.51	Cum
	Abutment						
	Section 1-1	2	*1.26*	*0.607*		*1.531*	*Cum*
	Section 2-2	2	*3.25*	*0.607*		*3.946*	*Cum*
	Section 3-3	2	*3.00*	*0.436*		*2.613*	*Cum*
	Section 5-5	2	*4.81*	*0.592*		*5.696*	*Cum*
	Section 6-6	2	*2.36*	*0.436*		*2.056*	*Cum*
	Toe wall	2	*11.88*	*0.150*	*0.600*	*3.563*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**31.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.7.900 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.00*	*1.619*	*1.220*	*3.937*	*Cum*
	Section 2-2	*2*	*2.75*	*1.254*	*1.220*	*8.414*	*Cum*
	Section 3-3	*2*	*2.30*	*1.134*	*1.020*	*5.321*	*Cum*
	Section 5-5	*2*	*4.53*	*1.769*	*1.220*	*19.568*	*Cum*
	Section 6-6	*2*	*2.41*	*1.134*	*1.020*	*5.566*	*Cum*
	U/S Key Floor	*1*	*0.63*	*3.050*	*0.850*	*1.620*	*Cum*
	U/S Floor	*1*	*2.65*	*3.050*	*1.220*	*9.861*	*Cum*
	D/S Floor	*1*	*2.75*	*3.050*	*0.650*	*5.452*	*Cum*
		1	*2.60*	*3.050*	*0.650*	*5.155*	*Cum*
	D/S Key Floor	*1*	*0.63*	*3.050*	*0.850*	*1.620*	*Cum*
	Toe Wall D/S Portion	*1*	*10.13*	*0.750*	*0.900*	*6.838*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
	TOTAL					**75.15**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*3.050*	*0.150*	*0.25*	*Cum*
		1	*0.78*	*3.050*	*0.150*	*0.36*	*Cum*
		1	*4.78*	*3.050*	*0.150*	*2.19*	*Cum*
		1	*0.28*	*3.050*	*0.150*	*0.13*	*Cum*
		1	*1.24*	*3.050*	*0.150*	*0.57*	*Cum*
		1	*0.78*	*3.050*	*0.150*	*0.36*	*Cum*
		1	*0.54*	*3.050*	*0.150*	*0.25*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.00*	*1.619*	*0.150*	*0.48*	*Cum*
	Section 2-2	*2*	*2.75*	*1.254*	*0.150*	*1.03*	*Cum*
	Section 3-3	*2*	*2.30*	*1.134*	*0.150*	*0.78*	*Cum*
	Section 5-5	*2*	*4.53*	*1.769*	*0.150*	*2.41*	*Cum*
	Section 6-6	*2*	*2.41*	*1.134*	*0.150*	*0.82*	*Cum*
	Toe Wall D/S Portion	*1*	*10.13*	*0.750*	*0.300*	*2.28*	*Cum*
	Toe Wall D/S Portion	*1*	*9.83*	*0.450*	*0.600*	*2.65*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**15.63**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.85*	*0.450*	*0.450*	*0.34*	*Cum*
		2	*0.85*	*0.885*	*1.449*	*2.17*	*Cum*
		2	*0.85*	*1.469*	*0.500*	*1.24*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.702*	*0.840*	*3.24*	*Cum*
		2	*2.75*	*1.104*	*0.500*	*3.04*	*Cum*
	Section 3-3	*2*	*1.96*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.96*	*0.642*	*0.640*	*1.61*	*Cum*
		2	*1.96*	*0.984*	*0.500*	*1.93*	*Cum*
	Section 5-5	*2*	*4.80*	*0.450*	*0.450*	*1.95*	*Cum*
		2	*4.80*	*0.885*	*1.449*	*12.32*	*Cum*
		2	*4.80*	*1.469*	*0.500*	*7.06*	*Cum*
	Section 6-6	*2*	*2.90*	*0.450*	*0.450*	*1.17*	*Cum*
		2	*2.90*	*0.642*	*0.640*	*2.38*	*Cum*
		2	*2.90*	*0.984*	*0.500*	*2.85*	*Cum*
	Floor	*1*	*0.63*	*3.050*	*0.700*	*1.33*	*Cum*
		1	*5.40*	*3.050*	*0.500*	*8.24*	*Cum*
		1	*0.20*	*3.050*	*0.400*	*0.24*	*Cum*
		1	*0.31*	*3.050*	*0.200*	*0.19*	*Cum*
		1	*2.40*	*3.050*	*0.500*	*3.66*	*Cum*
		1	*0.63*	*3.050*	*0.700*	*1.33*	*Cum*
	Crest	*1*	*0.76*	*3.050*	*0.979*	*2.28*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**60.48**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*3.050*	*0.200*	*0.37*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.82*	*0.450*	*0.050*	*0.31*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.82*	*0.450*	*0.050*	*0.31*	*Cum*
	TOTAL					**0.99**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**60.48**	**0.00**	**0.181**	**7850.0**	**1424.20**	**Kg**
	Total Weight in Metric Tonne					**1.42**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.85*		*0.450*	*1.52*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.85*		*1.449*	*4.91*	*Sqm*
		4		*0.885*	*1.449*	*5.13*	*Sqm*
		4	*0.85*		*0.500*	*1.69*	*Sqm*
		4		*1.469*	*0.500*	*2.94*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.840*	*9.24*	*Sqm*
		4		*0.702*	*0.840*	*2.36*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*1.104*	*0.500*	*2.21*	*Sqm*
	Section 3-3	*4*	*1.96*		*0.450*	*3.52*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.96*		*0.640*	*5.01*	*Sqm*
		4		*0.642*	*0.640*	*1.64*	*Sqm*
		4	*1.96*		*0.500*	*3.92*	*Sqm*
		4		*0.984*	*0.500*	*1.97*	*Sqm*
	Section 5-5	*4*	*4.80*		*0.450*	*8.65*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.80*		*1.449*	*27.85*	*Sqm*
		4		*0.885*	*1.449*	*5.13*	*Sqm*
		4	*4.80*		*0.500*	*9.61*	*Sqm*
		4		*1.469*	*0.500*	*2.94*	*Sqm*
	Section 6-6	*4*	*2.90*		*0.450*	*5.22*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.90*		*0.640*	*7.42*	*Sqm*
		4		*0.642*	*0.640*	*1.64*	*Sqm*
		4	*2.90*		*0.500*	*5.80*	*Sqm*
		4		*0.984*	*0.500*	*1.97*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*3.050*	*0.700*	*4.27*	*Sqm*
		2	*5.40*		*0.500*	*5.40*	*Sqm*
		2		*3.050*	*0.500*	*3.05*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*3.050*	*0.400*	*2.44*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*3.050*	*0.200*	*1.22*	*Sqm*
		2	*2.4*		*0.500*	*2.40*	*Sqm*
		2		*3.05*	*0.500*	*3.05*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*3.050*	*0.700*	*4.27*	*Sqm*
	Crest	*2*	*0.76*		*0.979*	*1.49*	*Sqm*
		2		*3.050*	*0.979*	*5.97*	*Sqm*
	Toe Wall D/S Portion	*2*	*10.13*		*0.300*	*6.08*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.83*		*0.600*	*11.80*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**198.31**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*3.583*		*14.33*	*Sqm*
	TOTAL					**14.33**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*2.450*	*0.300*	**1.47**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*2.450*	*0.150*	**1.47**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.82*	*0.450*		*6.22*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.82*	*0.450*		*6.22*	*Sqm*
	TOTAL					**12.44**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		6.383		6.38	Cum
	Abutment						
	Section 1-1	2	*1.00*	*0.336*		*0.670*	*Cum*
	Section 2-2	2	*2.75*	*0.343*		*1.887*	*Cum*
	Section 3-3	2	*2.30*	*0.343*		*1.578*	*Cum*
	Section 5-5	2	*4.53*	*0.336*		*3.047*	*Cum*
	Section 6-6	2	*2.41*	*0.343*		*1.651*	*Cum*
	Toe wall	2	*10.13*	*0.150*	*0.600*	*3.039*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**18.61**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	WELL TYPE FALL OF HEIGHT 1.828 METER AT CH.8.382 KM						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*240.00*			**240.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*3.05*	*0.75*	*1.71*	*3.92*	*Cum*
	D/S Toe Wall	*1*	*3.05*	*0.75*	*1.20*	*2.75*	*Cum*
	PCC Below Well Portion (U/S)	*1*	*2.50*	*2.50*	*4.62*	*28.86*	*Cum*
	PCC Below Well Portion (D/S)	*1*	*2.20*	*2.20*	*2.73*	*13.21*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.72*	*3.10*	*4.82*	*110.97*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.72*	*2.41*	*4.82*	*86.24*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*3.39*	*1.97*	*2.93*	*39.10*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.39*	*1.47*	*2.93*	*29.10*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.00*	*3.05*	*0.45*	*2.75*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.05*	*2.82*	*0.45*	*3.87*	*Cum*
	Below Canal Bed	*1*	*7.70*		*1.83*	*14.09*	*Cum*
	TOTAL					**334.85**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*3.05*	*0.75*	*0.30*	*0.69*	*Cum*
	U/S Toe Wall Stem	*1*	*3.05*	*0.45*	*1.41*	*1.94*	*Cum*
	D/S Toe Wall	*1*	*2.82*	*0.75*	*0.30*	*0.63*	*Cum*
	D/S Toe Wall Stem	*1*	*2.82*	*0.45*	*0.90*	*1.14*	*Cum*
	PCC Below Well Portion (U/S)	*1*	*2.50*	*2.50*	*0.15*	*0.94*	*Cum*
	PCC Below Well Portion (D/S)	*1*	*2.20*	*2.20*	*0.15*	*0.73*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.00*	*3.05*	*0.45*	*2.75*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.05*	*2.82*	*0.45*	*3.87*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.72*	*3.10*	*0.15*	*3.45*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*3.39*	*1.97*	*0.15*	*2.00*	*Cum*
	PCC Below Hume Pipe	*1*	*19.25*	*1.83*	*0.30*	*10.57*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*19.25*	*0.63*	*0.37*	*8.90*	*Cum*
	TOTAL					**37.61**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S well base	*1*	*2.20*	*2.20*	*0.20*	*0.97*	*Cum*
	U/S well Wall	*1*	*2.20*	*2.20*	*1.97*	*9.51*	*Cum*
		1	*2.20*	*2.20*	*1.37*	*6.61*	*Cum*
		1	*2.20*	*2.20*	*1.14*	*5.52*	*Cum*
	Deduct Well	*1*	*1.00*	*1.00*	*4.47*	*-4.47*	*Cum*
	Deduct Pipe in well portion	*1*	*0.79*		*0.45*	*-0.35*	*Cum*
	Deduct one side well wall	*1*	*2.20*	*0.30*	*1.14*	*-0.75*	*Cum*
	D/S well base	*1*	*1.90*	*1.90*	*0.20*	*0.72*	*Cum*
	D/S well Wall	*1*	*1.90*	*1.90*	*2.58*	*9.31*	*Cum*
	Deduct Well	*1*	*1.00*	*1.00*	*2.58*	*-2.58*	*Cum*
	Deduct Pipe in well portion Wall	*1*	*0.79*		*0.30*	*-0.24*	*Cum*
	Deduct one side well wall	*1*	*1.90*	*0.30*	*0.97*	*-0.55*	*Cum*
	U/S Transition Walls (Left & Right)						
	Section X-X	*2*	*3.72*	*0.30*	*0.50*	*1.11*	*Cum*
		2	*3.72*	*1.55*	*4.17*	*48.00*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section Y-Y	*2*	*3.39*	*0.30*	*0.50*	*1.02*	*Cum*
		2	*3.39*	*0.98*	*2.28*	*15.21*	*Cum*
	Collar Joint	*7*	*1.83*	*0.30*	*1.05*	*4.04*	*Cum*
	Deduct Hume Pipe Area	*1*	*0.79*		*0.30*	*-0.24*	*Cum*
	TOTAL					**92.84**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Toe Wall	*2*	*3.05*		*0.30*	*1.83*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	U/S Toe Wall Stem	*2*	*3.05*		*1.41*	*8.62*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.45*	*1.41*	*1.27*	*Sqm*
	D/S Toe Wall	*2*	*2.82*		*0.30*	*1.69*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	D/S Toe Wall Stem	*2*	*2.82*		*0.90*	*5.08*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2*		*0.45*	*1.80*	*Sqm*
		2		*3.05*	*0.45*	*2.75*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.05*		*0.45*	*2.75*	*Sqm*
		2		*2.82*	*0.45*	*2.54*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*3.72*		*0.50*	*7.43*	*Sqm*
		4		*0.3*	*0.50*	*0.60*	*Sqm*
		4	*3.72*		*4.17*	*61.94*	*Sqm*
		4		*1.55*	*4.17*	*25.84*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*3.39*		*0.50*	*6.78*	*Sqm*
		4		*0.3*	*0.50*	*0.60*	*Sqm*
		4	*3.39*		*2.28*	*30.92*	*Sqm*
		4		*0.98*	*2.28*	*8.97*	*Sqm*
	PCC Below Hume Pipe	*2*	*19.25*		*0.30*	*11.55*	*Sqm*
		2		*1.83*	*0.30*	*1.10*	*Sqm*
	Deduct Hume Pipe Area	*4*	*19.25*		*0.37*	*28.11*	*Sqm*
		4		*0.63*	*0.37*	*0.92*	*Sqm*
	U/S well Wall	*8*	*2.2*		*4.47*	*78.64*	*Sqm*
		8		*2.20*	*4.47*	*78.64*	*Sqm*
	D/S well Wall	*8*	*1.9*		*2.58*	*39.22*	*Sqm*
		8		*1.90*	*2.58*	*39.22*	*Sqm*
	TOTAL					**450.49**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*69.38*	*0.25%*	*0.17*	*7850*	*1361.55*	*Kg*
	1.5 % Skin Reinforcement for Well Wall	*22.73*	*1.50%*	*0.34*	*7851*	*2676.96*	*Kg*
	TOTAL Weight of steel (in kg)					4038.52	Kg
	TOTAL Weight of Steel (in Tonne)					**4.04**	**MT**
7	Providing 1000 mm RCC NP4 pipe	8		2.50		20	Rm
	TOTAL					**20.00**	**Rm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.72*	*0.70*		*5.20*	*Cum*
	D/S Transitions Walls	*2*	*3.39*	*0.41*		*2.78*	*Cum*
	Above Hume Pipe	*1*	*41.25*		*1.83*	*75.49*	*Cum*
	TOTAL					**83.47**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.9.240 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.99*	*1.584*	*1.116*	*3.509*	*Cum*
	Section 2-2	*2*	*2.75*	*1.218*	*1.116*	*7.476*	*Cum*
	Section 3-3	*2*	*1.95*	*1.098*	*0.916*	*3.922*	*Cum*
	Section 5-5	*2*	*4.24*	*1.734*	*1.116*	*16.426*	*Cum*
	Section 6-6	*2*	*2.23*	*1.098*	*0.916*	*4.490*	*Cum*
	U/S Key Floor	*1*	*2.00*	*2.820*	*0.850*	*4.794*	*Cum*
	U/S Floor	*1*	*2.65*	*2.820*	*1.116*	*8.340*	*Cum*
	D/S Floor	*1*	*2.10*	*2.820*	*0.650*	*3.849*	*Cum*
		1	*2.25*	*2.820*	*0.650*	*4.124*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.820*	*0.850*	*1.498*	*Cum*
	Toe Wall D/S Portion	*1*	*9.48*	*0.750*	*0.900*	*6.399*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
	TOTAL					**66.40**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.820*	*0.150*	*0.23*	*Cum*
		1	*0.78*	*2.820*	*0.150*	*0.33*	*Cum*
		1	*4.13*	*2.820*	*0.150*	*1.75*	*Cum*
		1	*0.28*	*2.820*	*0.150*	*0.12*	*Cum*
		1	*0.89*	*2.820*	*0.150*	*0.38*	*Cum*
		1	*0.78*	*2.820*	*0.150*	*0.33*	*Cum*
		1	*0.54*	*2.820*	*0.150*	*0.23*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.584*	*0.150*	*0.47*	*Cum*
	Section 2-2	*2*	*2.75*	*1.218*	*0.150*	*1.00*	*Cum*
	Section 3-3	*2*	*1.95*	*1.098*	*0.150*	*0.64*	*Cum*
	Section 5-5	*2*	*4.24*	*1.734*	*0.150*	*2.21*	*Cum*
	Section 6-6	*2*	*2.23*	*1.098*	*0.150*	*0.74*	*Cum*
	Toe Wall D/S Portion	*1*	*9.48*	*0.750*	*0.300*	*2.13*	*Cum*
	Toe Wall D/S Portion	*1*	*9.18*	*0.450*	*0.600*	*2.48*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**13.98**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.84*	*0.450*	*0.450*	*0.34*	*Cum*
		2	*0.84*	*0.867*	*1.390*	*2.03*	*Cum*
		2	*0.84*	*1.434*	*0.500*	*1.21*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.684*	*0.780*	*2.93*	*Cum*
		2	*2.75*	*1.068*	*0.500*	*2.94*	*Cum*
	Section 3-3	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.624*	*0.580*	*1.31*	*Cum*
		2	*1.81*	*0.948*	*0.500*	*1.72*	*Cum*
	Section 5-5	*2*	*4.20*	*0.450*	*0.450*	*1.70*	*Cum*
		2	*4.20*	*0.867*	*1.390*	*10.12*	*Cum*
		2	*4.20*	*1.434*	*0.500*	*6.02*	*Cum*
	Section 6-6	*2*	*2.86*	*0.450*	*0.450*	*1.16*	*Cum*
		2	*2.86*	*0.624*	*0.580*	*2.07*	*Cum*
		2	*2.86*	*0.948*	*0.500*	*2.71*	*Cum*
	Floor	*1*	*0.63*	*2.820*	*0.700*	*1.23*	*Cum*
		1	*4.75*	*2.820*	*0.500*	*6.70*	*Cum*
		1	*0.20*	*2.820*	*0.400*	*0.23*	*Cum*
		1	*0.31*	*2.820*	*0.200*	*0.17*	*Cum*
		1	*2.05*	*2.820*	*0.500*	*2.89*	*Cum*
		1	*0.63*	*2.820*	*0.700*	*1.23*	*Cum*
	Crest	*1*	*0.76*	*2.820*	*0.945*	*2.02*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**52.57**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.820*	*0.200*	*0.34*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.96*	*0.450*	*0.050*	*0.29*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.96*	*0.450*	*0.050*	*0.29*	*Cum*
	TOTAL					**0.92**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**52.57**	**0.00**	**0.158**	**7850.0**	**1237.98**	**Kg**
	Total Weight in Metric Tonne					**1.24**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.84*		*0.450*	*1.52*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.84*		*1.390*	*4.68*	*Sqm*
		4		*0.867*	*1.390*	*4.82*	*Sqm*
		4	*0.84*		*0.500*	*1.69*	*Sqm*
		4		*1.434*	*0.500*	*2.87*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.780*	*8.58*	*Sqm*
		4		*0.684*	*0.780*	*2.13*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*1.068*	*0.500*	*2.14*	*Sqm*
	Section 3-3	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.580*	*4.20*	*Sqm*
		4		*0.624*	*0.580*	*1.45*	*Sqm*
		4	*1.81*		*0.500*	*3.62*	*Sqm*
		4		*0.948*	*0.500*	*1.90*	*Sqm*
	Section 5-5	*4*	*4.20*		*0.450*	*7.56*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.20*		*1.390*	*23.34*	*Sqm*
		4		*0.867*	*1.390*	*4.82*	*Sqm*
		4	*4.20*		*0.500*	*8.40*	*Sqm*
		4		*1.434*	*0.500*	*2.87*	*Sqm*
	Section 6-6	*4*	*2.86*		*0.450*	*5.14*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.86*		*0.580*	*6.63*	*Sqm*
		4		*0.624*	*0.580*	*1.45*	*Sqm*
		4	*2.86*		*0.500*	*5.71*	*Sqm*
		4		*0.948*	*0.500*	*1.90*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.820*	*0.700*	*3.95*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*2.820*	*0.500*	*2.82*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.820*	*0.400*	*2.26*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*2.820*	*0.200*	*1.13*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*2.82*	*0.500*	*2.82*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.820*	*0.700*	*3.95*	*Sqm*
	Crest	*2*	*0.76*		*0.945*	*1.43*	*Sqm*
		2		*2.820*	*0.945*	*5.33*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.48*		*0.300*	*5.69*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.18*		*0.600*	*11.02*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**181.69**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*3.355*		*11.74*	*Sqm*
	TOTAL					**11.74**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*2.220*	*0.300*	**1.17**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*2.220*	*0.150*	**1.17**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*12.96*	*0.450*		*5.83*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.96*	*0.450*		*5.83*	*Sqm*
	TOTAL					**11.66**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.444		3.44	Cum
	Abutment						
	Section 1-1	2	*0.99*	*0.280*		*0.556*	*Cum*
	Section 2-2	2	*2.75*	*0.280*		*1.539*	*Cum*
	Section 3-3	2	*1.95*	*0.280*		*1.092*	*Cum*
	Section 5-5	2	*4.24*	*0.280*		*2.376*	*Cum*
	Section 6-6	2	*2.23*	*0.280*		*1.249*	*Cum*
	Toe wall	2	*9.48*	*0.150*	*0.600*	*2.844*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**13.42**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.12.000 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.21*	*1.854*	*1.746*	*7.814*	*Cum*
	Section 2-2	*2*	*2.75*	*1.122*	*1.746*	*10.775*	*Cum*
	Section 3-3	*2*	*2.30*	*1.002*	*1.546*	*7.126*	*Cum*
	Section 5-5	*2*	*3.40*	*2.004*	*1.746*	*23.765*	*Cum*
	Section 6-6	*2*	*1.77*	*1.002*	*1.546*	*5.478*	*Cum*
	U/S Key Floor	*1*	*2.65*	*2.170*	*1.250*	*7.188*	*Cum*
	U/S Floor	*1*	*2.65*	*2.170*	*1.746*	*10.040*	*Cum*
	D/S Floor	*1*	*2.75*	*2.170*	*0.650*	*3.879*	*Cum*
		1	*2.60*	*2.170*	*0.650*	*3.667*	*Cum*
	D/S Key Floor	*1*	*0.78*	*2.170*	*1.450*	*2.439*	*Cum*
	Toe Wall D/S Portion	*1*	*7.71*	*0.750*	*0.900*	*5.204*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
	TOTAL					**89.17**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.170*	*0.150*	*0.18*	*Cum*
		1	*1.23*	*2.170*	*0.150*	*0.40*	*Cum*
		1	*4.65*	*2.170*	*0.150*	*1.51*	*Cum*
		1	*0.28*	*2.170*	*0.150*	*0.09*	*Cum*
		1	*0.87*	*2.170*	*0.150*	*0.28*	*Cum*
		1	*1.45*	*2.170*	*0.150*	*0.47*	*Cum*
		1	*0.54*	*2.170*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.21*	*1.854*	*0.150*	*0.67*	*Cum*
	Section 2-2	*2*	*2.75*	*1.122*	*0.150*	*0.93*	*Cum*
	Section 3-3	*2*	*2.30*	*1.002*	*0.150*	*0.69*	*Cum*
	Section 5-5	*2*	*3.40*	*2.004*	*0.150*	*2.04*	*Cum*
	Section 6-6	*2*	*1.77*	*1.002*	*0.150*	*0.53*	*Cum*
	Toe Wall D/S Portion	*1*	*7.71*	*0.750*	*0.300*	*1.73*	*Cum*
	Toe Wall D/S Portion	*1*	*7.41*	*0.450*	*0.600*	*2.00*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**12.79**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.06*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.06*	*1.002*	*1.840*	*3.90*	*Cum*
		2	*1.06*	*1.704*	*0.500*	*1.80*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.636*	*0.620*	*2.17*	*Cum*
		2	*2.75*	*0.972*	*0.500*	*2.67*	*Cum*
	Section 3-3	*2*	*2.02*	*0.450*	*0.450*	*0.82*	*Cum*
		2	*2.02*	*0.576*	*0.420*	*0.98*	*Cum*
		2	*2.02*	*0.852*	*0.500*	*1.72*	*Cum*
	Section 5-5	*2*	*3.35*	*0.450*	*0.450*	*1.36*	*Cum*
		2	*3.35*	*1.002*	*1.840*	*12.36*	*Cum*
		2	*3.35*	*1.704*	*0.500*	*5.71*	*Cum*
	Section 6-6	*2*	*2.19*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.19*	*0.576*	*0.420*	*1.06*	*Cum*
		2	*2.19*	*0.852*	*0.550*	*2.06*	*Cum*
	Floor	*1*	*0.73*	*2.170*	*1.100*	*1.73*	*Cum*
		1	*5.40*	*2.170*	*0.500*	*5.86*	*Cum*
		1	*0.20*	*2.170*	*0.400*	*0.17*	*Cum*
		1	*0.38*	*2.170*	*0.200*	*0.16*	*Cum*
		1	*2.40*	*2.170*	*0.500*	*2.60*	*Cum*
		1	*0.78*	*2.170*	*1.300*	*2.19*	*Cum*
	Crest	*1*	*0.94*	*2.170*	*1.455*	*2.98*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**54.74**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*2.170*	*0.200*	*0.30*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.22*	*0.450*	*0.050*	*0.28*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.22*	*0.450*	*0.050*	*0.28*	*Cum*
	TOTAL					**0.85**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**54.74**	**0.00**	**0.164**	**7850.0**	**1289.06**	**Kg**
	Total Weight in Metric Tonne					**1.29**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.06*		*0.450*	*1.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.06*		*1.840*	*7.78*	*Sqm*
		4		*1.002*	*1.840*	*7.37*	*Sqm*
		4	*1.06*		*0.500*	*2.11*	*Sqm*
		4		*1.704*	*0.500*	*3.41*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.620*	*6.82*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*0.972*	*0.500*	*1.94*	*Sqm*
	Section 3-3	*4*	*2.02*		*0.450*	*3.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.02*		*0.420*	*3.40*	*Sqm*
		4		*0.576*	*0.420*	*0.97*	*Sqm*
		4	*2.02*		*0.500*	*4.05*	*Sqm*
		4		*0.852*	*0.500*	*1.70*	*Sqm*
	Section 5-5	*4*	*3.35*		*0.450*	*6.03*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.35*		*1.840*	*24.67*	*Sqm*
		4		*1.002*	*1.840*	*7.37*	*Sqm*
		4	*3.35*		*0.500*	*6.71*	*Sqm*
		4		*1.704*	*0.500*	*3.41*	*Sqm*
	Section 6-6	*4*	*2.19*		*0.450*	*3.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.19*		*0.420*	*3.69*	*Sqm*
		4		*0.576*	*0.420*	*0.97*	*Sqm*
		4	*2.19*		*0.550*	*4.83*	*Sqm*
		4		*0.852*	*0.550*	*1.87*	*Sqm*
	Floor	*2*	*0.73*		*1.100*	*1.60*	*Sqm*
		2		*2.170*	*1.100*	*4.77*	*Sqm*
		2	*5.40*		*0.500*	*5.40*	*Sqm*
		2		*2.170*	*0.500*	*2.17*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.170*	*0.400*	*1.74*	*Sqm*
		2	*0.38*		*0.200*	*0.15*	*Sqm*
		2		*2.170*	*0.200*	*0.87*	*Sqm*
		2	*2.4*		*0.500*	*2.40*	*Sqm*
		2		*2.17*	*0.500*	*2.17*	*Sqm*
		2	*0.78*		*1.300*	*2.02*	*Sqm*
		2		*2.170*	*1.300*	*5.64*	*Sqm*
	Crest	*2*	*0.94*		*1.455*	*2.74*	*Sqm*
		2		*2.170*	*1.455*	*6.31*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.71*		*0.300*	*4.63*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.41*		*0.600*	*8.89*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**184.41**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.748*		*10.99*	*Sqm*
	TOTAL					**10.99**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.570*	*0.300*	**0.94**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*1.570*	*0.150*	**0.94**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*12.22*	*0.450*		*5.50*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.22*	*0.450*		*5.50*	*Sqm*
	TOTAL					**11.00**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		8.179		8.18	**Cum**
	Abutment						
	Section 1-1	2	*1.21*	*0.750*		*1.811*	*Cum*
	Section 2-2	2	*2.75*	*0.696*		*3.828*	*Cum*
	Section 3-3	2	*2.30*	*0.529*		*2.433*	*Cum*
	Section 5-5	2	*3.40*	*0.750*		*5.094*	*Cum*
	Section 6-6	2	*1.77*	*0.529*		*1.871*	*Cum*
	Toe wall	2	*7.71*	*0.150*	*0.600*	*2.313*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**25.89**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL / CULVERT OF HEIGHT 0.610 METER AT CH.12.689 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.08*	*1.488*	*1.044*	*3.342*	*Cum*
	Section 2-2	*2*	*2.00*	*1.086*	*1.044*	*4.535*	*Cum*
	Section 3-3	*2*	*5.20*	*0.966*	*0.844*	*8.479*	*Cum*
	Section 5-5	*2*	*3.59*	*1.638*	*1.044*	*12.285*	*Cum*
	Section 6-6	*2*	*1.22*	*0.966*	*0.844*	*1.996*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.000*	*0.850*	*1.063*	*Cum*
	U/S Floor	*1*	*2.65*	*2.000*	*1.044*	*5.533*	*Cum*
	D/S Floor	*1*	*2.00*	*2.000*	*0.650*	*2.600*	*Cum*
		1	*5.50*	*2.000*	*0.650*	*7.150*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.000*	*0.850*	*1.063*	*Cum*
	Toe Wall D/S Portion	*1*	*7.12*	*0.750*	*0.900*	*4.806*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.25*	*0.600*	*0.750*	*1.125*	*Cum*
	TOTAL					**53.98**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.000*	*0.150*	*0.16*	*Cum*
		1	*0.78*	*2.000*	*0.150*	*0.23*	*Cum*
		1	*3.95*	*2.000*	*0.150*	*1.18*	*Cum*
		1	*0.28*	*2.000*	*0.150*	*0.08*	*Cum*
		1	*4.22*	*2.000*	*0.150*	*1.27*	*Cum*
		1	*0.78*	*2.000*	*0.150*	*0.23*	*Cum*
		1	*0.54*	*2.000*	*0.150*	*0.16*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.08*	*1.488*	*0.150*	*0.48*	*Cum*
	Section 2-2	*2*	*2.00*	*1.086*	*0.150*	*0.65*	*Cum*
	Section 3-3	*2*	*5.20*	*0.966*	*0.150*	*1.51*	*Cum*
	Section 5-5	*2*	*3.59*	*1.638*	*0.150*	*1.77*	*Cum*
	Section 6-6	*2*	*1.22*	*0.966*	*0.150*	*0.35*	*Cum*
	Toe Wall D/S Portion	*1*	*7.12*	*0.750*	*0.300*	*1.60*	*Cum*
	Toe Wall D/S Portion	*1*	*6.82*	*0.450*	*0.600*	*1.84*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.600*	*0.150*	*0.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.300*	*0.600*	*0.45*	*Cum*
	TOTAL					**12.21**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.93*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.93*	*0.819*	*1.230*	*1.86*	*Cum*
		2	*0.93*	*1.338*	*0.500*	*1.24*	*Cum*
	Section 2-2	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.618*	*0.560*	*1.38*	*Cum*
		2	*2.00*	*0.936*	*0.550*	*2.06*	*Cum*
	Section 3-3	*2*	*5.02*	*0.450*	*0.450*	*2.03*	*Cum*
		2	*5.02*	*0.558*	*0.360*	*2.02*	*Cum*
		2	*5.02*	*0.816*	*0.500*	*4.09*	*Cum*
	Section 5-5	*2*	*3.55*	*0.450*	*0.450*	*1.44*	*Cum*
		2	*3.55*	*0.819*	*1.230*	*7.15*	*Cum*
		2	*3.55*	*1.338*	*0.500*	*4.75*	*Cum*
	Section 6-6	*2*	*1.82*	*0.450*	*0.450*	*0.74*	*Cum*
		2	*1.82*	*0.558*	*0.360*	*0.73*	*Cum*
		2	*1.82*	*0.816*	*0.500*	*1.48*	*Cum*
	Floor	*1*	*0.63*	*2.000*	*0.700*	*0.88*	*Cum*
		1	*4.65*	*2.000*	*0.500*	*4.65*	*Cum*
		1	*0.20*	*2.000*	*0.400*	*0.16*	*Cum*
		1	*0.23*	*2.000*	*0.300*	*0.14*	*Cum*
		1	*5.30*	*2.000*	*0.500*	*5.30*	*Cum*
		1	*0.63*	*2.000*	*0.700*	*0.88*	*Cum*
	Crest	*1*	*0.84*	*2.000*	*0.885*	*1.49*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**45.63**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*2.000*	*0.150*	*0.21*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.58*	*0.450*	*0.050*	*0.19*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.58*	*0.450*	*0.050*	*0.19*	*Cum*
	Slab Bridge						
	Slab	*1*	*2.80*	*5.500*	*0.328*	*5.05*	*Cum*
	Wearing coat	*1*	*2.80*	*4.500*	*0.070*	*0.88*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
	300 mm thick pedastal	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**10.56**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*30*	*3.26*		*1.578*	*154.3*	*Kg*
a2	*10*	*14*	*5.84*		*0.616*	*50.4*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.12*		*0.616*	*36.5*	*Kg*
a5	*10*	*10*	*5.75*		*0.616*	*35.4*	*Kg*
x1	*12*	*46*	*2.50*		*0.888*	*102.1*	*Kg*
x2	*16*	*46*	*1.27*		*1.578*	*91.8*	*Kg*
x3	*10*	*36*	*2.70*		*0.616*	*59.9*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**45.63**	**0.003**	**0.137**	**7850.0**	**1074.7**	**Kg**
	Total Reinforcement Steel (in kg)					*1611.9*	*Kg*
	Total Weight in Metric Tonne					**1.61**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.93*		*0.450*	*1.67*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.93*		*1.230*	*4.55*	*Sqm*
		4		*0.819*	*1.230*	*4.03*	*Sqm*
		4	*0.93*		*0.500*	*1.85*	*Sqm*
		4		*1.338*	*0.500*	*2.68*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*0.560*	*4.48*	*Sqm*
		4		*0.618*	*0.560*	*1.38*	*Sqm*
		4	*2.00*		*0.550*	*4.40*	*Sqm*
		4		*0.936*	*0.550*	*2.06*	*Sqm*
	Section 3-3	*4*	*5.02*		*0.450*	*9.03*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.02*		*0.360*	*7.22*	*Sqm*
		4		*0.558*	*0.360*	*0.80*	*Sqm*
		4	*5.02*		*0.500*	*10.03*	*Sqm*
		4		*0.816*	*0.500*	*1.63*	*Sqm*
	Section 5-5	*4*	*3.55*		*0.450*	*6.39*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.55*		*1.230*	*17.45*	*Sqm*
		4		*0.819*	*1.230*	*4.03*	*Sqm*
		4	*3.55*		*0.500*	*7.10*	*Sqm*
		4		*1.338*	*0.500*	*2.68*	*Sqm*
	Section 6-6	*4*	*1.82*		*0.450*	*3.27*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.82*		*0.360*	*2.62*	*Sqm*
		4		*0.558*	*0.360*	*0.80*	*Sqm*
		4	*1.82*		*0.500*	*3.63*	*Sqm*
		4		*0.816*	*0.500*	*1.63*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.000*	*0.700*	*2.80*	*Sqm*
		2	*4.65*		*0.500*	*4.65*	*Sqm*
		2		*2.000*	*0.500*	*2.00*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.000*	*0.400*	*1.60*	*Sqm*
		2	*0.23*		*0.300*	*0.14*	*Sqm*
		2		*2.000*	*0.300*	*1.20*	*Sqm*
		2	*5.3*		*0.500*	*5.30*	*Sqm*
		2		*2*	*0.500*	*2.00*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.000*	*0.700*	*2.80*	*Sqm*
	Crest	*2*	*0.84*		*0.885*	*1.49*	*Sqm*
		2		*2.000*	*0.885*	*3.54*	*Sqm*
	Slab	*2*	*2.8*		*0.328*	*1.84*	*Sqm*
		2		*5.5*	*0.328*	*3.61*	*Sqm*
	Dirt wall	*4*	*0.4*		*0.3*	*0.48*	*Sqm*
		4		*5.5*	*0.300*	*6.60*	*Sqm*
	300 mm thick pedastal	*4*	*0.82*		*0.3*	*0.98*	*Sqm*
		4		*5.5*	*0.300*	*6.60*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.12*		*0.300*	*4.27*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.82*		*0.600*	*8.18*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.150*	*0.75*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.600*	*3.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**180.88**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.25*	*2.518*		*6.30*	*Sqm*
	TOTAL					**6.30**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.25*	*1.400*	*0.300*	**0.53**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.25*	*1.400*	*0.150*	**0.53**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.58*	*0.450*		*3.86*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.58*	*0.450*		*3.86*	*Sqm*
	TOTAL					**7.72**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.739		4.74	Cum
	Abutment						
	Section 1-1	2	*1.08*	*0.239*		*0.514*	*Cum*
	Section 2-2	2	*2.00*	*0.239*		*0.956*	*Cum*
	Section 3-3	2	*5.20*	*0.249*		*2.590*	*Cum*
	Section 5-5	2	*3.59*	*0.239*		*1.717*	*Cum*
	Section 6-6	2	*1.22*	*0.249*		*0.610*	*Cum*
	Toe wall	2	*7.12*	*0.150*	*0.600*	*2.136*	*Cum*
		2	*1.25*	0.150	*0.600*	*0.225*	*Cum*
	TOTAL					**13.49**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.13.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.12*	*1.428*	*1.356*	*4.337*	*Cum*
	Section 2-2	*2*	*2.20*	*1.062*	*1.356*	*6.336*	*Cum*
	Section 3-3	*2*	*2.85*	*0.942*	*1.156*	*6.207*	*Cum*
	Section 5-5	*2*	*2.99*	*1.578*	*1.356*	*12.792*	*Cum*
	Section 6-6	*2*	*1.48*	*0.942*	*1.156*	*3.219*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.800*	*0.850*	*0.956*	*Cum*
	U/S Floor	*1*	*2.65*	*1.800*	*1.356*	*6.468*	*Cum*
	D/S Floor	*1*	*2.75*	*1.800*	*0.650*	*3.218*	*Cum*
		1	*3.35*	*1.800*	*0.650*	*3.920*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.800*	*0.850*	*0.956*	*Cum*
	Toe Wall D/S Portion	*1*	*6.64*	*0.750*	*0.900*	*4.482*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.25*	*0.600*	*0.750*	*1.125*	*Cum*
	TOTAL					**54.02**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.800*	*0.150*	*0.15*	*Cum*
		1	*0.78*	*1.800*	*0.150*	*0.21*	*Cum*
		1	*3.90*	*1.800*	*0.150*	*1.05*	*Cum*
		1	*0.28*	*1.800*	*0.150*	*0.08*	*Cum*
		1	*2.12*	*1.800*	*0.150*	*0.57*	*Cum*
		1	*0.78*	*1.800*	*0.150*	*0.21*	*Cum*
		1	*0.54*	*1.800*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.12*	*1.428*	*0.150*	*0.48*	*Cum*
	Section 2-2	*2*	*2.20*	*1.062*	*0.150*	*0.70*	*Cum*
	Section 3-3	*2*	*2.85*	*0.942*	*0.150*	*0.81*	*Cum*
	Section 5-5	*2*	*2.99*	*1.578*	*0.150*	*1.41*	*Cum*
	Section 6-6	*2*	*1.48*	*0.942*	*0.150*	*0.42*	*Cum*
	Toe Wall D/S Portion	*1*	*6.64*	*0.750*	*0.300*	*1.49*	*Cum*
	Toe Wall D/S Portion	*1*	*6.34*	*0.450*	*0.600*	*1.71*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.600*	*0.150*	*0.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.300*	*0.600*	*0.45*	*Cum*
	TOTAL					**10.11**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.93*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.93*	*0.789*	*1.130*	*1.65*	*Cum*
		2	*0.93*	*1.278*	*0.500*	*1.18*	*Cum*
	Section 2-2	*2*	*2.20*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.20*	*0.606*	*0.520*	*1.39*	*Cum*
		2	*2.20*	*0.912*	*0.500*	*2.01*	*Cum*
	Section 3-3	*2*	*2.60*	*0.450*	*0.450*	*1.05*	*Cum*
		2	*2.60*	*0.546*	*0.320*	*0.91*	*Cum*
		2	*2.60*	*0.792*	*0.500*	*2.06*	*Cum*
	Section 5-5	*2*	*2.95*	*0.450*	*0.450*	*1.19*	*Cum*
		2	*2.95*	*0.789*	*1.130*	*5.25*	*Cum*
		2	*2.95*	*1.278*	*0.500*	*3.76*	*Cum*
	Section 6-6	*2*	*1.87*	*0.450*	*0.450*	*0.76*	*Cum*
		2	*1.87*	*0.546*	*0.320*	*0.65*	*Cum*
		2	*1.87*	*0.792*	*0.550*	*1.63*	*Cum*
	Floor	*1*	*0.63*	*1.800*	*0.700*	*0.79*	*Cum*
		1	*4.65*	*1.800*	*0.500*	*4.19*	*Cum*
		1	*0.20*	*1.800*	*0.400*	*0.14*	*Cum*
		1	*0.18*	*1.800*	*0.200*	*0.06*	*Cum*
		1	*3.15*	*1.800*	*0.500*	*2.84*	*Cum*
		1	*0.63*	*1.800*	*0.700*	*0.79*	*Cum*
	Crest	*1*	*0.83*	*1.800*	*0.845*	*1.27*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**34.84**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*1.800*	*0.150*	*0.19*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.16*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.16*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.69**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**34.84**	**0.00**	**0.105**	**7850.0**	**820.49**	**Kg**
	Total Weight in Metric Tonne					**0.82**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.93*		*0.450*	*1.67*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.93*		*1.130*	*4.18*	*Sqm*
		4		*0.789*	*1.130*	*3.57*	*Sqm*
		4	*0.93*		*0.500*	*1.85*	*Sqm*
		4		*1.278*	*0.500*	*2.56*	*Sqm*
	Section 2-2	*4*	*2.20*		*0.450*	*3.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.20*		*0.520*	*4.58*	*Sqm*
		4		*0.606*	*0.520*	*1.26*	*Sqm*
		4	*2.20*		*0.500*	*4.40*	*Sqm*
		4		*0.912*	*0.500*	*1.82*	*Sqm*
	Section 3-3	*4*	*2.60*		*0.450*	*4.69*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.60*		*0.320*	*3.33*	*Sqm*
		4		*0.546*	*0.320*	*0.70*	*Sqm*
		4	*2.60*		*0.500*	*5.21*	*Sqm*
		4		*0.792*	*0.500*	*1.58*	*Sqm*
	Section 5-5	*4*	*2.95*		*0.450*	*5.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.95*		*1.130*	*13.31*	*Sqm*
		4		*0.789*	*1.130*	*3.57*	*Sqm*
		4	*2.95*		*0.500*	*5.89*	*Sqm*
		4		*1.278*	*0.500*	*2.56*	*Sqm*
	Section 6-6	*4*	*1.87*		*0.450*	*3.37*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.87*		*0.320*	*2.40*	*Sqm*
		4		*0.546*	*0.320*	*0.70*	*Sqm*
		4	*1.87*		*0.550*	*4.12*	*Sqm*
		4		*0.792*	*0.550*	*1.74*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.800*	*0.700*	*2.52*	*Sqm*
		2	*4.65*		*0.500*	*4.65*	*Sqm*
		2		*1.800*	*0.500*	*1.80*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.800*	*0.400*	*1.44*	*Sqm*
		2	*0.18*		*0.200*	*0.07*	*Sqm*
		2		*1.800*	*0.200*	*0.72*	*Sqm*
		2	*3.15*		*0.500*	*3.15*	*Sqm*
		2		*1.8*	*0.500*	*1.80*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.800*	*0.700*	*2.52*	*Sqm*
	Crest	*2*	*0.83*		*0.845*	*1.41*	*Sqm*
		2		*1.800*	*0.845*	*3.04*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.64*		*0.300*	*3.98*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.34*		*0.600*	*7.61*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.150*	*0.75*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.25*		*0.600*	*3.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**134.80**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.25*	*2.366*		*5.92*	*Sqm*
	TOTAL					**5.92**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.25*	*1.200*	*0.300*	**0.45**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.25*	*1.200*	*0.150*	**0.45**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.16*	*0.450*		*5.02*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.16*	*0.450*		*5.02*	*Sqm*
	TOTAL					**10.04**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.539		4.54	Cum
	Abutment						
	Section 1-1	2	*1.12*	*0.436*		*0.977*	*Cum*
	Section 2-2	2	*2.20*	*0.425*		*1.870*	*Cum*
	Section 3-3	2	*2.85*	*0.436*		*2.485*	*Cum*
	Section 5-5	2	*2.99*	*0.391*		*2.337*	*Cum*
	Section 6-6	2	*1.48*	*0.436*		*1.289*	*Cum*
	Toe wall	2	*6.64*	*0.150*	*0.600*	*1.992*	*Cum*
		2	*1.25*	0.150	*0.600*	*0.225*	*Cum*
	TOTAL					**15.71**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.15.000 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.88*	*1.416*	*0.880*	*2.192*	*Cum*
	Section 2-2	*2*	*2.00*	*1.050*	*0.880*	*3.696*	*Cum*
	Section 3-3	*2*	*2.40*	*0.930*	*0.680*	*3.034*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*0.880*	*1.736*	*Cum*
	Section 6-6	*2*	*0.04*	*0.930*	*0.680*	*0.051*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.500*	*0.850*	*0.266*	*Cum*
	U/S Floor	*1*	*2.30*	*0.500*	*1.356*	*1.559*	*Cum*
	D/S Floor	*1*	*2.00*	*0.500*	*0.650*	*0.650*	*Cum*
		1	*2.70*	*0.500*	*0.650*	*0.877*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.500*	*0.850*	*0.266*	*Cum*
	TOTAL					**14.33**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.500*	*0.150*	*0.04*	*Cum*
		1	*0.78*	*0.500*	*0.150*	*0.06*	*Cum*
		1	*3.72*	*0.500*	*0.150*	*0.28*	*Cum*
		1	*0.28*	*0.500*	*0.150*	*0.02*	*Cum*
		1	*1.30*	*0.500*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*0.500*	*0.150*	*0.06*	*Cum*
		1	*0.54*	*0.500*	*0.150*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.88*	*1.416*	*0.150*	*0.37*	*Cum*
	Section 2-2	*2*	*2.00*	*1.050*	*0.150*	*0.63*	*Cum*
	Section 3-3	*2*	*2.40*	*0.930*	*0.150*	*0.67*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*0.150*	*0.30*	*Cum*
	Section 6-6	*2*	*0.04*	*0.930*	*0.150*	*0.01*	*Cum*
	TOTAL					**2.58**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.73*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.73*	*0.783*	*1.110*	*1.27*	*Cum*
		2	*0.73*	*1.266*	*0.500*	*0.92*	*Cum*
	Section 2-2	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.600*	*0.500*	*1.20*	*Cum*
		2	*2.00*	*0.900*	*0.500*	*1.80*	*Cum*
	Section 3-3	*2*	*2.01*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.01*	*0.540*	*0.300*	*0.65*	*Cum*
		2	*2.01*	*0.780*	*0.500*	*1.57*	*Cum*
	Section 5-5	*2*	*0.59*	*0.450*	*0.450*	*0.24*	*Cum*
		2	*0.59*	*0.783*	*1.110*	*1.02*	*Cum*
		2	*0.59*	*1.266*	*0.500*	*0.74*	*Cum*
	Section 6-6	*2*	*0.49*	*0.450*	*0.450*	*0.20*	*Cum*
		2	*0.49*	*0.540*	*0.300*	*0.16*	*Cum*
		2	*0.49*	*0.780*	*0.500*	*0.38*	*Cum*
	Floor	*1*	*0.63*	*0.500*	*0.700*	*0.22*	*Cum*
		1	*4.30*	*0.500*	*0.500*	*1.08*	*Cum*
		1	*0.20*	*0.500*	*0.400*	*0.04*	*Cum*
		1	*0.33*	*0.500*	*0.200*	*0.03*	*Cum*
		1	*2.50*	*0.500*	*0.500*	*0.63*	*Cum*
		1	*0.63*	*0.500*	*0.700*	*0.22*	*Cum*
	Crest	*1*	*0.63*	*0.500*	*0.850*	*0.27*	*Cum*
	TOTAL					**14.54**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.50*	*0.500*	*0.150*	*0.04*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*5.68*	*0.450*	*0.050*	*0.13*	*Cum*
	On Abutment Top (Right Side)	*1*	*5.68*	*0.450*	*0.050*	*0.13*	*Cum*
	TOTAL					**0.29**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**14.54**	**0.00**	**0.044**	**7850.0**	**342.47**	**Kg**
	Total Weight in Metric Tonne					**0.34**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.73*		*0.450*	*1.31*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.73*		*1.110*	*3.24*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.73*		*0.500*	*1.46*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*0.500*	*4.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.00*		*0.500*	*4.00*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*2.01*		*0.450*	*3.62*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.01*		*0.300*	*2.41*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*2.01*		*0.500*	*4.02*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*0.59*		*0.450*	*1.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.59*		*1.110*	*2.60*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.59*		*0.500*	*1.17*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 6-6	*4*	*0.49*		*0.450*	*0.87*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.49*		*0.300*	*0.58*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.49*		*0.500*	*0.97*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.500*	*0.700*	*0.70*	*Sqm*
		2	*4.30*		*0.500*	*4.30*	*Sqm*
		2		*0.500*	*0.500*	*0.50*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.500*	*0.400*	*0.40*	*Sqm*
		2	*0.33*		*0.200*	*0.13*	*Sqm*
		2		*0.500*	*0.200*	*0.20*	*Sqm*
		2	*2.5*		*0.500*	*2.50*	*Sqm*
		2		*0.5*	*0.500*	*0.50*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.500*	*0.700*	*0.70*	*Sqm*
	Crest	*2*	*0.63*		*0.850*	*1.08*	*Sqm*
		2		*0.500*	*0.850*	*0.85*	*Sqm*
	TOTAL					**72.18**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*5.68*	*0.450*		*2.56*	*Sqm*
	On Abutment Top (Right Side)	*1*	*5.68*	*0.450*		*2.56*	*Sqm*
	TOTAL					**5.11**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.295		1.30	Cum
	Abutment						
	Section 1-1	2	*0.88*	*0.159*		*0.280*	*Cum*
	Section 2-2	2	*2.00*	*0.159*		*0.636*	*Cum*
	Section 3-3	2	*2.40*	*0.159*		*0.763*	*Cum*
	Section 5-5	2	*0.63*	*0.159*		*0.200*	*Cum*
	Section 6-6	2	*0.04*	*0.159*		*0.013*	*Cum*
	TOTAL					**3.19**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH. 21.050 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.28*	*2.597*	*3.263*	*21.660*	*Cum*
	Section 2-2	*2*	*3.75*	*1.470*	*3.263*	*35.975*	*Cum*
	Section 3-3	*2*	*1.70*	*1.350*	*3.063*	*14.059*	*Cum*
	Section 5-5	*2*	*6.23*	*2.747*	*3.263*	*111.739*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*3.063*	*28.532*	*Cum*
	U/S Key Floor	*1*	*0.63*	*5.800*	*0.850*	*3.081*	*Cum*
	U/S Floor	*1*	*4.50*	*5.800*	*3.028*	*79.031*	*Cum*
	D/S Floor	*1*	*5.45*	*5.800*	*0.950*	*30.030*	*Cum*
		1	*3.55*	*5.800*	*0.700*	*14.413*	*Cum*
	D/S Key Floor	*1*	*0.93*	*5.800*	*1.200*	*6.438*	*Cum*
	Toe Wall D/S Portion	*1*	*15.40*	*0.750*	*0.900*	*10.395*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.00*	*0.600*	*0.750*	*2.700*	*Cum*
						358.05	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.800*	*0.150*	*0.47*	*Cum*
		1	*0.78*	*5.800*	*0.150*	*0.68*	*Cum*
		1	*1.51*	*5.800*	*0.150*	*1.31*	*Cum*
		1	*0.35*	*5.800*	*0.150*	*0.31*	*Cum*
		1	*7.42*	*5.800*	*0.150*	*6.46*	*Cum*
		1	*0.71*	*5.800*	*0.150*	*0.62*	*Cum*
		1	*1.44*	*5.800*	*0.150*	*1.25*	*Cum*
		1	*2.12*	*5.800*	*0.150*	*1.85*	*Cum*
		1	*0.54*	*5.800*	*0.150*	*0.47*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.28*	*2.597*	*0.150*	*1.00*	*Cum*
	Section 2-2	*2*	*3.75*	*1.470*	*0.150*	*1.65*	*Cum*
	Section 3-3	*2*	*1.70*	*1.350*	*0.150*	*0.69*	*Cum*
	Section 5-5	*2*	*6.23*	*2.747*	*0.150*	*5.14*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*15.40*	*0.750*	*0.300*	*3.47*	*Cum*
	Toe Wall D/S Portion	*1*	*15.10*	*0.450*	*0.600*	*4.08*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.600*	*0.150*	*0.54*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.300*	*0.600*	*1.08*	*Cum*
	TOTAL					**32.44**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.13*	*0.450*	*0.450*	*0.46*	*Cum*
		2	*1.13*	*1.374*	*3.078*	*9.54*	*Cum*
		2	*1.13*	*2.447*	*1.050*	*5.80*	*Cum*
	Section 2-2	*2*	*3.75*	*0.450*	*0.450*	*1.52*	*Cum*
		2	*3.75*	*0.810*	*1.200*	*7.29*	*Cum*
		2	*3.75*	*1.320*	*1.050*	*10.40*	*Cum*
	Section 3-3	*2*	*1.25*	*0.450*	*0.450*	*0.51*	*Cum*
		2	*1.25*	*0.750*	*1.000*	*1.88*	*Cum*
		2	*1.25*	*1.200*	*0.800*	*2.40*	*Cum*
	Section 5-5	*2*	*6.19*	*0.450*	*0.450*	*2.51*	*Cum*
		2	*6.19*	*1.374*	*3.078*	*52.33*	*Cum*
		2	*6.19*	*2.447*	*0.500*	*15.14*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.550*	*5.35*	*Cum*
	Floor	*1*	*0.63*	*5.800*	*0.700*	*2.54*	*Cum*
		1	*2.46*	*5.800*	*0.800*	*11.41*	*Cum*
		1	*0.25*	*5.800*	*0.925*	*1.34*	*Cum*
		1	*7.24*	*5.800*	*1.050*	*44.07*	*Cum*
		1	*0.31*	*5.800*	*0.500*	*0.89*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*5.800*	*0.675*	*0.78*	*Cum*
		1	*3.30*	*5.800*	*0.800*	*15.31*	*Cum*
		1	*0.93*	*5.800*	*1.900*	*10.19*	*Cum*
	Crest	*1*	*1.39*	*5.800*	*2.418*	*19.56*	*Cum*
	TOTAL					**228.92**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.00*	*5.800*	*0.200*	*1.16*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*17.63*	*0.450*	*0.050*	*0.40*	*Cum*
	On Abutment Top (Right Side)	*1*	*17.63*	*0.450*	*0.050*	*0.40*	*Cum*
	TOTAL					**1.95**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.25% of M-20	**228.92**	**0.003**	**0.572**	**7850.0**	**4492.56**	**Kg**
	Total Weight in Metric Tonne					**4.49**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.13*		*0.450*	*2.03*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.13*		*3.078*	*13.89*	*Sqm*
		4		*1.374*	*3.078*	*16.91*	*Sqm*
		4	*1.13*		*1.050*	*4.74*	*Sqm*
		4		*2.447*	*1.050*	*10.28*	*Sqm*
	Section 2-2	*4*	*3.75*		*0.450*	*6.75*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.75*		*1.200*	*18.00*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*3.75*		*1.050*	*15.75*	*Sqm*
		4		*1.320*	*1.050*	*5.54*	*Sqm*
	Section 3-3	*4*	*1.25*		*0.450*	*2.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.25*		*1.000*	*5.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*1.25*		*0.800*	*4.00*	*Sqm*
		4		*1.200*	*0.800*	*3.84*	*Sqm*
	Section 5-5	*4*	*6.19*		*0.450*	*11.14*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.19*		*3.078*	*76.20*	*Sqm*
		4		*1.374*	*3.078*	*16.91*	*Sqm*
		4	*6.19*		*0.500*	*12.38*	*Sqm*
		4		*2.447*	*0.500*	*4.89*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.550*	*8.91*	*Sqm*
		4		*1.200*	*0.550*	*2.64*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*5.800*	*0.700*	*8.12*	*Sqm*
		2	*2.46*		*0.800*	*3.94*	*Sqm*
		2		*5.800*	*0.800*	*9.28*	*Sqm*
		2	*0.25*		*0.925*	*0.46*	*Sqm*
		2		*5.8*	*0.925*	*10.73*	*Sqm*
		2	*7.237*		*1.05*	*15.20*	*Sqm*
		2		*5.8*	*1.050*	*12.18*	*Sqm*
		2	*0.31*		*0.500*	*0.31*	*Sqm*
		2		*5.800*	*0.500*	*5.80*	*Sqm*
		2	*0.20*		*0.675*	*0.27*	*Sqm*
		2		*5.800*	*0.675*	*7.83*	*Sqm*
		2	*3.30*		*0.800*	*5.28*	*Sqm*
		2		*5.800*	*0.800*	*9.28*	*Sqm*
		2	*0.93*		*1.900*	*3.52*	*Sqm*
		2		*5.800*	*1.900*	*22.04*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.39*		*2.418*	*6.74*	*Sqm*
		2		*5.800*	*2.418*	*28.05*	*Sqm*
	Toe Wall D/S Portion	*2*	*15.40*		*0.300*	*9.24*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*15.10*		*0.600*	*18.12*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.150*	*1.80*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.600*	*7.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**467.80**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*4.952*		*29.71*	*Sqm*
	TOTAL					**29.71**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.00*	*5.200*	*0.300*	**4.68**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.00*	*5.200*	*0.150*	**4.68**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*17.63*	*0.450*		*7.93*	*Sqm*
	On Abutment Top (Right Side)	*1*	*17.63*	*0.450*		*7.93*	*Sqm*
	TOTAL					**15.87**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		*55.595*		*55.59*	**Cum**
	Abutment						
	Section 1-1	2	*1.28*	*2.067*		*5.283*	*Cum*
	Section 2-2	2	*3.75*	*1.459*		*10.943*	*Cum*
	Section 3-3	2	*1.70*	*1.170*		*3.978*	*Cum*
	Section 5-5	2	*6.23*	*1.970*		*24.558*	*Cum*
	Section 6-6	2	*3.45*	*1.170*		*8.073*	*Cum*
	Toe wall	2	*15.40*	*0.150*	*0.600*	*4.620*	*Cum*
		2	*3.00*	*0.150*	*0.600*	*0.540*	*Cum*
	TOTAL					**113.59**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH. 22.300 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.33*	*2.110*	*1.906*	*10.673*	*Cum*
	Section 2-2	*2*	*4.50*	*1.440*	*1.906*	*24.702*	*Cum*
	Section 3-3	*2*	*2.20*	*1.320*	*1.706*	*9.908*	*Cum*
	Section 5-5	*2*	*6.36*	*2.260*	*1.906*	*54.749*	*Cum*
	Section 6-6	*2*	*3.31*	*1.320*	*1.706*	*14.885*	*Cum*
	U/S Key Floor	*1*	*0.63*	*5.600*	*0.850*	*2.975*	*Cum*
	U/S Floor	*1*	*3.00*	*5.600*	*1.656*	*27.821*	*Cum*
	D/S Floor	*1*	*4.50*	*5.600*	*0.650*	*16.380*	*Cum*
		1	*2.50*	*5.600*	*0.400*	*5.600*	*Cum*
	D/S Key Floor	*1*	*0.76*	*5.600*	*0.900*	*3.843*	*Cum*
	Toe Wall D/S Portion	*1*	*14.85*	*0.750*	*0.900*	*10.024*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*4.50*	*0.600*	*0.750*	*4.050*	*Cum*
						185.61	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
		1	*0.78*	*5.600*	*0.150*	*0.66*	*Cum*
		1	*0.46*	*5.600*	*0.150*	*0.38*	*Cum*
		1	*0.35*	*5.600*	*0.150*	*0.30*	*Cum*
		1	*5.97*	*5.600*	*0.150*	*5.01*	*Cum*
		1	*0.57*	*5.600*	*0.150*	*0.47*	*Cum*
		1	*0.86*	*5.600*	*0.150*	*0.72*	*Cum*
		1	*1.40*	*5.600*	*0.150*	*1.17*	*Cum*
		1	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.33*	*2.110*	*0.150*	*0.84*	*Cum*
	Section 2-2	*2*	*4.50*	*1.440*	*0.150*	*1.94*	*Cum*
	Section 3-3	*2*	*2.20*	*1.320*	*0.150*	*0.87*	*Cum*
	Section 5-5	*2*	*6.36*	*2.260*	*0.150*	*4.31*	*Cum*
	Section 6-6	*2*	*3.31*	*1.320*	*0.150*	*1.31*	*Cum*
	Toe Wall D/S Portion	*1*	*14.85*	*0.750*	*0.300*	*3.34*	*Cum*
	Toe Wall D/S Portion	*1*	*14.55*	*0.450*	*0.600*	*3.93*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.600*	*0.150*	*0.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.300*	*0.600*	*1.62*	*Cum*
	TOTAL					**28.61**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.16*	*0.450*	*0.450*	*0.47*	*Cum*
		2	*1.16*	*1.130*	*2.266*	*5.93*	*Cum*
		2	*1.16*	*1.960*	*0.750*	*3.40*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.795*	*1.150*	*8.23*	*Cum*
		2	*4.50*	*1.290*	*0.750*	*8.71*	*Cum*
	Section 3-3	*2*	*1.77*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.77*	*0.735*	*0.950*	*2.46*	*Cum*
		2	*1.77*	*1.170*	*0.550*	*2.27*	*Cum*
	Section 5-5	*2*	*6.31*	*0.450*	*0.450*	*2.56*	*Cum*
		2	*6.31*	*1.130*	*2.266*	*32.32*	*Cum*
		2	*6.31*	*1.960*	*0.500*	*12.37*	*Cum*
	Section 6-6	*2*	*4.04*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.04*	*0.735*	*0.950*	*5.64*	*Cum*
		2	*4.04*	*1.170*	*0.550*	*5.20*	*Cum*
	Floor	*1*	*0.63*	*5.600*	*0.700*	*2.45*	*Cum*
		1	*1.44*	*5.600*	*0.500*	*4.03*	*Cum*
		1	*0.25*	*5.600*	*0.625*	*0.88*	*Cum*
		1	*5.84*	*5.600*	*0.750*	*24.52*	*Cum*
		1	*0.21*	*5.600*	*0.400*	*0.46*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*5.600*	*0.425*	*0.48*	*Cum*
		1	*2.30*	*5.600*	*0.550*	*7.08*	*Cum*
		1	*0.76*	*5.600*	*1.250*	*5.34*	*Cum*
	Crest	*1*	*1.07*	*5.600*	*1.616*	*9.68*	*Cum*
	TOTAL					**148.66**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*5.600*	*0.200*	*0.90*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*18.90*	*0.450*	*0.050*	*0.43*	*Cum*
	On Abutment Top (Right Side)	*1*	*18.90*	*0.450*	*0.050*	*0.43*	*Cum*
	TOTAL					**1.75**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**148.66**	**0.003**	**0.446**	**7850.0**	**3500.86**	**Kg**
	Total Weight in Metric Tonne					**3.50**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.16*		*0.450*	*2.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.16*		*2.266*	*10.50*	*Sqm*
		4		*1.130*	*2.266*	*10.24*	*Sqm*
		4	*1.16*		*0.750*	*3.47*	*Sqm*
		4		*1.960*	*0.750*	*5.88*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*1.150*	*20.70*	*Sqm*
		4		*0.795*	*1.150*	*3.66*	*Sqm*
		4	*4.50*		*0.750*	*13.50*	*Sqm*
		4		*1.290*	*0.750*	*3.87*	*Sqm*
	Section 3-3	*4*	*1.77*		*0.450*	*3.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.77*		*0.950*	*6.71*	*Sqm*
		4		*0.735*	*0.950*	*2.79*	*Sqm*
		4	*1.77*		*0.550*	*3.88*	*Sqm*
		4		*1.170*	*0.550*	*2.57*	*Sqm*
	Section 5-5	*4*	*6.31*		*0.450*	*11.36*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.31*		*2.266*	*57.20*	*Sqm*
		4		*1.130*	*2.266*	*10.24*	*Sqm*
		4	*6.31*		*0.500*	*12.62*	*Sqm*
		4		*1.960*	*0.500*	*3.92*	*Sqm*
	Section 6-6	*4*	*4.04*		*0.450*	*7.27*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.04*		*0.950*	*15.35*	*Sqm*
		4		*0.735*	*0.950*	*2.79*	*Sqm*
		4	*4.04*		*0.550*	*8.89*	*Sqm*
		4		*1.170*	*0.550*	*2.57*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*5.600*	*0.700*	*7.84*	*Sqm*
		2	*1.44*		*0.500*	*1.44*	*Sqm*
		2		*5.600*	*0.500*	*5.60*	*Sqm*
		2	*0.25*		*0.625*	*0.31*	*Sqm*
		2		*5.6*	*0.625*	*7.00*	*Sqm*
		2	*5.839*		*0.75*	*8.76*	*Sqm*
		2		*5.6*	*0.750*	*8.40*	*Sqm*
		2	*0.21*		*0.400*	*0.17*	*Sqm*
		2		*5.600*	*0.400*	*4.48*	*Sqm*
		2	*0.20*		*0.425*	*0.17*	*Sqm*
		2		*5.600*	*0.425*	*4.76*	*Sqm*
		2	*2.30*		*0.550*	*2.53*	*Sqm*
		2		*5.600*	*0.550*	*6.16*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*
		2		*5.600*	*1.250*	*14.00*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.07*		*1.616*	*3.46*	*Sqm*
		2		*5.600*	*1.616*	*18.10*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.85*		*0.300*	*8.91*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.55*		*0.600*	*17.46*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.150*	*2.70*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.600*	*10.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**375.31**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.50*	*4.762*		*42.86*	*Sqm*
	TOTAL					**42.86**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.50*	*5.000*	*0.300*	**6.75**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.50*	*5.000*	*0.150*	**6.75**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*18.90*	*0.450*		*8.50*	*Sqm*
	On Abutment Top (Right Side)	*1*	*18.90*	*0.450*		*8.50*	*Sqm*
	TOTAL					**17.01**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		*16.003*		*16.00*	**Cum**
	Abutment						
	Section 1-1	2	*1.33*	*0.718*		*1.906*	*Cum*
	Section 2-2	2	*4.50*	*0.717*		*6.453*	*Cum*
	Section 3-3	2	*2.20*	*0.519*		*2.284*	*Cum*
	Section 5-5	2	*6.36*	*0.618*		*7.855*	*Cum*
	Section 6-6	2	*3.31*	*0.519*		*3.431*	*Cum*
	Toe wall	2	*14.85*	*0.150*	*0.600*	*4.455*	*Cum*
		2	*4.50*	*0.150*	*0.600*	*0.810*	*Cum*
	TOTAL					**43.20**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.29.550 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.16*	*1.814*	*1.894*	*7.971*	*Cum*
	Section 2-2	*2*	*3.25*	*1.266*	*1.894*	*15.586*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*1.694*	*6.601*	*Cum*
	Section 5-5	*2*	*4.59*	*1.964*	*1.894*	*34.159*	*Cum*
	Section 6-6	*2*	*2.29*	*1.146*	*1.694*	*8.891*	*Cum*
	U/S Key Floor	*1*	*0.63*	*4.000*	*0.850*	*2.125*	*Cum*
	U/S Floor	*1*	*2.50*	*4.000*	*1.844*	*18.440*	*Cum*
	D/S Floor	*1*	*3.50*	*4.000*	*0.900*	*12.600*	*Cum*
		1	*2.00*	*4.000*	*0.700*	*5.600*	*Cum*
	D/S Key Floor	*1*	*0.73*	*4.000*	*0.650*	*1.885*	*Cum*
	Toe Wall D/S Portion	*1*	*11.22*	*0.750*	*0.900*	*7.574*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
	TOTAL					**123.46**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
		1	*0.78*	*4.000*	*0.150*	*0.47*	*Cum*
		1	*0.37*	*4.000*	*0.150*	*0.22*	*Cum*
		1	*0.07*	*4.000*	*0.150*	*0.04*	*Cum*
		1	*5.00*	*4.000*	*0.150*	*3.00*	*Cum*
		1	*0.35*	*4.000*	*0.150*	*0.21*	*Cum*
		1	*0.40*	*4.000*	*0.150*	*0.24*	*Cum*
		1	*1.12*	*4.000*	*0.150*	*0.67*	*Cum*
		1	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.16*	*1.814*	*0.150*	*0.63*	*Cum*
	Section 2-2	*2*	*3.25*	*1.266*	*0.150*	*1.23*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*4.59*	*1.964*	*0.150*	*2.71*	*Cum*
	Section 6-6	*2*	*2.29*	*1.146*	*0.150*	*0.79*	*Cum*
	Toe Wall D/S Portion	*1*	*11.22*	*0.750*	*0.300*	*2.52*	*Cum*
	Toe Wall D/S Portion	*1*	*10.92*	*0.450*	*0.600*	*2.95*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**18.13**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.01*	*0.450*	*0.450*	*0.41*	*Cum*
		2	*1.01*	*0.982*	*1.774*	*3.52*	*Cum*
		2	*1.01*	*1.664*	*0.550*	*1.85*	*Cum*
	Section 2-2	*2*	*3.25*	*0.450*	*0.450*	*1.32*	*Cum*
		2	*3.25*	*0.708*	*0.860*	*3.96*	*Cum*
		2	*3.25*	*1.116*	*0.550*	*3.99*	*Cum*
	Section 3-3	*2*	*0.93*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.93*	*0.648*	*0.660*	*0.79*	*Cum*
		2	*0.93*	*0.996*	*0.500*	*0.92*	*Cum*
	Section 5-5	*2*	*4.55*	*0.450*	*0.450*	*1.84*	*Cum*
		2	*4.55*	*0.982*	*1.774*	*15.85*	*Cum*
		2	*4.55*	*1.664*	*0.500*	*7.57*	*Cum*
	Section 6-6	*2*	*2.88*	*0.450*	*0.450*	*1.16*	*Cum*
		2	*2.88*	*0.648*	*0.660*	*2.46*	*Cum*
		2	*2.88*	*0.996*	*0.500*	*2.86*	*Cum*
	Floor	*1*	*0.63*	*4.000*	*0.700*	*1.75*	*Cum*
		1	*1.32*	*4.000*	*0.500*	*2.64*	*Cum*
		1	*0.05*	*4.000*	*0.525*	*0.11*	*Cum*
		1	*4.63*	*4.000*	*0.550*	*10.19*	*Cum*
		1	*0.38*	*4.000*	*0.250*	*0.38*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*4.000*	*0.400*	*0.32*	*Cum*
		1	*1.80*	*4.000*	*0.500*	*3.60*	*Cum*
		1	*0.73*	*4.000*	*1.000*	*2.90*	*Cum*
	Crest	*1*	*0.92*	*4.000*	*1.340*	*4.90*	*Cum*
	TOTAL					**75.65**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*4.000*	*0.150*	*0.42*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*14.35*	*0.450*	*0.050*	*0.32*	*Cum*
	On Abutment Top (Right Side)	*1*	*14.35*	*0.450*	*0.050*	*0.32*	*Cum*
	TOTAL					**1.07**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**75.65**	**0.00**	**0.227**	**7850.0**	**1781.57**	**Kg**
	Total Weight in Metric Tonne					**1.78**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.01*		*0.450*	*1.82*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.01*		*1.774*	*7.17*	*Sqm*
		4		*0.982*	*1.774*	*6.97*	*Sqm*
		4	*1.01*		*0.550*	*2.22*	*Sqm*
		4		*1.664*	*0.550*	*3.66*	*Sqm*
	Section 2-2	*4*	*3.25*		*0.450*	*5.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.25*		*0.860*	*11.18*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*3.25*		*0.550*	*7.15*	*Sqm*
		4		*1.116*	*0.550*	*2.46*	*Sqm*
	Section 3-3	*4*	*0.93*		*0.450*	*1.67*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.93*		*0.660*	*2.44*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*0.93*		*0.500*	*1.85*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 5-5	*4*	*4.55*		*0.450*	*8.19*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.55*		*1.774*	*32.27*	*Sqm*
		4		*0.982*	*1.774*	*6.97*	*Sqm*
		4	*4.55*		*0.500*	*9.10*	*Sqm*
		4		*1.664*	*0.500*	*3.33*	*Sqm*
	Section 6-6	*4*	*2.88*		*0.450*	*5.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.88*		*0.660*	*7.59*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*2.88*		*0.500*	*5.75*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.000*	*0.700*	*5.60*	*Sqm*
		2	*1.32*		*0.500*	*1.32*	*Sqm*
		2		*4.000*	*0.500*	*4.00*	*Sqm*
		2	*0.05*		*0.525*	*0.05*	*Sqm*
		2		*4.000*	*0.525*	*4.20*	*Sqm*
		2	*4.63*		*0.550*	*5.09*	*Sqm*
		2		*4.000*	*0.550*	*4.40*	*Sqm*
		2	*0.38*		*0.250*	*0.19*	*Sqm*
		2		*4.000*	*0.250*	*2.00*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.000*	*0.400*	*3.20*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*4.000*	*0.500*	*4.00*	*Sqm*
		2	*0.73*		*1.000*	*1.45*	*Sqm*
		2		*4.000*	*1.000*	*8.00*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*0.92*		*1.340*	*2.45*	*Sqm*
		2		*4.000*	*1.340*	*10.72*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.22*		*0.300*	*6.73*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*10.92*		*0.600*	*13.10*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**234.85**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*3.659*		*16.47*	*Sqm*
	TOTAL					**16.47**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*3.400*	*0.300*	**2.30**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*3.400*	*0.150*	**2.30**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*14.35*	*0.450*		*6.46*	*Sqm*
	On Abutment Top (Right Side)	*1*	*14.35*	*0.450*		*6.46*	*Sqm*
	TOTAL					**12.91**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		8.377		8.38	**Cum**
	Abutment						
	Section 1-1	2	*1.16*	*0.867*		*2.011*	*Cum*
	Section 2-2	2	*3.25*	*0.834*		*5.421*	*Cum*
	Section 3-3	2	*1.70*	*0.636*		*2.162*	*Cum*
	Section 5-5	2	*4.59*	*0.861*		*7.904*	*Cum*
	Section 6-6	2	*2.29*	*0.636*		*2.913*	*Cum*
	Toe wall	2	*11.22*	*0.150*	*0.600*	*3.366*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**32.56**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.30.800 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.16*	*1.814*	*1.624*	*6.835*	*Cum*
	Section 2-2	*2*	*3.50*	*1.266*	*1.624*	*14.392*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*1.424*	*5.548*	*Cum*
	Section 5-5	*2*	*4.59*	*1.964*	*1.624*	*29.290*	*Cum*
	Section 6-6	*2*	*2.29*	*1.146*	*1.424*	*7.474*	*Cum*
	U/S Key Floor	*1*	*0.63*	*4.000*	*0.850*	*2.125*	*Cum*
	U/S Floor	*1*	*2.50*	*4.000*	*1.575*	*15.750*	*Cum*
	D/S Floor	*1*	*3.50*	*4.000*	*0.900*	*12.600*	*Cum*
		1	*1.75*	*4.000*	*0.700*	*4.900*	*Cum*
	D/S Key Floor	*1*	*0.70*	*4.000*	*0.650*	*1.820*	*Cum*
	Toe Wall D/S Portion	*1*	*11.22*	*0.750*	*0.900*	*7.574*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
	TOTAL					**110.33**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
		1	*0.78*	*4.000*	*0.150*	*0.47*	*Cum*
		1	*0.37*	*4.000*	*0.150*	*0.22*	*Cum*
		1	*0.07*	*4.000*	*0.150*	*0.04*	*Cum*
		1	*5.00*	*4.000*	*0.150*	*3.00*	*Cum*
		1	*0.35*	*4.000*	*0.150*	*0.21*	*Cum*
		1	*0.40*	*4.000*	*0.150*	*0.24*	*Cum*
		1	*1.12*	*4.000*	*0.150*	*0.67*	*Cum*
		1	*0.54*	*4.000*	*0.150*	*0.33*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.16*	*1.814*	*0.150*	*0.63*	*Cum*
	Section 2-2	*2*	*3.50*	*1.266*	*0.150*	*1.33*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*4.59*	*1.964*	*0.150*	*2.71*	*Cum*
	Section 6-6	*2*	*2.29*	*1.146*	*0.150*	*0.79*	*Cum*
	Toe Wall D/S Portion	*1*	*11.22*	*0.750*	*0.300*	*2.52*	*Cum*
	Toe Wall D/S Portion	*1*	*10.92*	*0.450*	*0.600*	*2.95*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**18.23**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.01*	*0.450*	*0.450*	*0.41*	*Cum*
		2	*1.01*	*0.982*	*1.774*	*3.52*	*Cum*
		2	*1.01*	*1.664*	*0.550*	*1.85*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.708*	*0.860*	*4.26*	*Cum*
		2	*3.50*	*1.116*	*0.550*	*4.30*	*Cum*
	Section 3-3	*2*	*0.93*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.93*	*0.648*	*0.660*	*0.79*	*Cum*
		2	*0.93*	*0.996*	*0.500*	*0.92*	*Cum*
	Section 5-5	*2*	*4.55*	*0.450*	*0.450*	*1.84*	*Cum*
		2	*4.55*	*0.982*	*1.774*	*15.84*	*Cum*
		2	*4.55*	*1.664*	*0.500*	*7.57*	*Cum*
	Section 6-6	*2*	*2.88*	*0.450*	*0.450*	*1.16*	*Cum*
		2	*2.88*	*0.648*	*0.660*	*2.46*	*Cum*
		2	*2.88*	*0.996*	*0.500*	*2.86*	*Cum*
	Floor	*1*	*0.63*	*4.000*	*0.700*	*1.75*	*Cum*
		1	*1.32*	*4.000*	*0.500*	*2.64*	*Cum*
		1	*0.05*	*4.000*	*0.525*	*0.11*	*Cum*
		1	*4.63*	*4.000*	*0.550*	*10.19*	*Cum*
		1	*0.38*	*4.000*	*0.250*	*0.38*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*4.000*	*0.400*	*0.32*	*Cum*
		1	*1.80*	*4.000*	*0.500*	*3.60*	*Cum*
		1	*0.70*	*4.000*	*1.000*	*2.80*	*Cum*
	Crest	*1*	*0.92*	*4.000*	*1.339*	*4.90*	*Cum*
	TOTAL					**76.25**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*4.000*	*0.150*	*0.42*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.06*	*0.450*	*0.050*	*0.29*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.06*	*0.450*	*0.050*	*0.29*	*Cum*
	TOTAL					**1.01**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**76.25**	**0.00**	**0.229**	**7850.0**	**1795.72**	**Kg**
	Total Weight in Metric Tonne					**1.80**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.01*		*0.450*	*1.82*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.01*		*1.774*	*7.17*	*Sqm*
		4		*0.982*	*1.774*	*6.97*	*Sqm*
		4	*1.01*		*0.550*	*2.22*	*Sqm*
		4		*1.664*	*0.550*	*3.66*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.860*	*12.04*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*3.50*		*0.550*	*7.70*	*Sqm*
		4		*1.116*	*0.550*	*2.46*	*Sqm*
	Section 3-3	*4*	*0.93*		*0.450*	*1.67*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.93*		*0.660*	*2.44*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*0.93*		*0.500*	*1.85*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 5-5	*4*	*4.55*		*0.450*	*8.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.55*		*1.774*	*32.26*	*Sqm*
		4		*0.982*	*1.774*	*6.97*	*Sqm*
		4	*4.55*		*0.500*	*9.09*	*Sqm*
		4		*1.664*	*0.500*	*3.33*	*Sqm*
	Section 6-6	*4*	*2.88*		*0.450*	*5.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.88*		*0.660*	*7.59*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*2.88*		*0.500*	*5.75*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.000*	*0.700*	*5.60*	*Sqm*
		2	*1.32*		*0.500*	*1.32*	*Sqm*
		2		*4.000*	*0.500*	*4.00*	*Sqm*
		2	*0.05*		*0.525*	*0.05*	*Sqm*
		2		*4.000*	*0.525*	*4.20*	*Sqm*
		2	*4.63*		*0.550*	*5.09*	*Sqm*
		2		*4.000*	*0.550*	*4.40*	*Sqm*
		2	*0.38*		*0.250*	*0.19*	*Sqm*
		2		*4.000*	*0.250*	*2.00*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.000*	*0.400*	*3.20*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*4.000*	*0.500*	*4.00*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*4.000*	*1.000*	*8.00*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*0.92*		*1.339*	*2.45*	*Sqm*
		2		*4.000*	*1.339*	*10.71*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.22*		*0.300*	*6.73*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*10.92*		*0.600*	*13.10*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**236.64**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*3.659*		*16.47*	*Sqm*
	TOTAL					**16.47**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*3.400*	*0.300*	**2.30**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*3.400*	*0.150*	**2.30**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.06*	*0.450*		*5.88*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.06*	*0.450*		*5.88*	*Sqm*
	TOTAL					**11.75**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		8.372		8.37	**Cum**
	Abutment						
	Section 1-1	2	*1.16*	*0.616*		*1.429*	*Cum*
	Section 2-2	2	*3.50*	*0.615*		*4.305*	*Cum*
	Section 3-3	2	*1.70*	*0.448*		*1.523*	*Cum*
	Section 5-5	2	*4.59*	*0.609*		*5.592*	*Cum*
	Section 6-6	2	*2.29*	*0.448*		*2.052*	*Cum*
	Toe wall	2	*11.22*	*0.150*	*0.600*	*3.366*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**27.04**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR PALUA MR.						
	SHARDA TYPE FALL CUM CULVERT OF HEIGHT 0.610 METER AT CH. 1.650 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.40*	*1.416*	*1.298*	*1.470*	*Cum*
	Section 2-2	*2*	*2.50*	*1.570*	*1.298*	*10.189*	*Cum*
	Section 3-3	*2*	*4.00*	*1.450*	*1.098*	*12.737*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*1.298*	*2.561*	*Cum*
	Section 6-6	*2*	*0.18*	*0.930*	*1.098*	*0.368*	*Cum*
	U/S Key Floor	*1*	*0.82*	*0.600*	*0.850*	*0.418*	*Cum*
	U/S Floor	*1*	*2.25*	*0.600*	*1.298*	*1.752*	*Cum*
	D/S Floor	*1*	*2.50*	*0.600*	*0.850*	*1.275*	*Cum*
		1	*4.75*	*0.600*	*0.650*	*1.853*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	TOTAL					**32.94**	***Cum***
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*4.17*	*0.600*	*0.150*	*0.38*	*Cum*
		1	*0.28*	*0.600*	*0.150*	*0.03*	*Cum*
		1	*3.35*	*0.600*	*0.150*	*0.30*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.40*	*1.416*	*0.150*	*0.17*	*Cum*
	Section 2-2	*2*	*2.50*	*1.570*	*0.150*	*1.18*	*Cum*
	Section 3-3	*2*	*4.00*	*1.450*	*0.150*	*1.74*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*0.150*	*0.30*	*Cum*
	Section 6-6	*2*	*0.18*	*0.930*	*0.150*	*0.05*	*Cum*
	TOTAL					**4.37**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.32*	*0.450*	*0.450*	*0.13*	*Cum*
		2	*0.32*	*0.783*	*1.110*	*0.56*	*Cum*
		2	*0.32*	*1.266*	*0.500*	*0.41*	*Cum*
	Section 2-2	*2*	*2.50*	*0.820*	*0.500*	*2.05*	*Cum*
		2	*2.50*	*0.970*	*0.500*	*2.43*	*Cum*
		2	*2.50*	*1.270*	*0.850*	*5.40*	*Cum*
	Section 3-3	*2*	*4.06*	*0.820*	*0.500*	*3.33*	*Cum*
		2	*4.06*	*0.910*	*0.300*	*2.22*	*Cum*
		2	*4.06*	*1.150*	*1.050*	*9.80*	*Cum*
	Section 5-5	*2*	*0.59*	*0.450*	*0.450*	*0.24*	*Cum*
		2	*0.59*	*0.783*	*1.110*	*1.02*	*Cum*
		2	*0.59*	*1.266*	*0.500*	*0.74*	*Cum*
	Section 6-6	*2*	*0.48*	*0.450*	*0.450*	*0.19*	*Cum*
		2	*0.48*	*0.540*	*0.300*	*0.16*	*Cum*
		2	*0.48*	*0.780*	*0.500*	*0.37*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.500*	*-4.51*	*Cum*
	Floor	*1*	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
		1	*4.70*	*0.600*	*0.500*	*1.41*	*Cum*
		1	*0.35*	*0.600*	*0.200*	*0.04*	*Cum*
		1	*0.20*	*0.600*	*0.400*	*0.05*	*Cum*
		1	*4.55*	*0.600*	*0.500*	*1.37*	*Cum*
		1	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
	Crest	*1*	*0.73*	*0.600*	*0.830*	*0.36*	*Cum*
	TOTAL					**28.29**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.600*	*0.150*	*0.05*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*3.27*	*0.450*	*0.050*	*0.07*	*Cum*
	On Abutment Top (Right Side)	*1*	*3.27*	*0.450*	*0.050*	*0.07*	*Cum*
	Slab Bridge						
	Slab	*1*	*1.40*	*5.500*	*0.328*	*2.53*	*Cum*
	Wearing coat	*1*	*1.40*	*4.500*	*0.070*	*0.44*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.431*	*1.90*	*Cum*
	300 mm thick pedastal	*2*	*0.82*	*5.500*	*0.500*	*4.51*	*Cum*
	TOTAL					**9.57**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*1.86*		*1.578*	*91.0*	*Kg*
a2	*10*	*7*	*5.90*		*0.616*	*25.5*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*1.78*		*0.616*	*20.8*	*Kg*
a5	*10*	*6*	*5.75*		*0.616*	*21.3*	*Kg*
x1	*12*	*24*	*2.50*		*0.888*	*53.3*	*Kg*
x2	*16*	*24*	*1.27*		*1.578*	*47.9*	*Kg*
x3	*10*	*24*	*1.30*		*0.616*	*19.2*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**28.29**	**0.003**	**0.085**	**7850.0**	**666.3**	**Kg**
	Total Reinforcement Steel (in kg)					*952.0*	*Kg*
	Total Weight in Metric Tonne					**0.95**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.32*		*0.450*	*0.58*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.32*		*1.110*	*1.44*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.32*		*0.500*	*0.65*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.970*	*0.500*	*1.94*	*Sqm*
		4	*2.50*		*0.850*	*8.50*	*Sqm*
		4		*1.270*	*0.850*	*4.32*	*Sqm*
	Section 3-3	*4*	*4.06*		*0.500*	*8.12*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*4.06*		*0.300*	*4.87*	*Sqm*
		4		*0.910*	*0.300*	*1.09*	*Sqm*
		4	*4.06*		*1.050*	*17.05*	*Sqm*
		4		*1.150*	*1.050*	*4.83*	*Sqm*
	Section 5-5	*4*	*0.59*		*0.450*	*1.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.59*		*1.110*	*2.60*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.59*		*0.500*	*1.17*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 6-6	*4*	*0.48*		*0.450*	*0.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.48*		*0.300*	*0.58*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.48*		*0.500*	*0.96*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
		2	*4.70*		*0.500*	*4.70*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.35*		*0.200*	*0.14*	*Sqm*
		2		*0.600*	*0.200*	*0.24*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.600*	*0.400*	*0.48*	*Sqm*
		2	*4.55*		*0.500*	*4.55*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
	Crest	*2*	*0.73*		*0.830*	*1.21*	*Sqm*
		2		*0.600*	*0.830*	*1.00*	*Sqm*
	Bridge Slab	*2*	*1.40*		*0.33*	*0.92*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*1.40*	*5.50*		*7.70*	*Sqm*
	Dirt Wall	*2*	*0.40*		*0.43*	*0.34*	*Sqm*
		2		5.50	0.43	*4.74*	*Sqm*
	TOTAL					**124.98**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*3.27*	*0.450*		*1.47*	*Sqm*
	On Abutment Top (Right Side)	*1*	*3.27*	*0.450*		*1.47*	*Sqm*
	TOTAL					**2.94**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		1.274		1.27	**Cum**
	Abutment						
	Section 1-1	2	0.40	*0.395*		*0.316*	*Cum*
	Section 2-2	2	2.50	*0.441*		*2.207*	*Cum*
	Section 3-3	2	4.00	*0.346*		*2.764*	*Cum*
	Section 5-5	2	0.63	*0.395*		*0.498*	*Cum*
	Section 6-6	2	0.18	*0.346*		*0.124*	*Cum*
	D/S protection	2					
	TOTAL					**7.18**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.022 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*1.598*	*1.100*	*3.632*	*Cum*
	Section 2-2	*2*	*2.50*	*1.570*	*1.100*	*8.635*	*Cum*
	Section 3-3	*2*	*2.20*	*1.450*	*0.900*	*5.742*	*Cum*
	Section 5-5	*2*	*0.59*	*1.748*	*1.100*	*2.277*	*Cum*
	Section 6-6	*2*	*0.04*	*0.930*	*0.900*	*0.067*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	U/S Floor	*1*	*2.25*	*0.600*	*1.328*	*1.793*	*Cum*
	D/S Floor	*1*	*2.50*	*0.600*	*0.850*	*1.275*	*Cum*
		1	*2.50*	*0.600*	*0.650*	*0.975*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	TOTAL					**25.03**	***Cum***
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*4.17*	*0.600*	*0.150*	*0.38*	*Cum*
		1	*0.28*	*0.600*	*0.150*	*0.03*	*Cum*
		1	*1.10*	*0.600*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.03*	*1.598*	*0.150*	*0.50*	*Cum*
	Section 2-2	*2*	*2.50*	*1.570*	*0.150*	*1.18*	*Cum*
	Section 3-3	*2*	*2.20*	*1.450*	*0.150*	*0.96*	*Cum*
	Section 5-5	*2*	*0.59*	*1.748*	*0.150*	*0.31*	*Cum*
	Section 6-6	*2*	*0.04*	*0.930*	*0.150*	*0.01*	*Cum*
	TOTAL					**3.69**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.04*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.04*	*0.874*	*1.414*	*2.58*	*Cum*
		2	*1.04*	*1.448*	*0.500*	*1.51*	*Cum*
	Section 2-2	*2*	*2.50*	*0.820*	*0.450*	*1.85*	*Cum*
		2	*2.50*	*0.970*	*0.500*	*2.43*	*Cum*
		2	*2.50*	*1.270*	*0.500*	*3.18*	*Cum*
	Section 3-3	*2*	*1.96*	*0.820*	*0.450*	*1.45*	*Cum*
		2	*1.96*	*0.910*	*0.300*	*1.07*	*Cum*
		2	*1.96*	*1.150*	*0.500*	*2.25*	*Cum*
	Section 5-5	*2*	*0.55*	*0.450*	*0.450*	*0.22*	*Cum*
		2	*0.55*	*0.874*	*1.414*	*1.35*	*Cum*
		2	*0.55*	*1.448*	*0.500*	*0.79*	*Cum*
	Section 6-6	*2*	*0.49*	*0.450*	*0.450*	*0.20*	*Cum*
		2	*0.49*	*0.540*	*0.300*	*0.16*	*Cum*
		2	*0.49*	*0.780*	*0.500*	*0.38*	*Cum*
	Floor	*1*	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
		1	*4.75*	*0.600*	*0.500*	*1.43*	*Cum*
		1	*0.35*	*0.600*	*0.200*	*0.04*	*Cum*
		1	*0.20*	*0.600*	*0.400*	*0.05*	*Cum*
		1	*2.30*	*0.600*	*0.500*	*0.69*	*Cum*
		1	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
	Crest	*1*	*0.78*	*0.600*	*1.124*	*0.53*	*Cum*
	TOTAL					**23.09**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.600*	*0.150*	*0.05*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.17*	*0.450*	*0.050*	*0.14*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.17*	*0.450*	*0.050*	*0.14*	*Cum*
	TOTAL					**0.33**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**23.09**	**0.003**	**0.069**	**7850.0**	**543.71**	**Kg**
	Total Weight in Metric Tonne					**0.54**	**MT**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.04*		*0.450*	*1.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.04*		*1.414*	*5.90*	*Sqm*
		4		*0.874*	*1.414*	*4.94*	*Sqm*
		4	*1.04*		*0.500*	*2.09*	*Sqm*
		4		*1.448*	*0.500*	*2.90*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.820*	*0.450*	*1.48*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.970*	*0.500*	*1.94*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.270*	*0.500*	*2.54*	*Sqm*
	Section 3-3	*4*	*1.96*		*0.450*	*3.53*	*Sqm*
		4		*0.820*	*0.450*	*1.48*	*Sqm*
		4	*1.96*		*0.300*	*2.35*	*Sqm*
		4		*0.910*	*0.300*	*1.09*	*Sqm*
		4	*1.96*		*0.500*	*3.92*	*Sqm*
		4		*1.150*	*0.500*	*2.30*	*Sqm*
	Section 5-5	*4*	*0.55*		*0.450*	*0.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.55*		*1.414*	*3.10*	*Sqm*
		4		*0.874*	*1.414*	*4.94*	*Sqm*
		4	*0.55*		*0.500*	*1.10*	*Sqm*
		4		*1.448*	*0.500*	*2.90*	*Sqm*
	Section 6-6	*4*	*0.49*		*0.450*	*0.87*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.49*		*0.300*	*0.58*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.49*		*0.500*	*0.97*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.35*		*0.200*	*0.14*	*Sqm*
		2		*0.600*	*0.200*	*0.24*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.600*	*0.400*	*0.48*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
	Crest	*2*	*0.78*		*1.124*	*1.75*	*Sqm*
		2		*0.600*	*1.124*	*1.35*	*Sqm*
	TOTAL					**88.72**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.17*	*0.450*		*2.78*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.17*	*0.450*		*2.78*	*Sqm*
	TOTAL					**5.55**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		1.762		1.76	**Cum**
	Abutment						
	Section 1-1	2	1.03	*0.416*		*0.860*	*Cum*
	Section 2-2	2	2.50	*0.407*		*2.034*	*Cum*
	Section 3-3	2	2.20	*0.373*		*1.641*	*Cum*
	Section 5-5	2	0.59	*0.416*		*0.493*	*Cum*
	Section 6-6	2	0.04	*0.373*		*0.030*	*Cum*
	D/S protection	2					
	TOTAL					**6.82**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 2.225 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.31*	*1.964*	*2.060*	*10.632*	*Cum*
	Section 2-2	*2*	*3.00*	*1.570*	*2.060*	*19.405*	*Cum*
	Section 3-3	*2*	*4.70*	*1.450*	*1.860*	*25.352*	*Cum*
	Section 5-5	*2*	*0.52*	*2.114*	*1.860*	*4.062*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*1.860*	*0.519*	*Cum*
	U/S Key Floor	*1*	*0.69*	*0.600*	*1.100*	*0.454*	*Cum*
	U/S Floor	*1*	*2.75*	*0.600*	*1.860*	*3.069*	*Cum*
	D/S Floor	*1*	*3.00*	*0.600*	*1.100*	*1.980*	*Cum*
		1	*5.00*	*0.600*	*0.800*	*2.400*	*Cum*
	D/S Key Floor	*1*	*0.76*	*0.600*	*1.400*	*0.641*	*Cum*
	TOTAL					**68.51**	***Cum***
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*1.06*	*0.600*	*0.150*	*0.10*	*Cum*
		1	*0.15*	*0.600*	*0.150*	*0.01*	*Cum*
		1	*0.28*	*0.600*	*0.150*	*0.03*	*Cum*
		1	*4.69*	*0.600*	*0.150*	*0.42*	*Cum*
		1	*0.42*	*0.600*	*0.150*	*0.04*	*Cum*
		1	*1.20*	*0.600*	*0.150*	*0.11*	*Cum*
		1	*0.14*	*0.600*	*0.150*	*0.01*	*Cum*
		1	*1.92*	*0.600*	*0.150*	*0.17*	*Cum*
		1	*1.40*	*0.600*	*0.150*	*0.13*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.31*	*1.964*	*0.150*	*0.77*	*Cum*
	Section 2-2	*2*	*3.00*	*1.570*	*0.150*	*1.41*	*Cum*
	Section 3-3	*2*	*4.70*	*1.450*	*0.150*	*2.04*	*Cum*
	Section 5-5	*2*	*0.52*	*2.114*	*0.150*	*0.33*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**5.71**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.16*	*0.450*	*0.450*	*0.47*	*Cum*
		2	*1.16*	*1.057*	*2.024*	*4.98*	*Cum*
		2	*1.16*	*1.814*	*0.750*	*3.17*	*Cum*
	Section 2-2	*2*	*3.00*	*0.820*	*0.500*	*2.46*	*Cum*
		2	*3.00*	*0.970*	*0.500*	*2.91*	*Cum*
		2	*3.00*	*1.270*	*0.750*	*5.72*	*Cum*
	Section 3-3	*2*	*4.07*	*0.820*	*0.500*	*3.34*	*Cum*
		2	*4.07*	*0.910*	*0.300*	*2.22*	*Cum*
		2	*4.07*	*1.150*	*0.650*	*6.08*	*Cum*
	Section 5-5	*2*	*0.47*	*0.450*	*0.450*	*0.19*	*Cum*
		2	*0.47*	*1.057*	*2.024*	*2.02*	*Cum*
		2	*0.47*	*1.814*	*0.550*	*0.94*	*Cum*
	Section 6-6	*2*	*0.54*	*0.450*	*0.450*	*0.22*	*Cum*
		2	*0.54*	*0.540*	*0.300*	*0.17*	*Cum*
		2	*0.54*	*0.780*	*0.550*	*0.46*	*Cum*
	Floor	*1*	*0.69*	*0.600*	*0.950*	*0.39*	*Cum*
		1	*1.24*	*0.600*	*0.550*	*0.41*	*Cum*
		1	*0.20*	*0.600*	*0.650*	*0.08*	*Cum*
		1	*4.32*	*0.600*	*0.750*	*1.94*	*Cum*
		1	*0.40*	*0.600*	*0.300*	*0.07*	*Cum*
		1	*0.20*	*0.600*	*0.550*	*0.07*	*Cum*
		1	*1.55*	*0.600*	*0.650*	*0.60*	*Cum*
		1	*0.10*	*0.600*	*0.600*	*0.04*	*Cum*
		1	*3.15*	*0.600*	*0.550*	*1.04*	*Cum*
		1	*0.76*	*0.600*	*1.250*	*0.57*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.01*	*0.600*	*1.744*	*1.05*	*Cum*
	TOTAL					**41.62**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*0.600*	*0.150*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.98*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.98*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.52**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**41.62**	**0.003**	**0.125**	**7850.0**	**980.25**	**Kg**
	Total Weight in Metric Tonne					**0.98**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.16*		*0.450*	*2.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.16*		*2.024*	*9.42*	*Sqm*
		4		*1.057*	*2.024*	*8.56*	*Sqm*
		4	*1.16*		*0.750*	*3.49*	*Sqm*
		4		*1.814*	*0.750*	*5.44*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.970*	*0.500*	*1.94*	*Sqm*
		4	*3.00*		*0.750*	*9.00*	*Sqm*
		4		*1.270*	*0.750*	*3.81*	*Sqm*
	Section 3-3	*4*	*4.07*		*0.500*	*8.14*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*4.07*		*0.300*	*4.88*	*Sqm*
		4		*0.910*	*0.300*	*1.09*	*Sqm*
		4	*4.07*		*0.650*	*10.58*	*Sqm*
		4		*1.150*	*0.650*	*2.99*	*Sqm*
	Section 5-5	*4*	*0.47*		*0.450*	*0.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.47*		*2.024*	*3.83*	*Sqm*
		4		*1.057*	*2.024*	*8.56*	*Sqm*
		4	*0.47*		*0.550*	*1.04*	*Sqm*
		4		*1.814*	*0.550*	*3.99*	*Sqm*
	Section 6-6	*4*	*0.54*		*0.450*	*0.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.54*		*0.300*	*0.65*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.54*		*0.550*	*1.19*	*Sqm*
		4		*0.780*	*0.550*	*1.72*	*Sqm*
	Floor	*2*	*0.69*		*0.950*	*1.31*	*Sqm*
		2		*0.600*	*0.950*	*1.14*	*Sqm*
		2	*1.24*		*0.550*	*1.36*	*Sqm*
		2		*0.600*	*0.550*	*0.66*	*Sqm*
		2	*0.20*		*0.650*	*0.26*	*Sqm*
		2		*0.600*	*0.650*	*0.78*	*Sqm*
		2	*4.32*		*0.750*	*6.47*	*Sqm*
		2		*0.600*	*0.750*	*0.90*	*Sqm*
		2	*0.40*		*0.300*	*0.24*	*Sqm*
		2		*0.600*	*0.300*	*0.36*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*0.600*	*0.550*	*0.66*	*Sqm*
		2	*1.55*		*0.650*	*2.02*	*Sqm*
		2		*0.600*	*0.650*	*0.78*	*Sqm*
		2	*0.10*		*0.6*	*0.12*	*Sqm*
		2		*0.600*	*0.600*	*0.72*	*Sqm*
		2	*3.15*		*0.55*	*3.47*	*Sqm*
		2		*0.600*	*0.550*	*0.66*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.600*	*1.250*	*1.50*	*Sqm*
	Crest	*2*	*1.01*		*1.744*	*3.51*	*Sqm*
		2		*0.600*	*1.744*	*2.09*	*Sqm*
	TOTAL					**143.72**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.98*	*0.450*		*4.49*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.98*	*0.450*		*4.49*	*Sqm*
	TOTAL					**8.98**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		3.358		3.36	**Cum**
	Abutment						
	Section 1-1	2	1.31	*0.864*		*2.271*	*Cum*
	Section 2-2	2	3.00	*0.637*		*3.822*	*Cum*
	Section 3-3	2	4.70	*0.455*		*4.272*	*Cum*
	Section 5-5	2	0.52	*0.864*		*0.893*	*Cum*
	Section 6-6	2	0.15	*0.455*		*0.136*	*Cum*
	D/S protection	2					
	TOTAL					**14.75**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR ASHNI MR.						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.1.700 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.99*	*1.524*	*1.361*	*4.086*	*Cum*
	Section 2-2	*2*	*2.50*	*1.158*	*1.361*	*7.880*	*Cum*
	Section 3-3	*2*	*1.95*	*1.038*	*1.161*	*4.700*	*Cum*
	Section 5-5	*2*	*2.43*	*1.674*	*1.361*	*11.093*	*Cum*
	Section 6-6	*2*	*0.98*	*1.038*	*1.161*	*2.367*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.800*	*0.850*	*0.425*	*Cum*
	U/S Floor	*1*	*2.00*	*0.800*	*1.361*	*2.178*	*Cum*
	D/S Floor	*1*	*2.50*	*0.800*	*0.850*	*1.700*	*Cum*
		1	*2.25*	*0.800*	*0.650*	*1.170*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.800*	*0.850*	*0.425*	*Cum*
	Toe Wall D/S Portion	*1*	*4.84*	*0.750*	*0.900*	*3.267*	*Cum*
	TOTAL					**39.29**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.800*	*0.150*	*0.07*	*Cum*
		1	*0.78*	*0.800*	*0.150*	*0.09*	*Cum*
		1	*3.82*	*0.800*	*0.150*	*0.46*	*Cum*
		1	*0.28*	*0.800*	*0.150*	*0.03*	*Cum*
		1	*0.95*	*0.800*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*0.800*	*0.150*	*0.09*	*Cum*
		1	*0.54*	*0.800*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.524*	*0.150*	*0.45*	*Cum*
	Section 2-2	*2*	*2.50*	*1.158*	*0.150*	*0.87*	*Cum*
	Section 3-3	*2*	*1.95*	*1.038*	*0.150*	*0.61*	*Cum*
	Section 5-5	*2*	*2.43*	*1.674*	*0.150*	*1.22*	*Cum*
	Section 6-6	*2*	*0.98*	*1.038*	*0.150*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*4.84*	*0.750*	*0.300*	*1.09*	*Cum*
	Toe Wall D/S Portion	*1*	*4.54*	*0.450*	*0.600*	*1.23*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.75*	*0.600*	*0.300*	*0.32*	*Cum*
	TOTAL					**7.01**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.84*	*0.450*	*0.450*	*0.34*	*Cum*
		2	*0.84*	*0.837*	*1.290*	*1.80*	*Cum*
		2	*0.84*	*1.374*	*0.500*	*1.15*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.654*	*0.680*	*2.22*	*Cum*
		2	*2.50*	*1.008*	*0.500*	*2.52*	*Cum*
	Section 3-3	*2*	*1.66*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.66*	*0.594*	*0.480*	*0.94*	*Cum*
		2	*1.66*	*0.888*	*0.500*	*1.47*	*Cum*
	Section 5-5	*2*	*2.47*	*0.450*	*0.450*	*1.00*	*Cum*
		2	*2.47*	*0.837*	*1.290*	*5.32*	*Cum*
		2	*2.47*	*1.374*	*0.500*	*3.39*	*Cum*
	Section 6-6	*2*	*1.43*	*0.450*	*0.450*	*0.58*	*Cum*
		2	*1.43*	*0.594*	*0.480*	*0.81*	*Cum*
		2	*1.43*	*0.888*	*0.500*	*1.27*	*Cum*
	Floor	*1*	*0.63*	*0.800*	*0.700*	*0.35*	*Cum*
		1	*4.50*	*0.800*	*0.500*	*1.80*	*Cum*
		1	*0.25*	*0.800*	*0.200*	*0.04*	*Cum*
		1	*0.20*	*0.800*	*0.400*	*0.06*	*Cum*
		1	*2.05*	*0.800*	*0.500*	*0.82*	*Cum*
		1	*0.63*	*0.800*	*0.700*	*0.35*	*Cum*
	Crest	*1*	*0.75*	*0.800*	*0.885*	*0.53*	*Cum*
	TOTAL					**28.45**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.800*	*0.200*	*0.10*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.63*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.63*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.53**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**28.45**	**0.00**	**0.085**	**7850.0**	**670.01**	**Kg**
	Total Weight in Metric Tonne					**0.67**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.84*		*0.450*	*1.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.84*		*1.290*	*4.31*	*Sqm*
		4		*0.837*	*1.290*	*4.32*	*Sqm*
		4	*0.84*		*0.500*	*1.67*	*Sqm*
		4		*1.374*	*0.500*	*2.75*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.680*	*6.80*	*Sqm*
		4		*0.654*	*0.680*	*1.78*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.008*	*0.500*	*2.02*	*Sqm*
	Section 3-3	*4*	*1.66*		*0.450*	*2.98*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.66*		*0.480*	*3.18*	*Sqm*
		4		*0.594*	*0.480*	*1.14*	*Sqm*
		4	*1.66*		*0.500*	*3.31*	*Sqm*
		4		*0.888*	*0.500*	*1.78*	*Sqm*
	Section 5-5	*4*	*2.47*		*0.450*	*4.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.47*		*1.290*	*12.72*	*Sqm*
		4		*0.837*	*1.290*	*4.32*	*Sqm*
		4	*2.47*		*0.500*	*4.93*	*Sqm*
		4		*1.374*	*0.500*	*2.75*	*Sqm*
	Section 6-6	*4*	*1.43*		*0.450*	*2.57*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.43*		*0.480*	*2.74*	*Sqm*
		4		*0.594*	*0.480*	*1.14*	*Sqm*
		4	*1.43*		*0.500*	*2.85*	*Sqm*
		4		*0.888*	*0.500*	*1.78*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.800*	*0.700*	*1.12*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*0.800*	*0.500*	*0.80*	*Sqm*
		2	*0.25*		*0.200*	*0.10*	*Sqm*
		2		*0.800*	*0.200*	*0.32*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.800*	*0.400*	*0.64*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*0.800*	*0.500*	*0.80*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.800*	*0.700*	*1.12*	*Sqm*
	Crest	*2*	*0.75*		*0.885*	*1.32*	*Sqm*
		2		*0.800*	*0.885*	*1.42*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.84*		*0.300*	*2.90*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.54*		*0.600*	*5.45*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.300*	*2.10*	*Sqm*
		4		*0.600*	*0.300*	*0.72*	*Sqm*
	TOTAL					**119.57**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.063*		*7.22*	*Sqm*
	TOTAL					**7.22**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.63*	*0.450*		*4.33*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.63*	*0.450*		*4.33*	*Sqm*
	TOTAL					**8.67**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.598		1.60	**Cum**
	Abutment						
	Section 1-1	2	*0.99*	*0.440*		*0.867*	*Cum*
	Section 2-2	2	*2.50*	*0.440*		*2.198*	*Cum*
	Section 3-3	2	*1.95*	*0.423*		*1.650*	*Cum*
	Section 5-5	2	*2.43*	*0.440*		*2.142*	*Cum*
	Section 6-6	2	*0.98*	*0.423*		*0.831*	*Cum*
	Toe wall	2	*4.84*	*0.150*	*0.600*	*1.452*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**11.05**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BUDHAUL SUB DY.						
	SHARDA TYPE FALL OF HEIGHT 1.219 METER AT CH.1.260 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.27*	*2.111*	*1.464*	*7.859*	*Cum*
	Section 2-2	*2*	*3.75*	*1.380*	*1.464*	*15.152*	*Cum*
	Section 3-3	*2*	*2.95*	*1.230*	*1.264*	*9.173*	*Cum*
	Section 5-5	*2*	*2.96*	*2.261*	*1.464*	*19.599*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*1.264*	*3.949*	*Cum*
	U/S Key Floor	*1*	*0.70*	*2.930*	*1.150*	*2.359*	*Cum*
	U/S Floor	*1*	*3.00*	*2.930*	*1.265*	*11.119*	*Cum*
	D/S Floor	*1*	*3.75*	*2.930*	*0.850*	*9.339*	*Cum*
		1	*3.25*	*2.930*	*0.700*	*6.666*	*Cum*
	D/S Key Floor	*1*	*0.76*	*2.930*	*1.400*	*3.128*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.900*	*5.353*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**95.95**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
		1	*1.12*	*2.930*	*0.150*	*0.49*	*Cum*
		1	*0.39*	*2.930*	*0.150*	*0.17*	*Cum*
		1	*0.28*	*2.930*	*0.150*	*0.12*	*Cum*
		1	*5.18*	*2.930*	*0.150*	*2.28*	*Cum*
		1	*0.57*	*2.930*	*0.150*	*0.25*	*Cum*
		1	*1.61*	*2.930*	*0.150*	*0.71*	*Cum*
		1	*1.40*	*2.930*	*0.150*	*0.61*	*Cum*
		1	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.27*	*2.111*	*0.150*	*0.81*	*Cum*
	Section 2-2	*2*	*3.75*	*1.380*	*0.150*	*1.55*	*Cum*
	Section 3-3	*2*	*2.95*	*1.230*	*0.150*	*1.09*	*Cum*
	Section 5-5	*2*	*2.96*	*2.261*	*0.150*	*2.01*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*0.150*	*0.47*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.300*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*7.63*	*0.450*	*0.600*	*2.06*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**16.23**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.12*	*0.450*	*0.450*	*0.45*	*Cum*
		2	*1.12*	*1.131*	*2.269*	*5.75*	*Cum*
		2	*1.12*	*1.961*	*0.700*	*3.08*	*Cum*
	Section 2-2	*2*	*3.75*	*0.450*	*0.450*	*1.52*	*Cum*
		2	*3.75*	*0.765*	*1.050*	*6.02*	*Cum*
		2	*3.75*	*1.230*	*0.700*	*6.46*	*Cum*
	Section 3-3	*2*	*2.56*	*0.450*	*0.450*	*1.04*	*Cum*
		2	*2.56*	*0.690*	*0.800*	*2.83*	*Cum*
		2	*2.56*	*1.080*	*0.550*	*3.04*	*Cum*
	Section 5-5	*2*	*2.92*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.92*	*1.131*	*2.269*	*14.96*	*Cum*
		2	*2.92*	*1.961*	*0.500*	*5.72*	*Cum*
	Section 6-6	*2*	*1.81*	*0.450*	*0.450*	*0.73*	*Cum*
		2	*1.81*	*0.690*	*0.800*	*2.00*	*Cum*
		2	*1.81*	*1.080*	*0.550*	*2.15*	*Cum*
	Floor	*1*	*0.70*	*2.930*	*1.000*	*2.05*	*Cum*
		1	*1.50*	*1.080*	*0.500*	*0.81*	*Cum*
		1	*0.20*	*2.930*	*0.600*	*0.35*	*Cum*
		1	*5.05*	*2.930*	*0.700*	*10.36*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.25*	*2.930*	*0.450*	*0.33*	*Cum*
		1	*0.21*	*2.930*	*0.400*	*0.24*	*Cum*
		1	*3.00*	*2.930*	*0.550*	*4.83*	*Cum*
		1	*0.76*	*2.930*	*1.250*	*2.79*	*Cum*
	Crest	*1*	*1.03*	*2.930*	*1.709*	*5.14*	*Cum*
	TOTAL					**83.85**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*2.930*	*0.200*	*0.44*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.34*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.34*	*0.450*	*0.050*	*0.30*	*Cum*
	TOTAL					**1.04**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**83.85**	**0.00**	**0.252**	**7850.0**	**1974.71**	**Kg**
	Total Weight in Metric Tonne					**1.97**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.12*		*0.450*	*2.02*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.12*		*2.269*	*10.18*	*Sqm*
		4		*1.131*	*2.269*	*10.26*	*Sqm*
		4	*1.12*		*0.700*	*3.14*	*Sqm*
		4		*1.961*	*0.700*	*5.49*	*Sqm*
	Section 2-2	*4*	*3.75*		*0.450*	*6.75*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.75*		*1.050*	*15.75*	*Sqm*
		4		*0.765*	*1.050*	*3.21*	*Sqm*
		4	*3.75*		*0.700*	*10.50*	*Sqm*
		4		*1.230*	*0.700*	*3.44*	*Sqm*
	Section 3-3	*4*	*2.56*		*0.450*	*4.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.56*		*0.800*	*8.19*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*2.56*		*0.550*	*5.63*	*Sqm*
		4		*1.080*	*0.550*	*2.38*	*Sqm*
	Section 5-5	*4*	*2.92*		*0.450*	*5.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.92*		*2.269*	*26.47*	*Sqm*
		4		*1.131*	*2.269*	*10.26*	*Sqm*
		4	*2.92*		*0.500*	*5.83*	*Sqm*
		4		*1.961*	*0.500*	*3.92*	*Sqm*
	Section 6-6	*4*	*1.81*		*0.450*	*3.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.81*		*0.800*	*5.79*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.81*		*0.550*	*3.98*	*Sqm*
		4		*1.080*	*0.550*	*2.38*	*Sqm*
	Floor	*2*	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*2.930*	*1.000*	*5.86*	*Sqm*
		2	*1.497*		*0.5*	*1.50*	*Sqm*
		2		*1.08*	*0.500*	*1.08*	*Sqm*
		2	*0.20*		*0.600*	*0.24*	*Sqm*
		2		*2.93*	*0.600*	*3.52*	*Sqm*
		2	*5.05*		*0.700*	*7.07*	*Sqm*
		2		*2.930*	*0.700*	*4.10*	*Sqm*
		2	*0.25*		*0.450*	*0.23*	*Sqm*
		2		*2.930*	*0.450*	*2.64*	*Sqm*
		2	*0.21*		*0.400*	*0.17*	*Sqm*
		2		*2.930*	*0.400*	*2.34*	*Sqm*
		2	*3*		*0.550*	*3.30*	*Sqm*
		2		*2.93*	*0.550*	*3.22*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.930*	*1.250*	*7.33*	*Sqm*
	Crest	*2*	*1.03*		*1.709*	*3.51*	*Sqm*
		2		*2.930*	*1.709*	*10.01*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.93*		*0.300*	*4.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.63*		*0.600*	*9.16*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**250.07**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.592*		*12.96*	*Sqm*
	TOTAL					**12.96**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*2.330*	*0.300*	**1.75**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*2.330*	*0.150*	**1.75**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.34*	*0.450*		*6.00*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.34*	*0.450*		*6.00*	*Sqm*
	TOTAL					**12.01**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		12.076		12.08	**Cum**
	Abutment						
	Section 1-1	2	*1.27*	*0.402*		*1.023*	*Cum*
	Section 2-2	2	*3.75*	*0.402*		*3.017*	*Cum*
	Section 3-3	2	*2.95*	*0.231*		*1.365*	*Cum*
	Section 5-5	2	*2.96*	*0.372*		*2.204*	*Cum*
	Section 6-6	2	*1.27*	*0.231*		*0.588*	*Cum*
	Toe wall	2	*7.93*	*0.150*	*0.600*	*2.379*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**23.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.3.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.21*	*1.898*	*1.598*	*7.361*	*Cum*
	Section 2-2	*2*	*3.50*	*1.350*	*1.598*	*15.101*	*Cum*
	Section 3-3	*2*	*2.20*	*1.230*	*1.398*	*7.566*	*Cum*
	Section 5-5	*2*	*3.01*	*2.048*	*1.598*	*19.669*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*1.398*	*4.368*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.930*	*0.850*	*1.557*	*Cum*
	U/S Floor	*1*	*2.50*	*2.930*	*1.498*	*10.973*	*Cum*
	D/S Floor	*1*	*3.50*	*2.930*	*0.750*	*7.691*	*Cum*
		1	*2.50*	*2.930*	*0.600*	*4.395*	*Cum*
	D/S Key Floor	*1*	*0.70*	*2.930*	*1.150*	*2.359*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.900*	*5.353*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
	TOTAL					**88.64**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
		1	*0.78*	*2.930*	*0.150*	*0.34*	*Cum*
		1	*0.24*	*2.930*	*0.150*	*0.11*	*Cum*
		1	*0.14*	*2.930*	*0.150*	*0.06*	*Cum*
		1	*4.90*	*2.930*	*0.150*	*2.15*	*Cum*
		1	*0.42*	*2.930*	*0.150*	*0.19*	*Cum*
		1	*1.02*	*2.930*	*0.150*	*0.45*	*Cum*
		1	*1.12*	*2.930*	*0.150*	*0.49*	*Cum*
		1	*0.54*	*2.930*	*0.150*	*0.24*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.21*	*1.898*	*0.150*	*0.69*	*Cum*
	Section 2-2	*2*	*3.50*	*1.350*	*0.150*	*1.42*	*Cum*
	Section 3-3	*2*	*2.20*	*1.230*	*0.150*	*0.81*	*Cum*
	Section 5-5	*2*	*3.01*	*2.048*	*0.150*	*1.85*	*Cum*
	Section 6-6	*2*	*1.27*	*1.230*	*0.150*	*0.47*	*Cum*
	Toe Wall D/S Portion	*1*	*7.93*	*0.750*	*0.300*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*7.63*	*0.450*	*0.600*	*2.06*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**14.70**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.06*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.06*	*1.024*	*1.914*	*4.17*	*Cum*
		2	*1.06*	*1.748*	*0.600*	*2.23*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.750*	*1.000*	*5.25*	*Cum*
		2	*3.50*	*1.200*	*0.600*	*5.04*	*Cum*
	Section 3-3	*2*	*2.19*	*0.450*	*0.450*	*0.88*	*Cum*
		2	*2.19*	*0.690*	*0.800*	*2.41*	*Cum*
		2	*2.19*	*1.080*	*0.500*	*2.36*	*Cum*
	Section 5-5	*2*	*2.96*	*0.450*	*0.450*	*1.20*	*Cum*
		2	*2.96*	*1.024*	*1.914*	*11.61*	*Cum*
		2	*2.96*	*1.748*	*0.500*	*5.18*	*Cum*
	Section 6-6	*2*	*1.96*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.96*	*0.690*	*0.800*	*2.16*	*Cum*
		2	*1.96*	*1.080*	*0.500*	*2.12*	*Cum*
	Floor	*1*	*0.63*	*2.930*	*0.700*	*1.28*	*Cum*
		1	*1.20*	*1.080*	*0.500*	*0.65*	*Cum*
		1	*0.10*	*2.930*	*0.550*	*0.16*	*Cum*
		1	*4.70*	*2.930*	*0.600*	*8.26*	*Cum*
		1	*0.20*	*2.930*	*0.400*	*0.23*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.23*	*2.930*	*0.300*	*0.20*	*Cum*
		1	*2.30*	*2.930*	*0.500*	*3.37*	*Cum*
		1	*0.70*	*2.930*	*1.000*	*2.05*	*Cum*
	Crest	*1*	*0.98*	*2.930*	*1.400*	*4.00*	*Cum*
	TOTAL					**67.46**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*2.930*	*0.150*	*0.33*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.23*	*0.450*	*0.050*	*0.28*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.23*	*0.450*	*0.050*	*0.28*	*Cum*
	TOTAL					**0.88**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**67.46**	**0.00**	**0.202**	**7850.0**	**1588.64**	**Kg**
	Total Weight in Metric Tonne					**1.59**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.06*		*0.450*	*1.91*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.06*		*1.914*	*8.14*	*Sqm*
		4		*1.024*	*1.914*	*7.84*	*Sqm*
		4	*1.06*		*0.600*	*2.55*	*Sqm*
		4		*1.748*	*0.600*	*4.20*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*1.000*	*14.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*3.50*		*0.600*	*8.40*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Section 3-3	*4*	*2.19*		*0.450*	*3.93*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.19*		*0.800*	*6.99*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*2.19*		*0.500*	*4.37*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Section 5-5	*4*	*2.96*		*0.450*	*5.33*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.96*		*1.914*	*22.67*	*Sqm*
		4		*1.024*	*1.914*	*7.84*	*Sqm*
		4	*2.96*		*0.500*	*5.92*	*Sqm*
		4		*1.748*	*0.500*	*3.50*	*Sqm*
	Section 6-6	*4*	*1.96*		*0.450*	*3.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.96*		*0.800*	*6.27*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*1.96*		*0.500*	*3.92*	*Sqm*
		4		*1.080*	*0.500*	*2.16*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.930*	*0.700*	*4.10*	*Sqm*
		2	*1.2*		*0.5*	*1.20*	*Sqm*
		2		*1.08*	*0.500*	*1.08*	*Sqm*
		2	*0.10*		*0.550*	*0.11*	*Sqm*
		2		*2.93*	*0.550*	*3.22*	*Sqm*
		2	*4.70*		*0.600*	*5.64*	*Sqm*
		2		*2.930*	*0.600*	*3.52*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.930*	*0.400*	*2.34*	*Sqm*
		2	*0.23*		*0.300*	*0.14*	*Sqm*
		2		*2.930*	*0.300*	*1.76*	*Sqm*
		2	*2.3*		*0.500*	*2.30*	*Sqm*
		2		*2.93*	*0.500*	*2.93*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*2.930*	*1.000*	*5.86*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*0.98*		*1.400*	*2.73*	*Sqm*
		2		*2.930*	*1.400*	*8.20*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.93*		*0.300*	*4.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.63*		*0.600*	*9.16*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**217.33**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.592*		*12.96*	*Sqm*
	TOTAL					**12.96**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*2.330*	*0.300*	**1.75**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*2.330*	*0.150*	**1.75**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*12.23*	*0.450*		*5.50*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.23*	*0.450*		*5.50*	*Sqm*
	TOTAL					**11.01**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		6.265		6.27	**Cum**
	Abutment						
	Section 1-1	2	*1.21*	*0.560*		*1.359*	*Cum*
	Section 2-2	2	*3.50*	*0.560*		*3.920*	*Cum*
	Section 3-3	2	*2.20*	*0.395*		*1.738*	*Cum*
	Section 5-5	2	*3.01*	*0.545*		*3.275*	*Cum*
	Section 6-6	2	*1.27*	*0.395*		*1.003*	*Cum*
	Toe wall	2	*7.93*	*0.150*	*0.600*	*2.379*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**20.39**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.5.060 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.97*	*1.588*	*0.988*	*3.034*	*Cum*
	Section 2-2	*2*	*2.75*	*1.314*	*0.988*	*7.140*	*Cum*
	Section 3-3	*2*	*1.95*	*1.194*	*0.788*	*3.669*	*Cum*
	Section 5-5	*2*	*2.94*	*1.738*	*0.988*	*10.104*	*Cum*
	Section 6-6	*2*	*1.22*	*1.194*	*0.788*	*2.288*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.650*	*0.850*	*1.408*	*Cum*
	U/S Floor	*1*	*2.00*	*2.650*	*0.938*	*4.971*	*Cum*
	D/S Floor	*1*	*2.75*	*2.650*	*0.650*	*4.737*	*Cum*
		1	*2.25*	*2.650*	*0.650*	*3.876*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.650*	*0.850*	*1.408*	*Cum*
	Toe Wall D/S Portion	*1*	*7.47*	*0.750*	*0.900*	*5.042*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
	TOTAL					**49.70**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.650*	*0.150*	*0.22*	*Cum*
		1	*0.78*	*2.650*	*0.150*	*0.31*	*Cum*
		1	*4.05*	*2.650*	*0.150*	*1.61*	*Cum*
		1	*0.28*	*2.650*	*0.150*	*0.11*	*Cum*
		1	*0.97*	*2.650*	*0.150*	*0.38*	*Cum*
		1	*0.78*	*2.650*	*0.150*	*0.31*	*Cum*
		1	*0.54*	*2.650*	*0.150*	*0.22*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.97*	*1.588*	*0.150*	*0.46*	*Cum*
	Section 2-2	*2*	*2.75*	*1.314*	*0.150*	*1.08*	*Cum*
	Section 3-3	*2*	*1.95*	*1.194*	*0.150*	*0.70*	*Cum*
	Section 5-5	*2*	*2.94*	*1.738*	*0.150*	*1.53*	*Cum*
	Section 6-6	*2*	*1.22*	*1.194*	*0.150*	*0.44*	*Cum*
	Toe Wall D/S Portion	*1*	*7.47*	*0.750*	*0.300*	*1.68*	*Cum*
	Toe Wall D/S Portion	*1*	*7.17*	*0.450*	*0.600*	*1.94*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**12.20**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.82*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.82*	*0.869*	*1.397*	*1.99*	*Cum*
		2	*0.82*	*1.438*	*0.550*	*1.30*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.732*	*0.940*	*3.78*	*Cum*
		2	*2.75*	*1.164*	*0.550*	*3.52*	*Cum*
	Section 3-3	*2*	*1.58*	*0.450*	*0.450*	*0.64*	*Cum*
		2	*1.58*	*0.672*	*0.740*	*1.57*	*Cum*
		2	*1.58*	*1.044*	*0.550*	*1.81*	*Cum*
	Section 5-5	*2*	*2.90*	*0.450*	*0.450*	*1.17*	*Cum*
		2	*2.90*	*0.869*	*1.397*	*7.04*	*Cum*
		2	*2.90*	*1.438*	*0.500*	*4.17*	*Cum*
	Section 6-6	*2*	*1.74*	*0.450*	*0.450*	*0.70*	*Cum*
		2	*1.74*	*0.672*	*0.740*	*1.73*	*Cum*
		2	*1.74*	*1.044*	*0.500*	*1.81*	*Cum*
	Floor	*1*	*0.63*	*2.650*	*0.700*	*1.16*	*Cum*
		1	*4.75*	*2.650*	*0.500*	*6.29*	*Cum*
		1	*0.20*	*2.650*	*0.400*	*0.21*	*Cum*
		1	*0.18*	*2.650*	*0.200*	*0.09*	*Cum*
		1	*2.05*	*2.650*	*0.500*	*2.72*	*Cum*
		1	*0.63*	*2.650*	*0.700*	*1.16*	*Cum*
	Crest	*1*	*0.75*	*2.650*	*0.927*	*1.83*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**46.15**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.650*	*0.150*	*0.24*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.71*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.71*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.72**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**46.15**	**0.00**	**0.138**	**7850.0**	**1086.76**	**Kg**
	Total Weight in Metric Tonne					**1.09**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.82*		*0.450*	*1.47*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.82*		*1.397*	*4.58*	*Sqm*
		4		*0.869*	*1.397*	*4.86*	*Sqm*
		4	*0.82*		*0.550*	*1.80*	*Sqm*
		4		*1.438*	*0.550*	*3.16*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.940*	*10.34*	*Sqm*
		4		*0.732*	*0.940*	*2.75*	*Sqm*
		4	*2.75*		*0.550*	*6.05*	*Sqm*
		4		*1.164*	*0.550*	*2.56*	*Sqm*
	Section 3-3	*4*	*1.58*		*0.450*	*2.84*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.58*		*0.740*	*4.67*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*1.58*		*0.550*	*3.47*	*Sqm*
		4		*1.044*	*0.550*	*2.30*	*Sqm*
	Section 5-5	*4*	*2.90*		*0.450*	*5.22*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.90*		*1.397*	*16.19*	*Sqm*
		4		*0.869*	*1.397*	*4.86*	*Sqm*
		4	*2.90*		*0.500*	*5.80*	*Sqm*
		4		*1.438*	*0.500*	*2.88*	*Sqm*
	Section 6-6	*4*	*1.74*		*0.450*	*3.13*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.74*		*0.740*	*5.14*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*1.74*		*0.500*	*3.48*	*Sqm*
		4		*1.044*	*0.500*	*2.09*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.650*	*0.700*	*3.71*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*2.650*	*0.500*	*2.65*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.650*	*0.400*	*2.12*	*Sqm*
		2	*0.18*		*0.200*	*0.07*	*Sqm*
		2		*2.650*	*0.200*	*1.06*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*2.65*	*0.500*	*2.65*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.650*	*0.700*	*3.71*	*Sqm*
	Crest	*2*	*0.75*		*0.927*	*1.38*	*Sqm*
		2		*2.650*	*0.927*	*4.91*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.47*		*0.300*	*4.48*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.17*		*0.600*	*8.60*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**165.49**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*2.484*		*11.18*	*Sqm*
	TOTAL					**11.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*2.050*	*0.300*	**1.38**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*2.050*	*0.150*	**1.38**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.71*	*0.450*		*4.82*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.71*	*0.450*		*4.82*	*Sqm*
	TOTAL					**9.64**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.368		2.37	Cum
	Abutment						
	Section 1-1	2	*0.97*	*0.088*		*0.170*	*Cum*
	Section 2-2	2	*2.75*	*0.088*		*0.483*	*Cum*
	Section 3-3	2	*1.95*	*0.088*		*0.343*	*Cum*
	Section 5-5	2	*2.94*	*0.088*		*0.517*	*Cum*
	Section 6-6	2	*1.22*	*0.088*		*0.214*	*Cum*
	Toe wall	2	*7.47*	*0.150*	*0.600*	*2.241*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**6.74**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH.7.620 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.24*	*1.906*	*1.822*	*8.585*	*Cum*
	Section 2-2	*2*	*3.50*	*1.266*	*1.822*	*16.147*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*1.622*	*6.320*	*Cum*
	Section 5-5	*2*	*2.71*	*2.056*	*1.822*	*20.274*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*1.622*	*4.253*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.400*	*0.850*	*1.275*	*Cum*
	U/S Floor	*1*	*2.50*	*2.400*	*1.672*	*10.032*	*Cum*
	D/S Floor	*1*	*3.50*	*2.400*	*0.800*	*6.720*	*Cum*
		1	*2.00*	*2.400*	*0.650*	*3.120*	*Cum*
	D/S Key Floor	*1*	*0.74*	*2.400*	*1.300*	*2.301*	*Cum*
	Toe Wall D/S Portion	*1*	*6.98*	*0.750*	*0.900*	*4.712*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
	TOTAL					**85.76**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.400*	*0.150*	*0.20*	*Cum*
		1	*0.78*	*2.400*	*0.150*	*0.28*	*Cum*
		1	*0.17*	*2.400*	*0.150*	*0.06*	*Cum*
		1	*0.21*	*2.400*	*0.150*	*0.08*	*Cum*
		1	*4.86*	*2.400*	*0.150*	*1.75*	*Cum*
		1	*0.49*	*2.400*	*0.150*	*0.18*	*Cum*
		1	*0.46*	*2.400*	*0.150*	*0.17*	*Cum*
		1	*1.29*	*2.400*	*0.150*	*0.46*	*Cum*
		1	*0.54*	*2.400*	*0.150*	*0.20*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.24*	*1.906*	*0.150*	*0.71*	*Cum*
	Section 2-2	*2*	*3.50*	*1.266*	*0.150*	*1.33*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*2.71*	*2.056*	*0.150*	*1.67*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*6.98*	*0.750*	*0.300*	*1.57*	*Cum*
	Toe Wall D/S Portion	*1*	*6.68*	*0.450*	*0.600*	*1.80*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**12.64**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*0.450*	*0.450*	*0.44*	*Cum*
		2	*1.09*	*1.028*	*1.926*	*4.30*	*Cum*
		2	*1.09*	*1.756*	*0.650*	*2.48*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.708*	*0.860*	*4.26*	*Cum*
		2	*3.50*	*1.116*	*0.650*	*5.08*	*Cum*
	Section 3-3	*2*	*1.35*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.35*	*0.648*	*0.660*	*1.16*	*Cum*
		2	*1.35*	*0.996*	*0.500*	*1.35*	*Cum*
	Section 5-5	*2*	*2.66*	*0.450*	*0.450*	*1.08*	*Cum*
		2	*2.66*	*1.028*	*1.926*	*10.54*	*Cum*
		2	*2.66*	*1.756*	*0.500*	*4.68*	*Cum*
	Section 6-6	*2*	*1.64*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.64*	*0.648*	*0.660*	*1.40*	*Cum*
		2	*1.64*	*0.996*	*0.500*	*1.64*	*Cum*
	Floor	*1*	*0.63*	*2.400*	*0.700*	*1.05*	*Cum*
		1	*1.13*	*0.996*	*0.500*	*0.56*	*Cum*
		1	*0.15*	*2.400*	*0.575*	*0.21*	*Cum*
		1	*4.72*	*2.400*	*0.650*	*7.37*	*Cum*
		1	*0.20*	*2.400*	*0.400*	*0.19*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.18*	*2.400*	*0.350*	*0.15*	*Cum*
		1	*1.80*	*2.400*	*0.500*	*2.16*	*Cum*
		1	*0.74*	*2.400*	*1.150*	*2.04*	*Cum*
	Crest	*1*	*0.99*	*2.400*	*1.426*	*3.38*	*Cum*
	TOTAL					**58.14**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*2.400*	*0.200*	*0.36*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.25*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.25*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.87**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**58.14**	**0.00**	**0.174**	**7850.0**	**1369.10**	**Kg**
	Total Weight in Metric Tonne					**1.37**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.09*		*0.450*	*1.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.09*		*1.926*	*8.37*	*Sqm*
		4		*1.028*	*1.926*	*7.92*	*Sqm*
		4	*1.09*		*0.650*	*2.82*	*Sqm*
		4		*1.756*	*0.650*	*4.57*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.860*	*12.04*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*3.50*		*0.650*	*9.10*	*Sqm*
		4		*1.116*	*0.650*	*2.90*	*Sqm*
	Section 3-3	*4*	*1.35*		*0.450*	*2.43*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.35*		*0.660*	*3.57*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.35*		*0.500*	*2.70*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 5-5	*4*	*2.66*		*0.450*	*4.79*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.66*		*1.926*	*20.51*	*Sqm*
		4		*1.028*	*1.926*	*7.92*	*Sqm*
		4	*2.66*		*0.500*	*5.33*	*Sqm*
		4		*1.756*	*0.500*	*3.51*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.450*	*2.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.64*		*0.660*	*4.33*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.64*		*0.500*	*3.28*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.400*	*0.700*	*3.36*	*Sqm*
		2	*1.125*		*0.5*	*1.13*	*Sqm*
		2		*0.996*	*0.500*	*1.00*	*Sqm*
		2	*0.15*		*0.575*	*0.17*	*Sqm*
		2		*2.4*	*0.575*	*2.76*	*Sqm*
		2	*4.72*		*0.650*	*6.14*	*Sqm*
		2		*2.400*	*0.650*	*3.12*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.400*	*0.400*	*1.92*	*Sqm*
		2	*0.18*		*0.350*	*0.13*	*Sqm*
		2		*2.400*	*0.350*	*1.68*	*Sqm*
		2	*1.8*		*0.500*	*1.80*	*Sqm*
		2		*2.4*	*0.500*	*2.40*	*Sqm*
		2	*0.74*		*1.150*	*1.70*	*Sqm*
		2		*2.400*	*1.150*	*5.52*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*0.99*		*1.426*	*2.82*	*Sqm*
		2		*2.400*	*1.426*	*6.84*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.98*		*0.300*	*4.19*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.68*		*0.600*	*8.02*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**195.74**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*2.340*		*10.53*	*Sqm*
	TOTAL					**10.53**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*1.800*	*0.300*	**1.22**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*1.800*	*0.150*	**1.22**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.25*	*0.450*		*5.06*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.25*	*0.450*		*5.06*	*Sqm*
	TOTAL					**10.13**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		6.287		6.29	Cum
	Abutment						
	Section 1-1	2	*1.24*	*0.718*		*1.774*	*Cum*
	Section 2-2	2	*3.50*	*0.710*		*4.967*	*Cum*
	Section 3-3	2	*1.70*	*0.516*		*1.754*	*Cum*
	Section 5-5	2	*2.71*	*0.695*		*3.761*	*Cum*
	Section 6-6	2	*1.14*	*0.516*		*1.181*	*Cum*
	Toe wall	2	*6.98*	*0.150*	*0.600*	*2.094*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**22.22**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH.8.100 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.24*	*1.906*	*1.832*	*8.632*	*Cum*
	Section 2-2	*2*	*3.50*	*1.266*	*1.832*	*16.235*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*1.632*	*6.359*	*Cum*
	Section 5-5	*2*	*2.71*	*2.056*	*1.832*	*20.385*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*1.632*	*4.279*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.400*	*0.850*	*1.275*	*Cum*
	U/S Floor	*1*	*2.50*	*2.400*	*1.682*	*10.092*	*Cum*
	D/S Floor	*1*	*3.50*	*2.400*	*0.800*	*6.720*	*Cum*
		1	*2.00*	*2.400*	*0.650*	*3.120*	*Cum*
	D/S Key Floor	*1*	*0.74*	*2.400*	*1.300*	*2.301*	*Cum*
	Toe Wall D/S Portion	*1*	*6.98*	*0.750*	*0.900*	*4.712*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
	TOTAL					**86.13**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.400*	*0.150*	*0.20*	*Cum*
		1	*0.78*	*2.400*	*0.150*	*0.28*	*Cum*
		1	*0.17*	*2.400*	*0.150*	*0.06*	*Cum*
		1	*0.21*	*2.400*	*0.150*	*0.08*	*Cum*
		1	*4.86*	*2.400*	*0.150*	*1.75*	*Cum*
		1	*0.49*	*2.400*	*0.150*	*0.18*	*Cum*
		1	*0.46*	*2.400*	*0.150*	*0.17*	*Cum*
		1	*1.29*	*2.400*	*0.150*	*0.46*	*Cum*
		1	*0.54*	*2.400*	*0.150*	*0.20*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.24*	*1.906*	*0.150*	*0.71*	*Cum*
	Section 2-2	*2*	*3.50*	*1.266*	*0.150*	*1.33*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*2.71*	*2.056*	*0.150*	*1.67*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*6.98*	*0.750*	*0.300*	*1.57*	*Cum*
	Toe Wall D/S Portion	*1*	*6.68*	*0.450*	*0.600*	*1.80*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**12.64**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*0.450*	*0.450*	*0.44*	*Cum*
		2	*1.09*	*1.028*	*1.926*	*4.30*	*Cum*
		2	*1.09*	*1.756*	*0.650*	*2.48*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.708*	*0.860*	*4.26*	*Cum*
		2	*3.50*	*1.116*	*0.650*	*5.08*	*Cum*
	Section 3-3	*2*	*1.35*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.35*	*0.648*	*0.660*	*1.16*	*Cum*
		2	*1.35*	*0.996*	*0.500*	*1.35*	*Cum*
	Section 5-5	*2*	*2.66*	*0.450*	*0.450*	*1.08*	*Cum*
		2	*2.66*	*1.028*	*1.926*	*10.54*	*Cum*
		2	*2.66*	*1.756*	*0.500*	*4.68*	*Cum*
	Section 6-6	*2*	*1.64*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.64*	*0.648*	*0.660*	*1.40*	*Cum*
		2	*1.64*	*0.996*	*0.500*	*1.64*	*Cum*
	Floor	*1*	*0.63*	*2.400*	*0.700*	*1.05*	*Cum*
		1	*1.13*	*0.996*	*0.500*	*0.56*	*Cum*
		1	*0.15*	*2.400*	*0.575*	*0.21*	*Cum*
		1	*4.72*	*2.400*	*0.650*	*7.37*	*Cum*
		1	*0.20*	*2.400*	*0.400*	*0.19*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.18*	*2.400*	*0.350*	*0.15*	*Cum*
		1	*1.80*	*2.400*	*0.500*	*2.16*	*Cum*
		1	*0.74*	*2.400*	*1.150*	*2.04*	*Cum*
	Crest	*1*	*0.99*	*2.400*	*1.426*	*3.38*	*Cum*
	TOTAL					**58.14**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*2.400*	*0.200*	*0.36*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.25*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.25*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.87**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**58.14**	**0.00**	**0.174**	**7850.0**	**1369.10**	**Kg**
	Total Weight in Metric Tonne					**1.37**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.09*		*0.450*	*1.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.09*		*1.926*	*8.37*	*Sqm*
		4		*1.028*	*1.926*	*7.92*	*Sqm*
		4	*1.09*		*0.650*	*2.82*	*Sqm*
		4		*1.756*	*0.650*	*4.57*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.860*	*12.04*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*3.50*		*0.650*	*9.10*	*Sqm*
		4		*1.116*	*0.650*	*2.90*	*Sqm*
	Section 3-3	*4*	*1.35*		*0.450*	*2.43*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.35*		*0.660*	*3.57*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.35*		*0.500*	*2.70*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 5-5	*4*	*2.66*		*0.450*	*4.79*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.66*		*1.926*	*20.51*	*Sqm*
		4		*1.028*	*1.926*	*7.92*	*Sqm*
		4	*2.66*		*0.500*	*5.33*	*Sqm*
		4		*1.756*	*0.500*	*3.51*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.450*	*2.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.64*		*0.660*	*4.33*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.64*		*0.500*	*3.28*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.400*	*0.700*	*3.36*	*Sqm*
		2	*1.125*		*0.5*	*1.13*	*Sqm*
		2		*0.996*	*0.500*	*1.00*	*Sqm*
		2	*0.15*		*0.575*	*0.17*	*Sqm*
		2		*2.4*	*0.575*	*2.76*	*Sqm*
		2	*4.72*		*0.650*	*6.14*	*Sqm*
		2		*2.400*	*0.650*	*3.12*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.400*	*0.400*	*1.92*	*Sqm*
		2	*0.18*		*0.350*	*0.13*	*Sqm*
		2		*2.400*	*0.350*	*1.68*	*Sqm*
		2	*1.8*		*0.500*	*1.80*	*Sqm*
		2		*2.4*	*0.500*	*2.40*	*Sqm*
		2	*0.74*		*1.150*	*1.70*	*Sqm*
		2		*2.400*	*1.150*	*5.52*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*0.99*		*1.426*	*2.82*	*Sqm*
		2		*2.400*	*1.426*	*6.84*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.98*		*0.300*	*4.19*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.68*		*0.600*	*8.02*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**195.74**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*2.340*		*10.53*	*Sqm*
	TOTAL					**10.53**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*1.800*	*0.300*	**1.22**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*1.800*	*0.150*	**1.22**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.25*	*0.450*		*5.06*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.25*	*0.450*		*5.06*	*Sqm*
	TOTAL					**10.13**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		6.324		6.32	Cum
	Abutment						
	Section 1-1	2	*1.24*	*0.718*		*1.774*	*Cum*
	Section 2-2	2	*3.50*	*0.710*		*4.970*	*Cum*
	Section 3-3	2	*1.70*	*0.525*		*1.785*	*Cum*
	Section 5-5	2	*2.71*	*0.695*		*3.761*	*Cum*
	Section 6-6	2	*1.14*	*0.525*		*1.201*	*Cum*
	Toe wall	2	*6.98*	*0.150*	*0.600*	*2.094*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**22.31**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 10.025 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.38*	*2.132*	*2.647*	*15.565*	*Cum*
	Section 2-2	*2*	*3.50*	*1.218*	*2.647*	*22.568*	*Cum*
	Section 3-3	*2*	*3.60*	*1.098*	*2.447*	*19.345*	*Cum*
	Section 5-5	*2*	*4.13*	*2.282*	*2.647*	*49.900*	*Cum*
	Section 6-6	*2*	*2.23*	*1.098*	*2.447*	*11.994*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.820*	*0.850*	*1.498*	*Cum*
	U/S Floor	*1*	*3.60*	*2.820*	*2.997*	*30.426*	*Cum*
	D/S Floor	*1*	*3.50*	*2.820*	*1.000*	*9.870*	*Cum*
		1	*3.90*	*2.820*	*0.850*	*9.348*	*Cum*
	D/S Key Floor	*1*	*0.79*	*2.820*	*1.500*	*3.331*	*Cum*
	Toe Wall D/S Portion	*1*	*9.48*	*0.750*	*0.900*	*6.399*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
	TOTAL					**181.82**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.820*	*0.150*	*0.23*	*Cum*
		1	*0.78*	*2.820*	*0.150*	*0.33*	*Cum*
		1	*0.88*	*2.820*	*0.150*	*0.37*	*Cum*
		1	*0.49*	*2.820*	*0.150*	*0.21*	*Cum*
		1	*5.11*	*2.820*	*0.150*	*2.16*	*Cum*
		1	*0.57*	*2.820*	*0.150*	*0.24*	*Cum*
		1	*2.15*	*2.820*	*0.150*	*0.91*	*Cum*
		1	*1.51*	*2.820*	*0.150*	*0.64*	*Cum*
		1	*0.54*	*2.820*	*0.150*	*0.23*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.38*	*2.132*	*0.150*	*0.88*	*Cum*
	Section 2-2	*2*	*3.50*	*1.218*	*0.150*	*1.28*	*Cum*
	Section 3-3	*2*	*3.60*	*1.098*	*0.150*	*1.19*	*Cum*
	Section 5-5	*2*	*4.13*	*2.282*	*0.150*	*2.83*	*Cum*
	Section 6-6	*2*	*2.23*	*1.098*	*0.150*	*0.74*	*Cum*
	Toe Wall D/S Portion	*1*	*9.48*	*0.750*	*0.300*	*2.13*	*Cum*
	Toe Wall D/S Portion	*1*	*9.18*	*0.450*	*0.600*	*2.48*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**17.78**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.23*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.23*	*1.141*	*2.304*	*6.46*	*Cum*
		2	*1.23*	*1.982*	*0.850*	*4.14*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.684*	*0.780*	*3.73*	*Cum*
		2	*3.50*	*1.068*	*0.850*	*6.35*	*Cum*
	Section 3-3	*2*	*3.28*	*0.450*	*0.450*	*1.33*	*Cum*
		2	*3.28*	*0.624*	*0.580*	*2.37*	*Cum*
		2	*3.28*	*0.948*	*0.650*	*4.04*	*Cum*
	Section 5-5	*2*	*4.09*	*0.450*	*0.450*	*1.66*	*Cum*
		2	*4.09*	*1.141*	*2.304*	*21.49*	*Cum*
		2	*4.09*	*1.982*	*0.500*	*8.10*	*Cum*
	Section 6-6	*2*	*2.71*	*0.450*	*0.450*	*1.10*	*Cum*
		2	*2.71*	*0.624*	*0.580*	*1.96*	*Cum*
		2	*2.71*	*0.948*	*0.500*	*2.57*	*Cum*
	Floor	*1*	*0.63*	*2.820*	*0.700*	*1.23*	*Cum*
		1	*1.84*	*0.948*	*0.500*	*0.87*	*Cum*
		1	*0.35*	*2.820*	*0.675*	*0.67*	*Cum*
		1	*4.92*	*2.820*	*0.850*	*11.78*	*Cum*
		1	*0.20*	*2.820*	*0.550*	*0.31*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.27*	*2.820*	*0.400*	*0.30*	*Cum*
		1	*3.70*	*2.820*	*0.650*	*6.78*	*Cum*
		1	*0.79*	*2.820*	*1.350*	*3.00*	*Cum*
	Crest	*1*	*1.13*	*2.820*	*1.844*	*5.89*	*Cum*
	TOTAL					**98.04**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*2.820*	*0.200*	*0.45*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.45*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.45*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.97**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**98.04**	**0.00**	**0.294**	**7850.0**	**2308.87**	**Kg**
	Total Weight in Metric Tonne					**2.31**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.23*		*0.450*	*2.21*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.23*		*2.304*	*11.33*	*Sqm*
		4		*1.141*	*2.304*	*10.52*	*Sqm*
		4	*1.23*		*0.850*	*4.18*	*Sqm*
		4		*1.982*	*0.850*	*6.74*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.780*	*10.92*	*Sqm*
		4		*0.684*	*0.780*	*2.13*	*Sqm*
		4	*3.50*		*0.850*	*11.90*	*Sqm*
		4		*1.068*	*0.850*	*3.63*	*Sqm*
	Section 3-3	*4*	*3.28*		*0.450*	*5.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.28*		*0.580*	*7.60*	*Sqm*
		4		*0.624*	*0.580*	*1.45*	*Sqm*
		4	*3.28*		*0.650*	*8.52*	*Sqm*
		4		*0.948*	*0.650*	*2.46*	*Sqm*
	Section 5-5	*4*	*4.09*		*0.450*	*7.36*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.09*		*2.304*	*37.66*	*Sqm*
		4		*1.141*	*2.304*	*10.52*	*Sqm*
		4	*4.09*		*0.500*	*8.17*	*Sqm*
		4		*1.982*	*0.500*	*3.96*	*Sqm*
	Section 6-6	*4*	*2.71*		*0.450*	*4.87*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.71*		*0.580*	*6.28*	*Sqm*
		4		*0.624*	*0.580*	*1.45*	*Sqm*
		4	*2.71*		*0.500*	*5.41*	*Sqm*
		4		*0.948*	*0.500*	*1.90*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.820*	*0.700*	*3.95*	*Sqm*
		2	*1.835*		*0.5*	*1.84*	*Sqm*
		2		*0.948*	*0.500*	*0.95*	*Sqm*
		2	*0.35*		*0.675*	*0.47*	*Sqm*
		2		*2.82*	*0.675*	*3.81*	*Sqm*
		2	*4.92*		*0.850*	*8.36*	*Sqm*
		2		*2.820*	*0.850*	*4.79*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*2.820*	*0.550*	*3.10*	*Sqm*
		2	*0.27*		*0.400*	*0.22*	*Sqm*
		2		*2.820*	*0.400*	*2.26*	*Sqm*
		2	*3.7*		*0.650*	*4.81*	*Sqm*
		2		*2.82*	*0.650*	*3.67*	*Sqm*
		2	*0.79*		*1.350*	*2.13*	*Sqm*
		2		*2.820*	*1.350*	*7.61*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.13*		*1.844*	*4.18*	*Sqm*
		2		*2.820*	*1.844*	*10.40*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.48*		*0.300*	*5.69*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.18*		*0.600*	*11.02*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**275.06**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*3.355*		*11.74*	*Sqm*
	TOTAL					**11.74**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*2.220*	*0.300*	**1.17**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*2.220*	*0.150*	**1.17**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.45*	*0.450*		*5.15*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.45*	*0.450*		*5.15*	*Sqm*
	TOTAL					**10.31**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		20.500		20.50	Cum
	Abutment						
	Section 1-1	2	*1.38*	*1.435*		*3.958*	*Cum*
	Section 2-2	2	*3.50*	*0.928*		*6.496*	*Cum*
	Section 3-3	2	*3.60*	*0.696*		*5.011*	*Cum*
	Section 5-5	2	*4.13*	*1.382*		*11.417*	*Cum*
	Section 6-6	2	*2.23*	*0.669*		*2.985*	*Cum*
	Toe wall	2	*9.48*	*0.150*	*0.600*	*2.844*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**53.53**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 11.125 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.15*	*1.694*	*1.676*	*6.507*	*Cum*
	Section 2-2	*2*	*2.75*	*1.146*	*1.676*	*10.564*	*Cum*
	Section 3-3	*2*	*2.65*	*1.026*	*1.476*	*8.026*	*Cum*
	Section 5-5	*2*	*3.63*	*1.844*	*1.676*	*22.419*	*Cum*
	Section 6-6	*2*	*1.88*	*1.026*	*1.476*	*5.706*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.400*	*0.850*	*1.275*	*Cum*
	U/S Floor	*1*	*2.80*	*2.400*	*1.167*	*7.842*	*Cum*
	D/S Floor	*1*	*2.75*	*2.400*	*0.650*	*4.290*	*Cum*
		1	*2.95*	*2.400*	*0.500*	*3.540*	*Cum*
	D/S Key Floor	*1*	*0.68*	*2.400*	*1.050*	*1.701*	*Cum*
	Toe Wall D/S Portion	*1*	*8.22*	*0.750*	*0.900*	*5.549*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
	TOTAL					**78.99**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.400*	*0.150*	*0.20*	*Cum*
		1	*0.78*	*2.400*	*0.150*	*0.28*	*Cum*
		1	*4.92*	*2.400*	*0.150*	*1.77*	*Cum*
		1	*0.28*	*2.400*	*0.150*	*0.10*	*Cum*
		1	*1.50*	*2.400*	*0.150*	*0.54*	*Cum*
		1	*1.00*	*2.400*	*0.150*	*0.36*	*Cum*
		1	*0.54*	*2.400*	*0.150*	*0.20*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.15*	*1.694*	*0.150*	*0.58*	*Cum*
	Section 2-2	*2*	*2.75*	*1.146*	*0.150*	*0.95*	*Cum*
	Section 3-3	*2*	*2.65*	*1.026*	*0.150*	*0.82*	*Cum*
	Section 5-5	*2*	*3.63*	*1.844*	*0.150*	*2.01*	*Cum*
	Section 6-6	*2*	*1.88*	*1.026*	*0.150*	*0.58*	*Cum*
	Toe Wall D/S Portion	*1*	*8.22*	*0.750*	*0.300*	*1.85*	*Cum*
	Toe Wall D/S Portion	*1*	*7.92*	*0.450*	*0.600*	*2.14*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**13.31**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.00*	*0.450*	*0.450*	*0.40*	*Cum*
		2	*1.00*	*0.922*	*1.574*	*2.89*	*Cum*
		2	*1.00*	*1.544*	*0.500*	*1.54*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.648*	*0.660*	*2.35*	*Cum*
		2	*2.75*	*0.996*	*0.500*	*2.74*	*Cum*
	Section 3-3	*2*	*2.36*	*0.450*	*0.450*	*0.96*	*Cum*
		2	*2.36*	*0.588*	*0.460*	*1.28*	*Cum*
		2	*2.36*	*0.876*	*0.500*	*2.07*	*Cum*
	Section 5-5	*2*	*3.58*	*0.450*	*0.450*	*1.45*	*Cum*
		2	*3.58*	*0.922*	*1.574*	*10.40*	*Cum*
		2	*3.58*	*1.544*	*0.500*	*5.53*	*Cum*
	Section 6-6	*2*	*2.28*	*0.450*	*0.450*	*0.92*	*Cum*
		2	*2.28*	*0.588*	*0.460*	*1.23*	*Cum*
		2	*2.28*	*0.876*	*0.550*	*2.19*	*Cum*
	Floor	*1*	*0.63*	*2.400*	*0.700*	*1.05*	*Cum*
		1	*5.55*	*2.400*	*0.500*	*6.66*	*Cum*
		1	*0.20*	*2.400*	*0.400*	*0.19*	*Cum*
		1	*0.30*	*2.400*	*0.200*	*0.14*	*Cum*
		1	*2.75*	*2.400*	*0.500*	*3.30*	*Cum*
		1	*0.68*	*2.400*	*0.900*	*1.46*	*Cum*
	Crest	*1*	*0.90*	*2.400*	*1.224*	*2.63*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**52.50**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*2.400*	*0.150*	*0.25*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.82*	*0.450*	*0.050*	*0.29*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.82*	*0.450*	*0.050*	*0.29*	*Cum*
	TOTAL					**0.83**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**52.50**	**0.00**	**0.158**	**7850.0**	**1236.46**	**Kg**
	Total Weight in Metric Tonne					**1.24**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.00*		*0.450*	*1.79*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.00*		*1.574*	*6.27*	*Sqm*
		4		*0.922*	*1.574*	*5.80*	*Sqm*
		4	*1.00*		*0.500*	*1.99*	*Sqm*
		4		*1.544*	*0.500*	*3.09*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.660*	*7.26*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 3-3	*4*	*2.36*		*0.450*	*4.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.36*		*0.460*	*4.35*	*Sqm*
		4		*0.588*	*0.460*	*1.08*	*Sqm*
		4	*2.36*		*0.500*	*4.72*	*Sqm*
		4		*0.876*	*0.500*	*1.75*	*Sqm*
	Section 5-5	*4*	*3.58*		*0.450*	*6.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.58*		*1.574*	*22.56*	*Sqm*
		4		*0.922*	*1.574*	*5.80*	*Sqm*
		4	*3.58*		*0.500*	*7.17*	*Sqm*
		4		*1.544*	*0.500*	*3.09*	*Sqm*
	Section 6-6	*4*	*2.28*		*0.450*	*4.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.28*		*0.460*	*4.19*	*Sqm*
		4		*0.588*	*0.460*	*1.08*	*Sqm*
		4	*2.28*		*0.550*	*5.01*	*Sqm*
		4		*0.876*	*0.550*	*1.93*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.400*	*0.700*	*3.36*	*Sqm*
		2	*5.55*		*0.500*	*5.55*	*Sqm*
		2		*2.400*	*0.500*	*2.40*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.400*	*0.400*	*1.92*	*Sqm*
		2	*0.30*		*0.200*	*0.12*	*Sqm*
		2		*2.400*	*0.200*	*0.96*	*Sqm*
		2	*2.75*		*0.500*	*2.75*	*Sqm*
		2		*2.4*	*0.500*	*2.40*	*Sqm*
		2	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*2.400*	*0.900*	*4.32*	*Sqm*
	Crest	*2*	*0.90*		*1.224*	*2.19*	*Sqm*
		2		*2.400*	*1.224*	*5.88*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.22*		*0.300*	*4.93*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.92*		*0.600*	*9.50*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**177.79**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.899*		*10.15*	*Sqm*
	TOTAL					**10.15**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*1.800*	*0.300*	**0.95**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*1.800*	*0.150*	**0.95**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*12.82*	*0.450*		*5.77*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.82*	*0.450*		*5.77*	*Sqm*
	TOTAL					**11.54**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		7.955		7.96	Cum
	Abutment						
	Section 1-1	2	*1.15*	*0.699*		*1.601*	*Cum*
	Section 2-2	2	*2.75*	*0.658*		*3.619*	*Cum*
	Section 3-3	2	*2.65*	*0.487*		*2.581*	*Cum*
	Section 5-5	2	*3.63*	*0.698*		*5.063*	*Cum*
	Section 6-6	2	*1.88*	*0.494*		*1.861*	*Cum*
	Toe wall	2	*8.22*	*0.150*	*0.600*	*2.466*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**25.46**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR AQUEDUCT

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	3.280	Aqueduct	₹ 11,06,95,953.30
		Sub-Total	₹ 11,06,95,953.30
		Seigniorage charges	₹ 7,70,905.90
		Total (in Rs. Lakhs)	**₹ 1,114.67**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF AQUEDUCT AT 3.280 KM FOR ANGRA BRANCH CANAL								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	1555.071	Cum	**195.20**	303549.95			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	290.52	Cum	**6381.70**	1853981.93	94.13	130.73	261.46
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2858.88	Cum	**6914.20**	19766838.15	1179.29	1229.32	2458.63
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3433.80	Cum	**8151.40**	27990297.63	1946.97	1339.18	2712.70
5	Providing & laying **R.C.C. M-300** in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (RCD 14.01 C (II))	1037.81	Cum	**6217.20**	6452287.88	492.96	404.75	809.49
6	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	457.82	MT	**73574.90**	33683848.06			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8875.70	Sqm	**578.60**	5135478.02			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	20.00	No.	**5588.70**	111774.00			
9	Supply of Elastomeric Bearing	288000.00	Cucm	**0.67**	192960.00			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	311.01	Cum	**149.30**	46434.43			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	3103.978	Cum	**1075.00**	3336776.67			
	Coarse Aggregates (100 Km lead)	6242.295	Cum	**1398.00**	8726727.89			
	Cement (30 km lead)	3713.340	MT	**742.00**	2755298.39			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Steel (30 Km lead)	457.82	MT	**742.00**	339700.30			
	TOTAL (In Rs.)				**110695953.30**			
	TOTAL (In Rs.)				**₹ 11,06,95,953.30**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	3103.98	Cum	**584.64**	1814709.87	181470.99		
	Coarse Aggregate	6242.29	Cum	**944.26**	5894349.12	589434.91		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					770905.90		
	Total Seigniorage charges					**770905.90**		

NORTH KOEL RESERVOIR PROJECT,BIHAR AND JHARKHAND							
Detail Quantities of Aqueduct at K.M. 3.280 of Angra Br. Canal							
S. No.	**Item of Works**	**No.**	**Length**	**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Below Drain Bed						
	Left Below Abutment	*1*	*7.83*	*8.00*	*1.80*	*112.71*	*Cum*
	Right Below Abutment	*1*	*7.83*	*8.00*	*1.80*	*112.71*	*Cum*
	Pier	*9*	*3.20*	*11.20*	*1.80*	*580.61*	*Cum*
	Drain U/S Portion Wing Wall	*2*	*9.05*	*9.37*	*1.80*	*305.27*	*Cum*
	Drain D/S Portion Wing Wall	*2*	*9.05*	*9.37*	*1.80*	*305.27*	*Cum*
	In Canal U/S Floor Apron	*1*	*4.00*	*8.35*	*0.50*	*16.70*	*Cum*
	In Canal U/S Floor Apron	*1*	*4.00*	*8.35*	*0.50*	*16.70*	*Cum*
	Canal U/S Portion Wing Wall	*2*	*7.34*	*2.24*	*1.50*	*49.35*	*Cum*
	Canal D/S Portion Wing Wall	*2*	*8.85*	*2.10*	*1.50*	*55.76*	*Cum*
	TOTAL					**1555.07**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Left Below Abutment	*1*	*7.83*	*8.00*	*0.30*	*18.78*	*Cum*
	Right Below Abutment	*1*	*7.83*	*8.00*	*0.30*	*18.78*	*Cum*
	Pier	*9*	*3.20*	*11.20*	*0.30*	*96.77*	*Cum*
	Drain U/S Portion Wing Wall	*2*	*9.05*	*9.37*	*0.30*	*50.88*	*Cum*
	Drain D/S Portion Wing Wall	*2*	*9.05*	*9.37*	*0.30*	*50.88*	*Cum*
	Canal U/S Portion Wing Wall	*2*	*7.34*	*2.24*	*0.30*	*9.87*	*Cum*
	Canal D/S Portion Wing Wall	*2*	*8.85*	*2.10*	*0.30*	*11.15*	*Cum*
	In Canal U/S Floor Apron	*1*	*4.00*	*8.35*	*0.50*	*16.70*	*Cum*
	In Canal U/S Floor Apron	*1*	*4.00*	*8.35*	*0.50*	*16.70*	*Cum*
	TOTAL					**290.52**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Drain U/S Portion Wing Wall	*2*	*9.05*	*8.65*	*1.50*	*234.69*	*Cum*
		2	*9.05*	*4.72*	*12.75*	*1089.28*	*Cum*
		2	*9.05*	*0.80*	*1.50*	*21.71*	*Cum*
	Drain D/S Portion Wing Wall	*2*	*9.05*	*8.65*	*1.50*	*234.69*	*Cum*
		2	*9.05*	*4.72*	*12.75*	*1089.28*	*Cum*
		2	*9.05*	*0.80*	*1.50*	*21.71*	*Cum*
	Canal U/S Portion Wing Wall	*2*	*7.34*	*1.84*	*1.20*	*32.44*	*Cum*
		2	*7.34*	*1.35*	*2.40*	*47.60*	*Cum*
	Canal D/S Portion Wing Wall	*2*	*8.85*	*1.70*	*1.20*	*36.11*	*Cum*
		2	*8.85*	*1.21*	*2.40*	*51.38*	*Cum*
	TOTAL					**2858.88**	**Cum**

S. No.	Item of Works	No.	Length	Width	Height	Qty.	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment Raft	*2*	*7.43*	*8.00*	*1.50*	*178.25*	*Cum*
	Abutment Stem	*2*	*4.36*	*8.00*	*9.55*	*666.39*	*Cum*
		2	*1.50*	*8.00*	*1.50*	*36.00*	*Cum*
	Abutment Cap	*2*	*1.50*	*8.00*	*0.50*	*12.00*	*Cum*
	Pier Foundation	*9*	*2.80*	*11.11*	*1.50*	*419.92*	*Cum*
	Pier Stem (Avg .Top and Bottom)	*9*	*2.50*	*7.55*	*11.05*	*1877.39*	*Cum*
	Circular Portion	*9*	*2.45*		*11.05*	*243.85*	*Cum*
	TOTAL					**3433.80**	**Cum**
5	Providing & laying R.C.C. M-300 in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Close barrel						
	Bottom Slab	*1*	*102.50*	*4.00*	*0.50*	*205.00*	*Cum*
	Side Wall	*2*	*102.50*	*0.50*	*2.20*	*225.50*	*Cum*
	Top Slab	*1*	*102.50*	*4.00*	*0.50*	*205.00*	*Cum*
	Open Trough						
	Side Wall	*1*	*102.50*	*0.50*	*2.70*	*138.38*	*Cum*
	Bottom Slab	*1*	*102.50*	*4.00*	*0.50*	*205.00*	*Cum*
	Parapet	*2*	*102.50*	*0.50*	*0.25*	*25.63*	*Cum*
		2	*102.50*	*0.25*	*0.65*	*33.31*	*Cum*
	TOTAL					**1037.81**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***Conc. Qt.***	***Percent***		***Density of steel***	**Quantity**	**Unit**
	1.50% Reinf. for Pier	*2541.16*	*1.50%*	*38.12*	*7850*	*299221.68*	*Kg*
	0.30 % Reinf. for Abutment	*892.64*	*0.30%*	*2.68*	*7850*	*21021.71*	*Kg*
	1.0 % Reinf. for Trough and Box Barrel	*1037.81*	*1.00%*	*10.38*	*7850*	*81468.28*	*Kg*
	0.25 % Skin Reinforcement for Wing walls	*2858.88*	*0.25%*	*7.15*	*7850*	*56105.44*	*Kg*
	Total Reinforcement Steel (in kg)					*457817.11*	*Kg*
	TOTAL REINFORCEMENT STEEL (in MT)					**457.82**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Close barrel						
	Bottom Slab	*2*	*102.50*		*0.50*	*102.50*	*Sqm*
		2		*4.00*	*0.50*	*4.00*	*Sqm*
	Side Wall	*4*	*102.50*		*2.20*	*902.00*	*Sqm*
		4		*0.50*	*2.20*	*4.40*	*Sqm*
	Top Slab	*2*	*102.50*		*0.50*	*102.50*	*Sqm*
		2		*4.00*	*0.50*	*4.00*	*Sqm*
		1	*102.50*	*4.00*		*410.00*	*Sqm*
	Open Trough						

S. No.	Item of Works	No.	Length	Width	Height	Qty.	Unit
	Side Wall	*2*	*102.50*		*2.70*	*553.50*	*Sqm*
		2		*0.50*	*2.70*	*2.70*	*Sqm*
	Bottom Slab	*2*	*102.50*		*0.50*	*102.50*	*Sqm*
		2		*4.00*	*0.50*	*4.00*	*Sqm*
	Parapet	*4*	*102.50*		*0.25*	*102.50*	*Sqm*
		4		*0.50*	*0.25*	*0.50*	*Sqm*
		4	*205.00*		*1.30*	*1066.00*	*Sqm*
		4		*0.50*	*1.30*	*2.60*	*Sqm*
	Abutment Raft	*4*	*7.43*		*1.50*	*44.56*	*Sqm*
		4		*8.00*	*1.50*	*48.00*	*Sqm*
	Abutment Stem	*4*	*4.36*		*9.55*	*166.60*	*Sqm*
		4		*8.00*	*9.55*	*305.44*	*Sqm*
		4	*1.50*		*1.50*	*9.00*	*Sqm*
		4		*8.00*	*1.50*	*48.00*	*Sqm*
	Abutment Cap	*4*	*1.50*		*0.50*	*3.00*	*Sqm*
		4		*8.00*	*0.50*	*16.00*	*Sqm*
	Pier Foundation	*18*	*2.80*		*1.50*	*75.60*	*Sqm*
		18		*11.11*	*1.50*	*299.94*	*Sqm*
	Pier Stem (Avg .Top and Bottom)	*18*	*2.50*		*11.05*	*497.03*	*Sqm*
		18		*7.55*	*11.05*	*1501.91*	*Sqm*
	Circular Portion	*18*	*2.45*		*11.05*	*487.71*	*Sqm*
	Drain U/S Portion Wing Wall	*4*	*9.05*		*1.50*	*54.28*	*Sqm*
		4		*8.65*	*1.50*	*51.88*	*Sqm*
		4	*9.05*		*12.75*	*461.22*	*Sqm*
		4		*4.72*	*12.75*	*240.80*	*Sqm*
		4	*9.05*		*1.50*	*54.28*	*Sqm*
		4		*0.80*	*1.50*	*4.80*	*Sqm*
	Drain D/S Portion Wing Wall	*4*	*9.05*		*1.50*	*54.28*	*Sqm*
		4		*8.65*	*1.50*	*51.88*	*Sqm*
		4	*9.05*		*12.75*	*461.22*	*Sqm*
		4		*4.72*	*12.75*	*240.80*	*Sqm*
		4	*9.05*		*1.50*	*54.28*	*Sqm*
		4		*0.80*	*1.50*	*4.80*	*Sqm*
	Canal U/S Portion Wing Wall	*4*	*7.34*		*1.20*	*35.22*	*Sqm*
		4		*1.84*	*1.20*	*8.84*	*Sqm*
		4	*7.34*		*2.40*	*70.44*	*Sqm*
		4		*1.35*	*2.40*	*12.97*	*Sqm*
	Canal D/S Portion Wing Wall	*4*	*8.85*		*1.20*	*42.48*	*Sqm*
		4		*1.70*	*1.20*	*8.16*	*Sqm*
		4	*8.85*		*2.40*	*84.96*	*Sqm*
		4.00		*1.21*	*2.40*	*11.61*	*Sqm*
	TOTAL					**8875.70**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)						
		2	*10.00*			**20.00**	**No.**
9	Bearing Elastomeric (400 mm x 250 mm x 72mm)	*40*	*40.00*	*25.00*	*7.20*	**288000.00**	**CuCm**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	1	311.014			**311.014**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR PIPE CULVERT

Sr. No.	KM	CANAL	STRUCTURE	Amount in Rs.
1	1.951	Asni	Pipe Culvert	₹ 6,77,640.64
2	0.800	Kailashpur sub dy	Pipe Culvert	₹ 9,15,006.95
3	8.250	Budhaul Sub dy.	Pipe Culvert	₹ 9,60,683.00
			Sub-Total	₹ 25,53,330.58
			Seigniorage charges	₹ 21,775.01
			Total (in Rs. Lakhs)	**₹ 25.75**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 1.951 OF ASHNI MINOR									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.1.27	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	64.323	Cum	**195.20**	12555.88			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.24	Cum	**6381.70**	116380.33	5.91	8.21	16.41
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	31.592	Cum	**6914.20**	218430.75	13.03	13.58	27.17
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	137.959	Sqm	**578.60**	79823.34			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.62	MT	**73574.90**	45615.37			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.25	Cum	**694.61**	1562.87			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.25	Cum	**1237.00**	2783.25			
9	RCD M-148	Supplying 1000 mm NP4 Pipe	7.50	Rm	**6002.82**	45021.15			
10	WRD 5.6.2.4	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.08	Sqm	**680.10**	6173.27			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	4.658	Sqm	**340.20**	1584.65	0.503	0.068	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	1.918	Sqm	**63.20**	121.22	0.003		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	33.22	Cum	**149.30**	4959.19			
		Coarse Sand (60 Km lead)	21.859	Cum	**1075.00**	23498.27			
		Coarse Aggregates (100 Km lead)	43.582	Cum	**1398.00**	60927.22			
		Cement (30 km lead)	19.446	MT	**742.00**	14429.02			
		Steel (30 km lead)	0.620	MT	**742.00**	460.03			
		Boulder (60 km lead)	2.250	Cum	**1159.00**	2607.75			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
		Brick (15 km lead)	4538.00	No.	**3.18**	14430.84			
TOTAL (In Rs.)						**677640.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	21.86	Cum	**584.64**	12779.56	1277.96		
		Coarse Aggregate	43.58	Cum	**944.26**	41152.46	4115.25		
		Boulder (60 km lead)	2.25	Cum	**694.61**	1562.87	156.29		
		Total					**5549.49**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.800 OF KAILASHPUR SUB DY.									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.1.27	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	97.079	Cum	**195.20**	18949.91			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	28.83	Cum	**6381.70**	183996.58	9.34	12.97	25.95
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	42.560	Cum	**6914.20**	294271.66	17.56	18.30	36.60
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	168.520	Sqm	**578.60**	97505.58			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.84	MT	**73574.90**	61453.39			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.16	Cum	**694.61**	1500.36			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.16	Cum	**1237.00**	2671.92			
9	RCD M-148	Supplying 1000 mm NP4 Pipe	7.50	Rm	**6002.82**	45021.15			
10	WRD 5.6.2.4	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.32	Sqm	**680.10**	8377.47			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.820	Sqm	**340.20**	2660.36	0.845	0.114	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.220	Sqm	**63.20**	203.50	0.005		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	48.75	Cum	**149.30**	7277.86			
		Coarse Sand (60 Km lead)	31.390	Cum	**1075.00**	33743.75			
		Coarse Aggregates (100 Km lead)	62.551	Cum	**1398.00**	87445.92			
		Cement (30 km lead)	27.747	MT	**742.00**	20588.36			
		Steel (30 km lead)	0.835	MT	**742.00**	619.76			
		Boulder (60 km lead)	2.160	Cum	**1159.00**	2503.44			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
		Brick (15 km lead)	6159.00	No.	**3.18**	19585.62			
TOTAL (In Rs.)						**915006.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	31.39	Cum	**584.64**	18351.58	1835.16		
		Coarse Aggregate	62.55	Cum	**944.26**	59064.15	5906.42		
		Boulder (60 km lead)	2.16	Cum	**694.61**	1500.36	150.04		
		Total					**7891.61**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 8.250 OF BUDHAUL SUB DY.									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.1.27	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	99.908	Cum	**195.20**	19502.11			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	29.45	Cum	**6381.70**	187940.46	9.54	13.25	26.50
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	46.067	Cum	**6914.20**	318518.82	19.00	19.81	39.62
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	174.222	Sqm	**578.60**	100804.71			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.90	MT	**73574.90**	66516.98			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.16	Cum	**694.61**	1500.36			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.16	Cum	**1237.00**	2671.92			
9	RCD M-148	Supplying 1000 mm NP4 Pipe	7.50	Rm	**6002.82**	45021.15			
10	WRD 5.6.2.4	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.35	Sqm	**680.10**	8397.87			
13	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.500	Sqm	**340.20**	2891.70	0.918	0.124	
14	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.500	Sqm	**63.20**	221.20	0.005		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	49.54	Cum	**149.30**	7396.59			
		Coarse Sand (60 Km lead)	33.186	Cum	**1075.00**	35674.43			
		Coarse Aggregates (100 Km lead)	66.123	Cum	**1398.00**	92439.71			
		Cement (30 km lead)	29.468	MT	**742.00**	21865.10			
		Steel (30 km lead)	0.904	MT	**742.00**	670.82			
		Boulder (60 km lead)	2.160	Cum	**1159.00**	2503.44			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
		Brick (15 km lead)	6174.00	No.	**3.18**	19633.32			
TOTAL (In Rs.)						**960683.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	33.19	Cum	**584.64**	19401.58	1940.16		
		Coarse Aggregate	66.12	Cum	**944.26**	62437.14	6243.71		
		Boulder (60 km lead)	2.16	Cum	**694.61**	1500.36	150.04		
		Total					**8333.91**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 1.951 OF ASHNI MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*100.00*			**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*0.78*	*0.85*	*1.20*	*0.80*	*Cum*
	D/S Toe Wall	*1*	*0.78*	*0.85*	*1.20*	*0.80*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.40*	*Cum*
		2	*2.60*	*1.86*	*1.20*	*11.62*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.60*	*1.09*	*2.18*	*12.35*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.57*	*1.00*	*1.20*	*1.36*	*Cum*
		2	*3.05*	*1.85*	*1.20*	*13.52*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.05*	*1.09*	*2.18*	*14.48*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.50*	*0.68*	*0.45*	*0.77*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.00*	*0.69*	*0.45*	*0.92*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.75*	*0.60*	*0.90*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.75*	*0.60*	*1.35*	*Cum*
	TOTAL					**64.32**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*0.78*	*0.85*	*0.30*	*0.20*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.78*	*0.45*	*0.90*	*0.32*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.78*	*0.85*	*0.30*	*0.20*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.78*	*0.45*	*0.90*	*0.32*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.50*	*0.68*	*0.45*	*0.77*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.00*	*0.69*	*0.45*	*0.92*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*2.60*	*1.86*	*0.30*	*2.91*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.57*	*1.00*	*0.30*	*0.34*	*Cum*
		2	*3.05*	*1.85*	*0.30*	*3.38*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.35*	*3.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	TOTAL					**18.24**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.58*	*0.60*	*0.90*	*0.63*	*Cum*
		2	*0.58*	*0.45*	*0.70*	*0.37*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.60*	*1.46*	*0.90*	*6.85*	*Cum*
		2	*2.60*	*1.19*	*0.70*	*4.32*	*Cum*
		2	*2.60*	*0.73*	*0.50*	*1.90*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.57*	*0.60*	*0.90*	*0.61*	*Cum*
		2	*0.57*	*0.45*	*0.70*	*0.36*	*Cum*
		2	*0.57*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.05*	*1.45*	*0.90*	*7.95*	*Cum*
		2	*3.05*	*1.18*	*0.70*	*5.02*	*Cum*
		2	*3.05*	*0.72*	*0.50*	*2.21*	*Cum*
	Collar Joint	*2*	*1.37*	*0.30*	*1.60*	*1.32*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.28*		*-0.28*	*Cum*
	TOTAL					**31.59**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*0.78*		*0.90*	*1.41*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.78*		*0.90*	*1.41*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.50*		*0.45*	*2.25*	*Sqm*
		2		*0.68*	*0.45*	*0.61*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.00*		*0.45*	*2.70*	*Sqm*
		2		*0.69*	*0.45*	*0.62*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.70*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.60*		*0.30*	*3.12*	*Sqm*
		4		*1.86*	*0.30*	*2.24*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.57*		*0.30*	*0.68*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.05*		*0.30*	*3.66*	*Sqm*
		4		*1.85*	*0.30*	*2.22*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.58*		*0.90*	*2.10*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.70*	*1.64*	*Sqm*
		4		*0.45*	*0.70*	*1.26*	*Sqm*
		4	*0.58*		*0.50*	*1.17*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*2.60*		*0.90*	*9.35*	*Sqm*
		4		*1.46*	*0.90*	*5.27*	*Sqm*
		4	*2.60*		*0.70*	*7.27*	*Sqm*
		4		*1.19*	*0.70*	*3.33*	*Sqm*
		4	*2.60*		*0.50*	*5.20*	*Sqm*
		4		*0.73*	*0.50*	*1.46*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.57*		*0.90*	*2.04*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.57*		*0.70*	*1.59*	*Sqm*
		4		*0.45*	*0.70*	*1.26*	*Sqm*
		4	*0.57*		*0.50*	*1.14*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.05*		*0.90*	*10.97*	*Sqm*
		4		*1.45*	*0.90*	*5.22*	*Sqm*
		4	*3.05*		*0.70*	*8.53*	*Sqm*
		4		*1.18*	*0.70*	*3.29*	*Sqm*
		4	*3.05*		*0.50*	*6.09*	*Sqm*
		4		*0.72*	*0.50*	*1.45*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.37*	*0.35*	*0.96*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	TOTAL					**137.96**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*31.59*	*0.25%*	*0.08*	*7850*	*619.99*	*Kg*
	TOTAL Weight of steel (in kg)					619.99	Kg
	TOTAL Weight of Steel (in Tonne)					**0.62**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.75*	*0.60*	*0.90*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.75*	*0.60*	*1.35*	*Cum*
	TOTAL					**2.25**	**Cum**
8	Providing 1000 mm RCC NP2 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.65*	*2.00*		*3.30*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.65*	*3.00*		*4.95*	*Sqm*
	Parapet	2	1.37	0.5	0.6	*0.82*	*Cum*
	TOTAL					**9.08**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	1.37		1.7	**4.66**	*Sqm*
	TOTAL					**4.66**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	1.37		0.7	**1.92**	*Sqm*
	TOTAL					**1.92**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.60*	*1.09*	*2.18*	*12.35*	*Cum*
	D/S Transitions Walls	*2*	*3.05*	*1.09*	*2.18*	*14.48*	*Cum*
	Above Hume Pipe	*1*	*6.39*			*6.39*	*Cum*
	TOTAL					**33.22**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.800 OF KAILASHPUR SUB DY.						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*130.00*			**130.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*2.20*	*0.85*	*1.20*	*2.25*	*Cum*
	D/S Toe Wall	*1*	*2.20*	*0.85*	*1.20*	*2.25*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.60*	*1.00*	*1.20*	*1.44*	*Cum*
		2	*3.40*	*1.98*	*1.20*	*16.15*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.40*	*1.18*	*2.35*	*18.79*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.38*	*Cum*
		2	*4.27*	*1.95*	*1.20*	*19.93*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.27*	*1.18*	*2.35*	*23.57*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.55*	*0.45*	*1.78*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*1.58*	*0.45*	*2.52*	*Cum*
	Launching Apron in U/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**97.08**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*2.20*	*0.85*	*0.30*	*0.56*	*Cum*
	U/S Curtain Wall Stem	*1*	*2.20*	*0.45*	*0.90*	*0.89*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*2.20*	*0.85*	*0.30*	*0.56*	*Cum*
	D/S Curtain Wall Stem	*1*	*2.20*	*0.45*	*0.90*	*0.89*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*1.55*	*0.45*	*1.78*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*1.58*	*0.45*	*2.52*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.60*	*1.00*	*0.30*	*0.36*	*Cum*
		2	*3.40*	*1.98*	*0.30*	*4.04*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*4.27*	*1.95*	*0.30*	*4.98*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.83*	*0.34*	*4.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.64*	*0.36*	*3.52*	*Cum*
	TOTAL					**28.83**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.60*	*0.60*	*0.90*	*0.65*	*Cum*
		2	*0.60*	*0.45*	*0.60*	*0.32*	*Cum*
		2	*0.60*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*3.40*	*1.58*	*0.90*	*9.66*	*Cum*
		2	*3.40*	*1.30*	*0.60*	*5.29*	*Cum*
		2	*3.40*	*0.79*	*0.50*	*2.68*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.62*	*Cum*
		2	*0.58*	*0.45*	*0.60*	*0.31*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*4.27*	*1.55*	*0.90*	*11.88*	*Cum*
		2	*4.27*	*1.27*	*0.60*	*6.51*	*Cum*
		2	*4.27*	*0.77*	*0.50*	*3.30*	*Cum*
	Collar Joint	*2*	*1.83*	*0.30*	*1.60*	*1.76*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.79*		*-0.79*	*Cum*
	TOTAL					**42.56**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*2.20*		*0.90*	*3.96*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*2.20*		*0.90*	*3.96*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.55*	*0.45*	*1.40*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*1.58*	*0.45*	*1.42*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.60*		*0.30*	*0.72*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.40*		*0.30*	*4.08*	*Sqm*
		4		*1.98*	*0.30*	*2.37*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.69*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*4.27*		*0.30*	*5.12*	*Sqm*
		4		*1.95*	*0.30*	*2.34*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.60*		*0.90*	*2.16*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.60*		*0.60*	*1.44*	*Sqm*
		4		*0.45*	*0.60*	*1.08*	*Sqm*
		4	*0.60*		*0.50*	*1.20*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*3.40*		*0.90*	*12.25*	*Sqm*
		4		*1.58*	*0.90*	*5.68*	*Sqm*
		4	*3.40*		*0.60*	*8.16*	*Sqm*
		4		*1.30*	*0.60*	*3.11*	*Sqm*
		4	*3.40*		*0.50*	*6.80*	*Sqm*
		4		*0.79*	*0.50*	*1.58*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.07*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.60*	*1.38*	*Sqm*
		4		*0.45*	*0.60*	*1.08*	*Sqm*
		4	*0.58*		*0.50*	*1.15*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*4.27*		*0.90*	*15.36*	*Sqm*
		4		*1.55*	*0.90*	*5.57*	*Sqm*
		4	*4.27*		*0.60*	*10.24*	*Sqm*
		4		*1.27*	*0.60*	*3.05*	*Sqm*
		4	*4.27*		*0.50*	*8.54*	*Sqm*
		4		*0.77*	*0.50*	*1.55*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.34*	*5.03*	*Sqm*
		2		*1.83*	*0.34*	*1.23*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.36*	*10.92*	*Sqm*
		4		*0.64*	*0.36*	*0.94*	*Sqm*
	TOTAL					**168.52**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*42.56*	*0.25%*	*0.11*	*7850*	*835.25*	*Kg*
	TOTAL Weight of steel (in kg)					835.25	Kg
	TOTAL Weight of Steel (in Tonne)					**0.84**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**2.16**	**Cum**
8	Providing 1000 mm RCC NP2 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.82*	*3.00*		*5.47*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.82*	*3.00*		*5.47*	*Sqm*
	Parapet	2	2.3	0.5	0.6	*1.38*	*Cum*
	TOTAL					**12.32**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	2.3		1.7	**7.82**	*Sqm*
	TOTAL					**7.82**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.3		0.7	**3.22**	*Sqm*
	TOTAL					**3.22**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.40*	*1.18*	*2.35*	*18.79*	*Cum*
	D/S Transitions Walls	*2*	*4.27*	*1.18*	*2.35*	*23.57*	*Cum*
	Above Hume Pipe	*1*	*6.39*			*6.39*	*Cum*
	TOTAL					**48.75**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 8.250 OF BUDHAUL SUB DY.						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*		*120.00*		**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*2.30*	*0.85*	*1.20*	*2.34*	*Cum*
	D/S Toe Wall	*1*	*2.30*	*0.85*	*1.20*	*2.34*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*1.20*	*1.46*	*Cum*
		2	*3.48*	*2.03*	*1.20*	*16.97*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.48*	*1.18*	*2.35*	*19.22*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.39*	*Cum*
		2	*4.33*	*2.00*	*1.20*	*20.80*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.33*	*1.18*	*2.35*	*23.93*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.64*	*0.45*	*1.88*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*1.60*	*0.45*	*2.55*	*Cum*
	Launching Apron in U/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**99.91**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*2.30*	*0.85*	*0.30*	*0.59*	*Cum*
	U/S Curtain Wall Stem	*1*	*2.30*	*0.45*	*0.90*	*0.93*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*2.30*	*0.85*	*0.30*	*0.59*	*Cum*
	D/S Curtain Wall Stem	*1*	*2.30*	*0.45*	*0.90*	*0.93*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*1.64*	*0.45*	*1.88*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*1.60*	*0.45*	*2.55*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*0.30*	*0.36*	*Cum*
		2	*3.48*	*2.03*	*0.30*	*4.24*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*4.33*	*2.00*	*0.30*	*5.20*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.83*	*0.34*	*4.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.63*	*0.36*	*3.46*	*Cum*
	TOTAL					**29.45**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.61*	*0.60*	*0.90*	*0.66*	*Cum*
		2	*0.61*	*0.45*	*0.66*	*0.36*	*Cum*
		2	*0.61*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*3.48*	*1.63*	*0.90*	*10.22*	*Cum*
		2	*3.48*	*1.35*	*0.66*	*6.19*	*Cum*
		2	*3.48*	*0.82*	*0.50*	*2.84*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.63*	*Cum*
		2	*0.58*	*0.45*	*0.66*	*0.35*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*4.33*	*1.60*	*0.90*	*12.45*	*Cum*
		2	*4.33*	*1.32*	*0.66*	*7.56*	*Cum*
		2	*4.33*	*0.80*	*0.50*	*3.46*	*Cum*
	Collar Joint	*2*	*1.73*	*0.30*	*1.60*	*1.66*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.66*		*-0.66*	*Cum*
	TOTAL					**46.07**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*2.30*		*0.90*	*4.13*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*2.30*		*0.90*	*4.13*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.64*	*0.45*	*1.47*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*1.60*	*0.45*	*1.44*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.61*		*0.30*	*0.73*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.48*		*0.30*	*4.18*	*Sqm*
		4		*2.03*	*0.30*	*2.44*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.70*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*4.33*		*0.30*	*5.20*	*Sqm*
		4		*2.00*	*0.30*	*2.40*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.61*		*0.90*	*2.19*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.61*		*0.66*	*1.60*	*Sqm*
		4		*0.45*	*0.66*	*1.19*	*Sqm*
		4	*0.61*		*0.50*	*1.21*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*3.48*		*0.90*	*12.53*	*Sqm*
		4		*1.63*	*0.90*	*5.88*	*Sqm*
		4	*3.48*		*0.66*	*9.19*	*Sqm*
		4		*1.35*	*0.66*	*3.56*	*Sqm*
		4	*3.48*		*0.50*	*6.96*	*Sqm*
		4		*0.82*	*0.50*	*1.63*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.09*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.66*	*1.53*	*Sqm*
		4		*0.45*	*0.66*	*1.19*	*Sqm*
		4	*0.58*		*0.50*	*1.16*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*4.33*		*0.90*	*15.60*	*Sqm*
		4		*1.60*	*0.90*	*5.75*	*Sqm*
		4	*4.33*		*0.66*	*11.44*	*Sqm*
		4		*1.32*	*0.66*	*3.49*	*Sqm*
		4	*4.33*		*0.50*	*8.67*	*Sqm*
		4		*0.80*	*0.50*	*1.60*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.34*	*5.03*	*Sqm*
		2		*1.83*	*0.34*	*1.23*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.36*	*10.92*	*Sqm*
		4		*0.63*	*0.36*	*0.92*	*Sqm*
	TOTAL					**174.22**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*46.07*	*0.25%*	*0.12*	*7850*	*904.07*	*Kg*
	TOTAL Weight of steel (in kg)					904.07	Kg
	TOTAL Weight of Steel (in Tonne)					**0.90**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**2.16**	**Cum**
8	Providing 1000 mm RCC NP4 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.81*	*3.00*		*5.42*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.81*	*3.00*		*5.42*	*Sqm*
	Parapet	2	2.5	0.5	0.6	*1.50*	*Cum*
	TOTAL					**12.35**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2	2.5		1.7	**8.50**	*Sqm*
	TOTAL					**8.50**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.5		0.7	**3.50**	*Sqm*
	TOTAL					**3.50**	***Sqm***
13	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.48*	*1.18*	*2.35*	*19.22*	*Cum*
	D/S Transitions Walls	*2*	*4.33*	*1.18*	*2.35*	*23.93*	*Cum*
	Above Hume Pipe	*1*	*6.39*			*6.39*	*Cum*
	TOTAL					**49.54**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR CD WORK

Sr. No.	KM	Canal	STRUCTURE	Amount in Rs.
1	0.800	Budhaul Sub dy.	CD Work	₹ 20,58,305.40
2	0.950		CD Work	₹ 22,53,924.97
3	4.600		CD Work	₹ 20,92,628.26
4	12.482	Patoi Sub dy.	CD Work	₹ 17,87,023.52
5	13.800		CD Work	₹ 23,47,412.17
6	14.865		CD Work	₹ 16,40,140.48
			Sub-Total	₹ 1,21,79,434.81
			Seigniorage charges	₹ 97,660.42
			Total (in Rs. Lakhs)	**₹ 122.77**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF BUDHAUL SUB DY.									
CROSS DRAINAGE AT CH.0.800 KM									
1	**WRD 5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	220.000	Sqm	**11.80**	2596.97			
2	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	426.77	Cum	**149.30**	63716.70			
3	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	45.01	Cum	**6381.70**	287271.51	14.58	20.26	40.51
4	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	99.68	Cum	**6914.20**	689232.84	41.12	42.86	85.73
5	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	373.37	Sqm	**578.60**	216029.61			
6	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	22.50	RM	**6002.82**	135063.45			
7	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	22.50	RM	**1713.33**	38549.94			
8	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.75	MT	**73574.90**	275710.64			
9	**13.08**	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**153.70**	1229.60			
10	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	140.25	Cum	**195.20**	27375.85			
11		**Carriage of materials**							
		Coarse Sand 30 Km lead)	63.12	Cum	**1075.00**	67854.73			
		Coarse Aggregates (100 Km lead)	126.24	Cum	**1398.00**	176485.42			
		Cement (30 km lead)	55.70	MT	**742.00**	41332.62			
		Steel (30 Km lead)	3.75	MT	**742.00**	2780.53			
		Hume Pipe (30 Km)	22.50	RM	**1470.00**	33075.00			
TOTAL (In Rs.)						**₹ 20,58,305.40**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	63.12	Cum	**584.64**	36902.87	3690.29		
		Coarse Aggregate	126.24	Cum	**944.26**	119204.66	11920.47		
		Total					**15610.75**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 0.950 KM									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	156.05	Cum	**149.30**	23298.97			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	48.82	Cum	**6381.70**	311571.06	15.82	21.97	43.94
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	119.94	Cum	**6914.20**	829288.47	49.48	51.57	103.15
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	511.47	Sqm	**578.60**	295938.41			
5	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	20.00	RM	**6002.82**	120056.40			
6	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	20.00	RM	**1713.33**	34266.61			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.35	MT	**73574.90**	173182.11			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	522.74	Cum	**195.20**	102038.39			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	73.54	Cum	**1075.00**	79060.14			
		Coarse Aggregates (100 Km lead)	147.09	Cum	**1398.00**	205629.92			
		Cement (30 km lead)	65.29	MT	**742.00**	48447.94			
		Steel (30 Km lead)	2.35	MT	**742.00**	1746.53			
		Hume Pipe (30 Km)	20.00	RM	**1470.00**	29400.00			
TOTAL (In Rs.)						**₹ 22,53,924.97**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	73.54	Cum	**584.64**	42996.95	4299.70		
		Coarse Aggregate	147.09	Cum	**944.26**	138889.92	13888.99		
		Total					**18188.69**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 4.600 KM									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	74.16	Cum	**149.30**	11071.90			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	41.90	Cum	**6381.70**	267371.89	13.57	18.85	37.71
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	119.94	Cum	**6914.20**	829288.47	49.48	51.57	103.15
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	510.82	Sqm	**578.60**	295560.70			
5	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	15.00	RM	**6002.82**	90042.30			
6	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	15.00	RM	**1713.33**	25699.96			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.35	MT	**73574.90**	173182.11			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	293.06	Cum	**195.20**	57206.05			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	70.43	Cum	**1075.00**	75709.73			
		Coarse Aggregates (100 Km lead)	140.86	Cum	**1398.00**	196915.72			
		Cement (30 km lead)	63.05	MT	**742.00**	46782.90			
		Steel (30 Km lead)	2.35	MT	**742.00**	1746.53			
		Hume Pipe (30 Km)	15.00	RM	**1470.00**	22050.00			
TOTAL (In Rs.)						**₹ 20,92,628.26**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	70.43	Cum	**584.64**	41174.82	4117.48		
		Coarse Aggregate	140.86	Cum	**944.26**	133004.03	13300.40		
		Total					**17417.89**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF PATOI DY.									
Cross Drainage at Ch. 12.482 KM									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	59.72	Cum	**149.30**	8916.80			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	43.80	Cum	**6381.70**	279515.28	14.19	19.71	39.42
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	86.13	Cum	**6914.20**	595544.93	35.53	37.04	74.07
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	441.90	Sqm	**578.60**	255681.26			
5	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	20.00	RM	**7015.86**	140317.20			
6	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	20.00	RM	**2047.70**	40954.08			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.69	MT	**73574.90**	124368.94			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	241.54	Cum	**195.20**	47149.17			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	56.75	Cum	**1075.00**	61003.27			
		Coarse Aggregates (100 Km lead)	113.49	Cum	**1398.00**	158665.24			
		Cement (30 km lead)	49.72	MT	**742.00**	36893.09			
		Steel (30 Km lead)	1.69	MT	**742.00**	1254.26			
		Hume Pipe (30 Km)	20.00	RM	**1838.00**	36760.00			
TOTAL (In Rs.)						**₹ 17,87,023.52**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	56.75	Cum	**584.64**	33176.70	3317.67		
		Coarse Aggregate	113.49	Cum	**944.26**	107168.27	10716.83		
		Total					**14034.50**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 13.800 KM									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	111.68	Cum	**149.30**	16674.43			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	64.53	Cum	**6381.70**	411838.30	20.91	29.04	58.08
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	107.04	Cum	**6914.20**	740123.91	44.16	46.03	92.06
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	599.15	Sqm	**578.60**	346669.43			
5	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	30.00	RM	**6002.82**	180084.60			
6	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	30.00	RM	**1713.33**	51399.92			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.10	MT	**73574.90**	154561.68			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	315.21	Cum	**195.20**	61529.61			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	75.07	Cum	**1075.00**	80699.56			
		Coarse Aggregates (100 Km lead)	150.14	Cum	**1398.00**	209893.92			
		Cement (30 km lead)	65.06	MT	**742.00**	48278.06			
		Steel (30 Km lead)	2.10	MT	**742.00**	1558.75			
		Hume Pipe (30 Km)	30.00	RM	**1470.00**	44100.00			
TOTAL (In Rs.)						**₹ 23,47,412.17**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	75.07	Cum	**584.64**	43888.55	4388.85		
		Coarse Aggregate	150.14	Cum	**944.26**	141769.98	14177.00		
		Total					**18565.85**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 14.865 KM									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	111.68	Cum	**149.30**	16674.43			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	64.88	Cum	**6381.70**	414039.98	21.02	29.20	58.39
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	62.27	Cum	**6914.20**	430549.25	25.69	26.78	53.55
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	466.42	Sqm	**578.60**	269868.18			
5	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	10.00	RM	**7015.86**	70158.60			
6	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	10.00	RM	**2047.70**	20477.04			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.22	MT	**73574.90**	89912.54			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	315.21	Cum	**195.20**	61529.61			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	55.97	Cum	**1075.00**	60169.79			
		Coarse Aggregates (100 Km lead)	111.94	Cum	**1398.00**	156497.41			
		Cement (30 km lead)	46.71	MT	**742.00**	34656.87			
		Steel (30 Km lead)	1.22	MT	**742.00**	906.76			
		Hume Pipe (30 Km)	10.00	RM	**1470.00**	14700.00			
TOTAL (In Rs.)						**₹ 16,40,140.48**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	55.97	Cum	**584.64**	32723.41	3272.34		
		Coarse Aggregate	111.94	Cum	**944.26**	105704.04	10570.40		
		Total					**13842.74**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF BUDHAUL SUB DY.							
CROSS DRAINAGE AT CH.0.800 KM							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*220.00*			**220.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*2.93*	*0.75*	*1.83*	*4.01*	*Cum*
	D/S Toe Wall	*1*	*2.93*	*0.75*	*1.20*	*2.64*	*Cum*
	PCC Below Well Portion (U/S)	*1*	*2.50*	*2.50*	*0.15*	*0.94*	*Cum*
	PCC Below Well Portion (D/S)	*1*	*2.20*	*2.20*	*0.15*	*0.73*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*4.12*	*2.45*	*3.74*	*75.31*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.12*	*1.87*	*3.74*	*57.41*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.12*	*2.44*	*3.74*	*75.10*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.12*	*1.87*	*3.74*	*57.41*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.93*	*2.00*	*0.45*	*2.64*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.93*	*3.05*	*0.45*	*4.02*	*Cum*
	Below Canal Bed	*1*	*71.89*		*2.04*	*146.58*	*Cum*
	TOTAL					**426.77**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*2.93*	*0.75*	*0.30*	*0.66*	*Cum*
	U/S Toe Wall Stem	*1*	*2.93*	*0.45*	*1.53*	*2.01*	*Cum*
	D/S Toe Wall	*1*	*2.93*	*0.75*	*0.30*	*0.66*	*Cum*
	D/S Toe Wall Stem	*1*	*2.93*	*0.45*	*0.90*	*1.19*	*Cum*
	PCC Below Well Portion (U/S)	*1*	*2.50*	*2.50*	*0.15*	*0.94*	*Cum*
	PCC Below Well Portion (D/S)	*1*	*2.20*	*2.20*	*0.15*	*0.73*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.93*	*2.00*	*0.45*	*2.64*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.93*	*3.05*	*0.45*	*4.02*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*4.12*	*2.45*	*0.15*	*3.02*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.12*	*2.44*	*0.15*	*3.02*	*Cum*
	PCC Below Hume Pipe	*1*	*21.75*	*2.04*	*0.30*	*13.31*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*21.75*	*0.69*	*0.43*	*12.83*	*Cum*
	TOTAL					**45.01**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S well base	*1*	*2.20*	*2.20*	*0.20*	*0.97*	*Cum*
	U/S well Wall	*4*	*2.20*	*0.45*	*2.09*	*8.26*	*Cum*
		4	*2.20*	*0.30*	*1.56*	*4.12*	*Cum*
	Deduct Pipe in well portion	*1*	*1.13*		*0.45*	*-0.51*	*Cum*
	Deduct one side well wall	*1*	*2.20*	*0.30*	*1.14*	*-0.75*	*Cum*
	D/S well base	*4*	*1.90*	*0.30*	*0.20*	*0.46*	*Cum*
	D/S well Wall	*4*	*1.90*	*0.30*	*3.38*	*7.70*	*Cum*
	Deduct Pipe in well portion Wall	*1*	*1.13*		*0.30*	*-0.34*	*Cum*
	Deduct one side well wall	*1*	*1.90*	*0.30*	*0.97*	*-0.55*	*Cum*
	U/S Transition Walls (Left & Right)						

	Section X-X	*2*	*4.12*	*0.30*	*0.50*	*1.23*	*Cum*
		2	*4.12*	*1.55*	*3.09*	*39.35*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section Y-Y	*2*	*4.12*	*0.30*	*0.50*	*1.23*	*Cum*
		2	*4.12*	*1.23*	*3.09*	*31.10*	*Cum*
	Collar Joint	*7*	*2.04*	*0.30*	*1.81*	*7.75*	*Cum*
	Deduct Hume Pipe Area	*1*	*1.13*		*0.30*	*-0.34*	*Cum*
	TOTAL					**99.68**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Toe Wall	*2*	*2.93*		*0.30*	*1.76*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	U/S Toe Wall Stem	*2*	*2.93*		*1.53*	*8.94*	*Sqm*
		2		*0.45*	*1.53*	*1.37*	*Sqm*
	D/S Toe Wall	*2*	*2.93*		*0.30*	*1.76*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	D/S Toe Wall Stem	*2*	*2.93*		*0.90*	*5.27*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.93*		*0.45*	*2.64*	*Sqm*
		2		*2*	*0.45*	*1.80*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.93*		*0.45*	*2.64*	*Sqm*
		2		*3.05*	*0.45*	*2.75*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*4.12*		*0.50*	*8.23*	*Sqm*
		4		*0.3*	*0.50*	*0.60*	*Sqm*
		4	*4.12*		*3.09*	*50.78*	*Sqm*
		4		*1.55*	*3.09*	*19.13*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*4.115*		*0.50*	*8.23*	*Sqm*
		4		*0.3*	*0.50*	*0.60*	*Sqm*
		4	*4.115*		*3.09*	*50.78*	*Sqm*
		4		*1.23*	*3.09*	*15.12*	*Sqm*
	PCC Below Hume Pipe	*2*	*21.75*		*0.30*	*13.05*	*Sqm*
		2		*2.04*	*0.30*	*1.22*	*Sqm*
	Deduct Hume Pipe Area	*4*	*21.75*		*0.43*	*37.15*	*Sqm*
		4		*0.69*	*0.43*	*1.18*	*Sqm*
	U/S well Wall	*8*	*2.2*		*3.65*	*64.15*	*Sqm*
		8		*0.45*	*3.65*	*13.12*	*Sqm*
	D/S well Wall	*8*	*1.9*		*3.38*	*51.30*	*Sqm*
		8		*0.30*	*3.38*	*8.10*	*Sqm*
	TOTAL					**373.37**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*80.68*	*0.25%*	*0.20*	*7850*	*1583.33*	*Kg*
	1.5 % Skin Reinforcement for Well Wall	*18.38*	*1.50%*	*0.28*	*7851*	*2164.02*	*Kg*
	TOTAL Weight of steel (in kg)					3747.35	Kg
	TOTAL Weight of Steel (in Tonne)					**3.75**	**MT**
7	Providing 1000 mm RCC NP4 pipe	9		2.50		22.5	Rm
	TOTAL					**22.50**	**Rm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**

9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*4.12*	*4.32*		*35.53*	*Cum*
	D/S Transitions Walls	*2*	*4.12*	*4.29*		*35.30*	*Cum*
	Above Hume Pipe	*1*	*34.05*		*2.04*	*69.42*	*Cum*
	TOTAL					**140.25**	**Cum**
	Cross Drainage at Ch. 0.950 KM						
S. No.	**Item of Works**	**No.**		**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*9.64*	*0.76*		*7.36*	*Cum*
		1	*5.73*	*5.39*		*30.90*	*Cum*
	Middle Portion	*1*	*1.83*	*43.47*		*79.55*	*Cum*
	Right Portion	*1*	*9.64*	*0.76*		*7.36*	*Cum*
		1	*5.73*	*5.39*		*30.90*	*Cum*
	TOTAL					**156.05**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*9.64*	*1.06*	*0.30*	*3.06*	*Cum*
		1	*5.73*	*4.31*	*0.30*	*7.42*	*Cum*
	300 mm Thick Left Abutment	*1*	*9.64*	*1.06*	*0.30*	*3.06*	*Cum*
		1	*5.73*	*4.31*	*0.30*	*7.42*	*Cum*
	Below Pipe Section	*1*	*20.00*	*1.83*	*0.30*	*10.98*	*Cum*
		2	*20.00*	*0.23*		*9.24*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.32*	*2.50*	*0.20*	*4.32*	*Cum*
	Pipe Section	*7*	*0.30*	*1.73*	*1.60*	*5.81*	*Cum*
	Deduct Area of Pipe	*7*	*0.30*	*1.19*		*-2.49*	*Cum*
	TOTAL					**48.82**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*9.34*	*0.30*	*0.30*	*1.68*	*Cum*
		2	*9.34*	*0.53*	*1.53*	*15.14*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*2.40*	*0.30*	*0.50*	*0.72*	*Cum*
		2	*2.40*	*0.91*	*5.04*	*21.95*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.33*	*0.30*	*0.40*	*1.04*	*Cum*
		2	*4.33*	*0.72*	*3.29*	*20.42*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*9.34*	*0.30*	*0.30*	*1.68*	*Cum*
		2	*9.34*	*0.53*	*1.53*	*15.14*	*Cum*

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	D/S Portion Retaining Wall (Section E-E)	*2*	*2.40*	*0.30*	*0.50*	*0.72*	*Cum*
		2	*2.40*	*0.91*	*5.04*	*21.95*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.33*	*0.30*	*0.40*	*1.04*	*Cum*
		2	*4.33*	*0.72*	*3.29*	*20.42*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.82*	*1.188*		*-1.95*	*Cum*
	TOTAL					**119.94**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
	300 mm Thick Left Abutment	2	*9.64*		*0.30*	5.79	*Sqm*
		2		*1.06*	*0.30*	0.64	*Sqm*
		2	5.73		0.30	3.44	*Sqm*
		2		4.31	0.30	2.59	*Sqm*
	300 mm Thick Right Abutment	2	*9.64*		*0.30*	5.79	*Sqm*
		2		*1.06*	*0.30*	0.64	*Sqm*
		2	5.73		0.30	3.44	*Sqm*
		2		4.31	0.30	2.59	*Sqm*
	200 mm Thick Left and Right Portion Well	4	4.32		0.20	3.46	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	14	0.30		1.60	6.72	*Sqm*
		14		1.73	1.60	38.75	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*9.34*		*0.30*	11.21	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*9.34*		*1.53*	57.17	*Sqm*
		4		0.53	1.53	3.24	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.40		0.50	4.80	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	2.40		5.04	48.42	*Sqm*
		4		0.91	5.04	18.29	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.33		0.40	6.92	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.33		3.29	56.88	*Sqm*
		4		0.72	3.29	9.44	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	2.40		5.04	48.42	*Sqm*
		4		0.91	5.04	18.29	*Sqm*
		4	2.40		0.50	4.80	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	9.34		1.53	57.17	*Sqm*
		4		0.53	1.53	3.24	*Sqm*
		4	9.34		0.30	11.21	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.33		0.40	6.92	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.33		3.29	56.88	*Sqm*
		4		0.72	3.29	9.44	*Sqm*
	TOTAL					**511.47**	***Sqm***
5	Providing 1000 mm NP4 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1000 mm dia pipe	*8*	*2.50*			*20.00*	*RM*
	TOTAL					**20.00**	**RM**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*119.94*	*0.0025*	*0.300*	*7850.00*	*2353.821*	*Kg*
	TOTAL					*2353.821*	*Kg*
	TOTAL					**2.35**	**M.T.**
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*9.64*	*1.06*	*5.13*	*52.37*	*Cum*
		1	*5.73*	*4.31*	*5.13*	*126.80*	*Cum*
	Middle Portion	*1*	*1.83*	*77.33*		*141.51*	*Cum*
	Right Portion	*1*	*9.64*	*1.06*	*5.78*	*59.06*	*Cum*
		1	*5.73*	*4.31*	*5.78*	*142.99*	*Cum*
	TOTAL					**522.74**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Cross Drainage at Ch. 4.600 KM						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*9.64*	*0.76*		*7.36*	*Cum*
		1	*5.73*	*2.60*		*14.90*	*Cum*
	Middle Portion	*1*	*1.83*	*16.20*		*29.64*	*Cum*
	Right Portion	*1*	*9.64*	*0.76*		*7.36*	*Cum*
		1	*5.73*	*2.60*		*14.90*	*Cum*
	TOTAL					**74.16**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*9.64*	*1.06*	*0.30*	*3.06*	*Cum*
		1	*5.73*	*3.77*	*0.30*	*6.48*	*Cum*
	300 mm Thick Left Abutment	*1*	*9.64*	*1.06*	*0.30*	*3.06*	*Cum*
		1	*5.73*	*3.77*	*0.30*	*6.48*	*Cum*
	Below Pipe Section	*1*	*15.00*	*1.83*	*0.30*	*8.24*	*Cum*
		2	*15.00*	*0.23*		*6.93*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.32*	*2.50*	*0.20*	*4.32*	*Cum*
	Pipe Section	*7*	*0.30*	*1.73*	*1.60*	*5.81*	*Cum*
	Deduct Area of Pipe	*7*	*0.30*	*1.19*		*-2.49*	*Cum*
	TOTAL					**41.90**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*9.34*	*0.30*	*0.30*	*1.68*	*Cum*
		2	*9.34*	*0.53*	*1.53*	*15.14*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*2.40*	*0.30*	*0.50*	*0.72*	*Cum*
		2	*2.40*	*0.91*	*5.04*	*21.95*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.33*	*0.30*	*0.40*	*1.04*	*Cum*
		2	*4.33*	*0.72*	*3.29*	*20.42*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*9.34*	*0.30*	*0.30*	*1.68*	*Cum*
		2	*9.34*	*0.53*	*1.53*	*15.14*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*2.40*	*0.30*	*0.50*	*0.72*	*Cum*
		2	*2.40*	*0.91*	*5.04*	*21.95*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.33*	*0.30*	*0.40*	*1.04*	*Cum*
		2	*4.33*	*0.72*	*3.29*	*20.42*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.82*	*1.188*		*-1.95*	*Cum*
	TOTAL					**119.94**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	300 mm Thick Left Abutment	2	*9.64*		*0.30*	5.79	*Sqm*
		2		*1.06*	*0.30*	0.64	*Sqm*
		2	5.73		0.30	3.44	*Sqm*
		2		3.77	0.30	2.26	*Sqm*
	300 mm Thick Right Abutment	2	*9.64*		*0.30*	5.79	*Sqm*
		2		*1.06*	*0.30*	0.64	*Sqm*
		2	5.73		0.30	3.44	*Sqm*
		2		3.77	0.30	2.26	*Sqm*
	200 mm Thick Left and Right Portion Well	4	4.32		0.20	3.46	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	14	0.30		1.60	6.72	*Sqm*
		14		1.73	1.60	38.75	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*9.34*		*0.30*	11.21	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*9.34*		*1.53*	57.17	*Sqm*
		4		0.53	1.53	3.24	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.40		0.50	4.80	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	2.40		5.04	48.42	*Sqm*
		4		0.91	5.04	18.29	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.33		0.40	6.92	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.33		3.29	56.88	*Sqm*
		4		0.72	3.29	9.44	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	2.40		5.04	48.42	*Sqm*
		4		0.91	5.04	18.29	*Sqm*
		4	2.40		0.50	4.80	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	9.34		1.53	57.17	*Sqm*
		4		0.53	1.53	3.24	*Sqm*
		4	9.34		0.30	11.21	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.33		0.40	6.92	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.33		3.29	56.88	*Sqm*
		4		0.72	3.29	9.44	*Sqm*
	TOTAL					**510.82**	***Sqm***
5	Providing 1000 mm NP4 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1000 mm dia pipe	*6*	*2.50*			*15.00*	*RM*
	TOTAL					**15.00**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*119.94*	*0.0025*	*0.300*	*7850.00*	*2353.821*	*Kg*
	TOTAL					*2353.821*	*Kg*
	TOTAL					**2.35**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*9.64*	*1.06*	*3.22*	*32.88*	*Cum*
		1	*5.73*	*3.77*	*3.22*	*69.56*	*Cum*
	Middle Portion	*1*	*1.83*	*35.91*		*65.72*	*Cum*
	Right Portion	*1*	*9.64*	*1.06*	*3.93*	*40.09*	*Cum*
		1	*5.73*	*3.77*	*3.93*	*84.82*	*Cum*
	TOTAL					**293.06**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF PATOI DY.						
	Cross Drainage at Ch. 12.482 KM						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*9.98*	*0.92*		*9.19*	*Cum*
		1	*3.96*	*1.33*		*5.27*	*Cum*
	Middle Portion	*1*	*2.04*	*15.10*		*30.80*	*Cum*
	Right Portion	*1*	*9.98*	*0.92*		*9.19*	*Cum*
		1	*3.96*	*1.33*		*5.27*	*Cum*
	TOTAL					**59.72**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*9.98*	*1.12*	*0.30*	*3.36*	*Cum*
		1	*6.02*	*3.63*	*0.30*	*6.56*	*Cum*
	300 mm Thick Left Abutment	*1*	*9.98*	*1.12*	*0.30*	*3.36*	*Cum*
		1	*6.02*	*3.63*	*0.30*	*6.56*	*Cum*
	Below Pipe Section	*1*	*15.00*	*2.04*	*0.30*	*9.18*	*Cum*
		1	*15.00*	*0.38*		*5.76*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.54*	*2.50*	*0.20*	*4.54*	*Cum*
	Pipe Section	*7*	*0.30*	*1.94*	*1.94*	*7.90*	*Cum*
	Deduct Area of Pipe	*7*	*0.30*	*1.63*		*-3.42*	*Cum*
	TOTAL					**43.80**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*9.68*	*0.30*	*0.30*	*1.74*	*Cum*
		2	*9.68*	*0.56*	*1.74*	*18.91*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*2.62*	*0.30*	*0.50*	*0.79*	*Cum*
		2	*2.62*	*0.71*	*2.76*	*10.33*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.07*	*0.30*	*0.40*	*0.98*	*Cum*
		2	*4.07*	*0.64*	*2.25*	*11.66*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*9.68*	*0.30*	*0.30*	*1.74*	*Cum*
		2	*9.68*	*0.56*	*1.74*	*18.91*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*2.62*	*0.30*	*0.50*	*0.79*	*Cum*
		2	*2.62*	*0.71*	*2.76*	*10.33*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.07*	*0.64*	*2.25*	*11.66*	*Cum*
		2	*4.07*	*0.30*	*0.40*	*0.98*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.82*	*1.628*		*-2.67*	*Cum*
	TOTAL					**86.13**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
	300 mm Thick Left Abutment	2	*9.98*		*0.30*	5.99	*Sqm*
		2		*1.12*	*0.30*	0.67	*Sqm*
		2	6.02		0.30	3.61	*Sqm*
		2		3.63	0.30	2.18	*Sqm*
	300 mm Thick Right Abutment	2	*9.98*		*0.30*	5.99	*Sqm*
		2		*1.12*	*0.30*	0.67	*Sqm*
		2	6.02		0.30	3.61	*Sqm*
		2		3.63	0.30	2.18	*Sqm*
	200 mm Thick Left and Right Portion Well	4	4.54		0.20	3.63	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	14	0.30		1.94	8.15	*Sqm*
		14		1.94	1.94	52.69	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*9.68*		*0.30*	11.62	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*9.68*		*1.74*	67.40	*Sqm*
		4		0.56	1.74	3.90	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.62		0.50	5.24	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	2.62		2.76	28.94	*Sqm*
		4		0.71	2.76	7.88	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.07		0.40	6.50	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.07		2.25	36.59	*Sqm*
		4		0.64	2.25	5.74	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	2.62		2.76	28.94	*Sqm*
		4		0.71	2.76	7.88	*Sqm*
		4	2.62		0.50	5.24	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	9.68		1.74	67.40	*Sqm*
		4		0.56	1.74	3.90	*Sqm*
		4	9.68		0.30	11.62	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.07		2.25	36.59	*Sqm*
		4		0.64	2.25	5.74	*Sqm*
		4	4.07		0.40	6.50	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
	TOTAL					**441.90**	***Sqm***
5	Providing 1200 mm NP2 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1200 mm dia pipe	*8*	*2.50*			*20.00*	*RM*
	TOTAL					**20.00**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*86.13*	*0.0025*	*0.215*	*7850.00*	*1690.372*	*Kg*
	TOTAL					*1690.372*	*Kg*
	TOTAL					**1.69**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*9.98*	*1.12*	*3.31*	*37.08*	*Cum*
		1	*6.02*	*3.63*	*3.31*	*72.34*	*Cum*
	Middle Portion	*1*	*2.04*	*11.94*		*24.36*	*Cum*
	Right Portion	*1*	*9.98*	*1.12*	*3.26*	*36.52*	*Cum*
		1	*6.02*	*3.63*	*3.26*	*71.25*	*Cum*
	TOTAL					**241.54**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Cross Drainage at Ch. 13.800 KM						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*11.47*	*0.76*		*8.75*	*Cum*
		1	*5.60*	*1.97*		*11.04*	*Cum*
	Middle Portion	*1*	*3.66*	*19.70*		*72.10*	*Cum*
	Right Portion	*1*	*11.47*	*0.76*		*8.75*	*Cum*
		1	*5.60*	*1.97*		*11.04*	*Cum*
	TOTAL					**111.68**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*11.47*	*1.06*	*0.30*	*3.64*	*Cum*
		1	*7.55*	*3.75*	*0.30*	*8.50*	*Cum*
	300 mm Thick Left Abutment	*1*	*11.47*	*1.06*	*0.30*	*3.64*	*Cum*
		1	*7.55*	*3.75*	*0.30*	*8.50*	*Cum*
	Below Pipe Section	*1*	*15.00*	*3.66*	*0.30*	*16.47*	*Cum*
		1	*15.00*	*0.72*		*10.83*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*6.15*	*2.50*	*0.20*	*6.15*	*Cum*
	Pipe Section	*5*	*0.30*	*3.56*	*1.94*	*10.36*	*Cum*
	Deduct Area of Pipe	*10*	*0.30*	*1.19*		*-3.56*	*Cum*
	TOTAL					**64.53**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*11.17*	*0.30*	*0.30*	*2.01*	*Cum*
		2	*11.17*	*0.53*	*1.53*	*18.10*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*4.23*	*0.30*	*0.50*	*1.27*	*Cum*
		2	*4.23*	*0.78*	*3.18*	*20.88*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.10*	*0.30*	*0.40*	*0.98*	*Cum*
		2	*4.10*	*0.65*	*2.36*	*12.60*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*11.17*	*0.30*	*0.30*	*2.01*	*Cum*
		2	*11.17*	*0.53*	*1.53*	*18.10*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*4.23*	*0.30*	*0.50*	*1.27*	*Cum*
		2	*4.23*	*0.78*	*3.18*	*20.88*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.10*	*0.65*	*2.36*	*12.60*	*Cum*
		2	*4.10*	*0.30*	*0.40*	*0.98*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.98*	*2.375*		*-4.66*	*Cum*
	TOTAL					**107.04**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	300 mm Thick Left Abutment	2	*11.47*		*0.30*	6.88	*Sqm*
		2		*1.06*	*0.30*	0.63	*Sqm*
		2	7.55		0.30	4.53	*Sqm*
		2		3.75	0.30	2.25	*Sqm*
	300 mm Thick Right Abutment	2	*11.47*		*0.30*	6.88	*Sqm*
		2		*1.06*	*0.30*	0.63	*Sqm*
		2	7.55		0.30	4.53	*Sqm*
		2		3.75	0.30	2.25	*Sqm*
	200 mm Thick Left and Right Portion Well	4	6.15		0.20	4.92	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	10	0.30		1.94	5.82	*Sqm*
		20		3.56	1.94	138.13	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*11.17*		*0.30*	13.41	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*11.17*		*1.53*	68.37	*Sqm*
		4		0.53	1.53	3.24	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	4.23		0.50	8.45	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	4.23		3.18	53.75	*Sqm*
		4		0.78	3.18	9.88	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.10		0.40	6.55	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.10		2.36	38.58	*Sqm*
		4		0.65	2.36	6.15	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	4.23		3.18	53.75	*Sqm*
		4		0.78	3.18	9.88	*Sqm*
		4	4.23		0.50	8.45	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	11.17		1.53	68.37	*Sqm*
		4		0.53	1.53	3.24	*Sqm*
		4	11.17		0.30	13.41	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.10		2.36	38.58	*Sqm*
		4		0.65	2.36	6.15	*Sqm*
		4	4.10		0.40	6.55	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
	TOTAL					**599.15**	***Sqm***
5	Providing 1000 mm NP2 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1.0 m dia pipe	*12*	*2.50*			*30.00*	*RM*
	TOTAL					**30.00**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*107.04*	*0.0025*	*0.268*	*7850.00*	*2100.739*	*Kg*
	TOTAL					*2100.739*	*Kg*
	TOTAL					**2.10**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*11.47*	*1.06*	*3.49*	*42.40*	*Cum*
		1	*7.55*	*3.75*	*3.49*	*98.97*	*Cum*
	Middle Portion	*1*	*3.66*	*15.33*		*56.11*	*Cum*
	Right Portion	*1*	*11.47*	*1.06*	*2.91*	*35.31*	*Cum*
		1	*7.55*	*3.75*	*2.91*	*82.43*	*Cum*
	TOTAL					**315.21**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Cross Drainage at Ch. 14.865 KM						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*11.47*	*0.76*		*8.75*	*Cum*
		1	*5.60*	*1.97*		*11.04*	*Cum*
	Middle Portion	*1*	*3.66*	*19.70*		*72.10*	*Cum*
	Right Portion	*1*	*11.47*	*0.76*		*8.75*	*Cum*
		1	*5.60*	*1.97*		*11.04*	*Cum*
	TOTAL					**111.68**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*11.47*	*1.06*	*0.30*	*3.64*	*Cum*
		1	*7.55*	*3.75*	*0.30*	*8.50*	*Cum*
	300 mm Thick Left Abutment	*1*	*11.47*	*1.06*	*0.30*	*3.64*	*Cum*
		1	*7.55*	*3.75*	*0.30*	*8.50*	*Cum*
	Below Pipe Section	*1*	*15.00*	*3.66*	*0.30*	*16.47*	*Cum*
		1	*15.00*	*0.75*		*11.18*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*6.15*	*2.50*	*0.20*	*6.15*	*Cum*
	Pipe Section	*5*	*0.30*	*3.56*	*1.94*	*10.36*	*Cum*
	Deduct Area of Pipe	*10*	*0.30*	*1.19*		*-3.56*	*Cum*
	TOTAL					**64.88**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*9.13*	*0.30*	*0.30*	*1.64*	*Cum*
		2	*9.13*	*0.51*	*1.40*	*13.04*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*2.27*	*0.30*	*0.50*	*0.68*	*Cum*
		2	*2.27*	*0.68*	*2.50*	*7.65*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.10*	*0.30*	*0.40*	*0.98*	*Cum*
		2	*4.10*	*0.59*	*1.95*	*9.46*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*9.13*	*0.30*	*0.30*	*1.64*	*Cum*
		2	*9.13*	*0.51*	*1.40*	*13.04*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*2.27*	*0.30*	*0.50*	*0.68*	*Cum*
		2	*2.27*	*0.68*	*2.50*	*7.65*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.10*	*0.30*	*0.40*	*0.98*	*Cum*
		2	*4.10*	*0.59*	*1.95*	*9.46*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.98*	*2.375*		*-4.66*	*Cum*
	TOTAL					**62.27**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	300 mm Thick Left Abutment	2	*11.47*		*0.30*	6.88	*Sqm*
		2		*1.06*	*0.30*	0.63	*Sqm*
		2	7.55		0.30	4.53	*Sqm*
		2		3.75	0.30	2.25	*Sqm*
	300 mm Thick Right Abutment	2	*11.47*		*0.30*	6.88	*Sqm*
		2		*1.06*	*0.30*	0.63	*Sqm*
		2	7.55		0.30	4.53	*Sqm*
		2		3.75	0.30	2.25	*Sqm*
	200 mm Thick Left and Right Portion Well	4	6.15		0.20	4.92	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	10	0.30		1.94	5.82	*Sqm*
		20		3.56	1.94	138.13	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*9.13*		*0.30*	10.96	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*9.13*		*1.40*	51.15	*Sqm*
		4		0.51	1.40	2.86	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.27		0.50	4.53	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	2.27		2.50	22.66	*Sqm*
		4		0.68	2.50	6.75	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.10		0.40	6.55	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.10		1.95	31.95	*Sqm*
		4		0.59	1.95	4.62	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	2.27		2.50	22.66	*Sqm*
		4		0.68	2.50	6.75	*Sqm*
		4	2.27		0.50	4.53	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	9.13		1.40	51.15	*Sqm*
		4		0.51	1.40	2.86	*Sqm*
		4	9.13		0.30	10.96	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.10		0.40	6.55	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.10		1.95	31.95	*Sqm*
		4		0.59	1.95	4.62	*Sqm*
	TOTAL					**466.42**	***Sqm***
5	Providing 1000 mm NP4 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1.0 m dia pipe	*4*	*2.50*			*10.00*	*RM*
	TOTAL					**10.00**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*62.27*	*0.0025*	*0.156*	*7850.00*	*1222.054*	*Kg*
	TOTAL					*1222.054*	*Kg*
	TOTAL					**1.22**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*11.47*	*1.06*	*3.49*	*42.40*	*Cum*
		1	*7.55*	*3.75*	*3.49*	*98.97*	*Cum*
	Middle Portion	*1*	*3.66*	*15.33*		*56.11*	*Cum*
	Right Portion	*1*	*11.47*	*1.06*	*2.91*	*35.31*	*Cum*
		1	*7.55*	*3.75*	*2.91*	*82.43*	*Cum*
	TOTAL					**315.21**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR SLAB BRIDGE

Sr. No.	KM	Canal	STRUCTURE	Amount in Rs.
1	0.914	Angra Branch Canal	Slab Bridge	₹ 30,44,013.82
2	2.925		Slab Bridge	₹ 37,77,318.72
3	21.800		Slab Bridge	₹ 22,66,291.58
4	22.500		Slab Bridge	₹ 21,42,077.67
5	22.850		Slab Bridge	₹ 21,39,938.27
6	23.400		Slab Bridge	₹ 22,07,514.99
7	0.155	Asni mr.	Slab Bridge	₹ 18,23,758.26
8	0.600	Kailashpur Sub dy.	Slab Bridge	₹ 16,70,432.31
9	1.690		Slab Bridge	₹ 17,63,481.57
10	6.850		Slab Bridge	₹ 14,58,524.16
11	0.500	Budhaul Sub dy.	Slab Bridge	₹ 18,13,267.13
12	6.370		Slab Bridge	₹ 17,51,676.49
13	0.460	Patoi sub dy.	Slab Bridge	₹ 21,72,024.53
14	2.045		Slab Bridge	₹ 20,54,649.39
15	3.850		Slab Bridge	₹ 19,41,216.50
16	5.005		Slab Bridge	₹ 18,88,133.48
17	5.944		Slab Bridge	₹ 18,18,453.35
18	6.750		Slab Bridge	₹ 17,43,025.56
19	7.165		Slab Bridge	₹ 17,47,647.52
20	7.405		Slab Bridge	₹ 17,37,887.43
21	7.560		Slab Bridge	₹ 17,37,504.85
22	8.030		Slab Bridge	₹ 17,40,482.29
23	9.205		Slab Bridge	₹ 22,08,004.92
24	9.632		Slab Bridge	₹ 17,26,283.05
25	14.640		Slab Bridge	₹ 15,17,241.32
26	15.179		Slab Bridge	₹ 9,28,105.72
			Sub-Total	₹ 5,08,18,954.90
			Seigniorage charges	₹ 2,78,879.65
			Total (in Rs. Lakhs)	**₹ 510.98**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF SLAB BRIDGE FOR ANGRA BRANCH CANAL AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.914								
S.no.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	351.877	Cum	**195.20**	68686.39			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.97	Cum	**6381.70**	76414.48	3.88	5.39	10.78
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	80.20	Cum	**6914.20**	554544.21	33.08	34.49	68.98
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	83.39	Cum	**8151.40**	679739.88	47.28	32.52	65.88
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	7.86	MT	**73574.90**	578051.52			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	368.92	Sqm	**578.60**	213457.14			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	Rm	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	191.03	Cum	**149.30**	28520.79			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	72.398	Cum	**1075.00**	77827.55			
	Coarse Aggregates (100 Km lead)	145.629	Cum	**1398.00**	203589.81			
	Cement (30 km lead)	84.245	MT	**742.00**	62510.05			
	Steel (30 Km lead)	7.86	MT	**742.00**	5829.63			
TOTAL (In Rs.)					**3044013.82**			
TOTAL (In Rs.)					**3044013.82**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	72.40	Cum	**584.64**	42326.60	4232.66		
	Coarse Aggregate	145.63	Cum	**944.26**	137511.96	13751.20		
	Total					17983.86		
	For 1 no, Total Seigniorage charges					**17983.86**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 2.925								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	89.556	Cum	**195.20**	17481.38			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.16	Cum	**6381.70**	90354.92	4.59	6.37	12.74
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	149.28	Cum	**6914.20**	1032131.73	61.58	64.19	128.38
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	83.39	Cum	**8151.40**	679739.88	47.28	32.52	65.88
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	9.21	MT	**73574.90**	677787.16			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	451.16	Sqm	**578.60**	261040.48			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	218.44	Cum	**149.30**	32613.10			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	103.082	Cum	**1075.00**	110813.47			
	Coarse Aggregates (100 Km lead)	206.998	Cum	**1398.00**	289383.88			
	Cement (30 km lead)	113.446	MT	**742.00**	84176.85			
	Steel (30 Km lead)	9.21	MT	**742.00**	6835.46			
TOTAL (In Rs.)					**3777318.72**			
TOTAL (In Rs.)					**3777318.72**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	103.08	Cum	**584.64**	60266.03	6026.60		
	Coarse Aggregate	207.00	Cum	**944.26**	195460.39	19546.04		
	Total					25572.64		
	For 1 nos., Total Seigniorage charges					**25572.64**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 21.800							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	72.980	Cum	**195.20**	14245.72			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.89	Cum	**6381.70**	69499.27	3.53	4.90	9.80
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	52.39	Cum	**6914.20**	362211.45	21.61	22.53	45.05
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	59.39	Cum	**8151.40**	484130.68	33.68	23.16	46.92
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.60	MT	**73574.90**	412062.81			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	288.76	Sqm	**578.60**	167077.75			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	118.18	Cum	**149.30**	17644.38			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	50.590	Cum	**1075.00**	54384.17			
	Coarse Aggregates (100 Km lead)	101.774	Cum	**1398.00**	142279.75			
	Cement (30 km lead)	58.813	MT	**742.00**	43639.56			
	Steel (30 Km lead)	5.60	MT	**742.00**	4155.64			
	TOTAL (In Rs.)				**2266291.58**			
	TOTAL (In Rs.)				**2266291.58**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	50.59	Cum	**584.64**	29576.90	2957.69		
	Coarse Aggregate	101.77	Cum	**944.26**	96100.91	9610.09		
	Total					12567.78		
	For 1 nos., Total Seigniorage charges					**12567.78**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 22.500							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	112.201	Cum	**195.20**	21901.54			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.81	Cum	**6381.70**	68974.69	3.50	4.86	9.73
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	49.44	Cum	**6914.20**	341868.22	20.40	21.26	42.52
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	53.34	Cum	**8151.40**	434769.93	30.24	20.80	42.14
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.16	MT	**73574.90**	379395.59			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	277.41	Sqm	**578.60**	160512.02			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	89.09	Cum	**149.30**	13300.73			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	46.926	Cum	**1075.00**	50445.59			
	Coarse Aggregates (100 Km lead)	94.386	Cum	**1398.00**	131951.12			
	Cement (30 km lead)	54.140	MT	**742.00**	40171.62			
	Steel (30 Km lead)	5.16	MT	**742.00**	3826.19			
	TOTAL (In Rs.)				**2142077.67**			
	TOTAL (In Rs.)				**2142077.67**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	46.93	Cum	**584.64**	27434.90	2743.49		
	Coarse Aggregate	94.39	Cum	**944.26**	89124.58	8912.46		
	Total					11655.95		
	For 1 nos., Total Seigniorage charges					**11655.95**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 22.850								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	101.024	Cum	**195.20**	19719.93			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.81	Cum	**6381.70**	68974.69	3.50	4.86	9.73
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	49.44	Cum	**6914.20**	341868.22	20.40	21.26	42.52
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	53.34	Cum	**8151.40**	434769.93	30.24	20.80	42.14
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.16	MT	**73574.90**	379395.59			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	277.41	Sqm	**578.60**	160512.02			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	89.37	Cum	**149.30**	13342.95			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	46.926	Cum	**1075.00**	50445.59			
	Coarse Aggregates (100 Km lead)	94.386	Cum	**1398.00**	131951.12			
	Cement (30 km lead)	54.140	MT	**742.00**	40171.62			
	Steel (30 Km lead)	5.16	MT	**742.00**	3826.19			
TOTAL (In Rs.)					**2139938.27**			
TOTAL (In Rs.)					**2139938.27**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	46.93	Cum	**584.64**	27434.90	2743.49		
	Coarse Aggregate	94.39	Cum	**944.26**	89124.58	8912.46		
	Total					11655.95		
	For 1 nos., Total Seigniorage charges					**11655.95**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 23.400							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	84.528	Cum	**195.20**	16499.92			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.07	Cum	**6381.70**	70633.68	3.59	4.98	9.96
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	55.16	Cum	**6914.20**	381412.14	22.75	23.72	47.44
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	53.34	Cum	**8151.40**	434769.93	30.24	20.80	42.14
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.27	MT	**73574.90**	387653.63			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	286.41	Sqm	**578.60**	165716.81			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	117.92	Cum	**149.30**	17604.99			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	49.502	Cum	**1075.00**	53215.07			
	Coarse Aggregates (100 Km lead)	99.538	Cum	**1398.00**	139154.32			
	Cement (30 km lead)	56.583	MT	**742.00**	41984.63			
	Steel (30 Km lead)	5.27	MT	**742.00**	3909.47			
	TOTAL (In Rs.)				**2207514.99**			
	TOTAL (In Rs.)				**2207514.99**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	49.50	Cum	**584.64**	28941.08	2894.11		
	Coarse Aggregate	99.54	Cum	**944.26**	93989.89	9398.99		
	Total					12293.10		
	For 1 nos., Total Seigniorage charges					**12293.10**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KAILASHPUR SUB DY.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.600								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	146.288	Cum	**195.20**	28555.37			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.36	Cum	**6381.70**	66145.04	3.36	4.66	9.33
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	40.13	Cum	**6914.20**	277439.52	16.55	17.25	34.51
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	33.44	Cum	**8151.40**	272608.35	18.96	13.04	26.42
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.11	MT	**73574.90**	228702.43			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	217.14	Sqm	**578.60**	125637.31			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	66.34	Cum	**149.30**	9903.96			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	34.961	Cum	**1075.00**	37583.27			
	Coarse Aggregates (100 Km lead)	70.257	Cum	**1398.00**	98219.00			
	Cement (30 km lead)	38.872	MT	**742.00**	28843.36			
	Steel (30 Km lead)	3.11	MT	**742.00**	2306.46			
TOTAL (In Rs.)					**1670432.31**			
TOTAL (In Rs.)					**1670432.31**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	34.96	Cum	**584.64**	20439.71	2043.97		
	Coarse Aggregate	70.26	Cum	**944.26**	66340.68	6634.07		
	Total					8678.04		
	For 1 nos., Total Seigniorage charges					**8678.04**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 1.690							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	68.997	Cum	**195.20**	13468.25			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.84	Cum	**6381.70**	69190.65	3.51	4.88	9.76
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	49.23	Cum	**6914.20**	340375.31	20.31	21.17	42.34
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	33.44	Cum	**8151.40**	272608.35	18.96	13.04	26.42
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.29	MT	**73574.90**	241845.44			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	233.34	Sqm	**578.60**	135013.11			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	67.33	Cum	**149.30**	10052.13			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	39.090	Cum	**1075.00**	42021.72			
	Coarse Aggregates (100 Km lead)	78.514	Cum	**1398.00**	109763.09			
	Cement (30 km lead)	42.782	MT	**742.00**	31744.10			
	Steel (30 Km lead)	3.29	MT	**742.00**	2439.00			
	TOTAL (In Rs.)				**1763481.57**			
	TOTAL (In Rs.)				**1763481.57**			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	39.09	Cum	**584.64**	22853.56	2285.36		
	Coarse Aggregate	78.51	Cum	**944.26**	74137.98	7413.80		
	Total					9699.15		
	For 1 nos., Total Seigniorage charges					**9699.15**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR ASNI MR.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.155								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	150.141	Cum	**195.20**	29307.50			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.59	Cum	**6381.70**	67613.47	3.43	4.77	9.54
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	75.18	Cum	**6914.20**	519793.18	31.01	32.33	64.65
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.79	Cum	**8151.40**	193911.71	13.49	9.28	18.79
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.36	MT	**73574.90**	246900.09			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	238.80	Sqm	**578.60**	138168.16			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	4.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	4.20	Sqm	**66.00**	277.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	10.50	RM	**36993.21**	388428.71			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	55.14	Cum	**149.30**	8232.17			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	46.372	Cum	**1075.00**	49849.58			
	Coarse Aggregates (100 Km lead)	92.981	Cum	**1398.00**	129987.85			
	Cement (30 km lead)	47.932	MT	**742.00**	35565.36			
	Steel (30 Km lead)	3.36	MT	**742.00**	2489.98			
TOTAL (In Rs.)					**1823758.26**			
TOTAL (In Rs.)					**1823758.26**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	46.37	Cum	**584.64**	27110.75	2711.08		
	Coarse Aggregate	92.98	Cum	**944.26**	87798.52	8779.85		
	Total					11490.93		
	For 1 nos., Total Seigniorage charges					**11490.93**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KAILASHPUR SUB DY.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 6.850								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	57.716	Cum	**195.20**	11266.20			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.44	Cum	**6381.70**	60217.08	3.06	4.25	8.49
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	33.45	Cum	**6914.20**	231267.72	13.80	14.38	28.77
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.07	Cum	**8151.40**	220621.29	15.35	10.56	21.38
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.53	MT	**73574.90**	185926.25			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	185.30	Sqm	**578.60**	107212.41			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	53.14	Cum	**149.30**	7933.56			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	29.184	Cum	**1075.00**	31373.25			
	Coarse Aggregates (100 Km lead)	58.639	Cum	**1398.00**	81978.00			
	Cement (30 km lead)	32.201	MT	**742.00**	23892.94			
	Steel (30 Km lead)	2.53	MT	**742.00**	1875.06			
TOTAL (In Rs.)					**1458524.16**			
TOTAL (In Rs.)					**1458524.16**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.18	Cum	**584.64**	17062.38	1706.24		
	Coarse Aggregate	58.64	Cum	**944.26**	55370.92	5537.09		
	Total					7243.33		
	For 1 nos., Total Seigniorage charges					**7243.33**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR BUDHAUL SUB DY.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.500								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	92.073	Cum	**195.20**	17972.72			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.62	Cum	**6381.70**	67783.86	3.44	4.78	9.56
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	45.93	Cum	**6914.20**	317560.18	18.95	19.75	39.50
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	37.81	Cum	**8151.40**	308200.94	21.44	14.75	29.87
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.64	MT	**73574.90**	267716.26			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	237.77	Sqm	**578.60**	137574.82			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	94.26	Cum	**149.30**	14072.70			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	39.275	Cum	**1075.00**	42220.40			
	Coarse Aggregates (100 Km lead)	78.928	Cum	**1398.00**	110340.90			
	Cement (30 km lead)	43.825	MT	**742.00**	32518.16			
	Steel (30 Km lead)	3.64	MT	**742.00**	2699.91			
TOTAL (In Rs.)					**1813267.13**			
TOTAL (In Rs.)					**1813267.13**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	39.27	Cum	**584.64**	22961.61	2296.16		
	Coarse Aggregate	78.93	Cum	**944.26**	74528.25	7452.83		
	Total					9748.99		
	For 1 nos., Total Seigniorage charges					**9748.99**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 6.370							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	104.448	Cum	**195.20**	20388.32			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.53	Cum	**6381.70**	67187.36	3.41	4.74	9.48
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	43.89	Cum	**6914.20**	303460.96	18.10	18.87	37.74
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	35.15	Cum	**8151.40**	286535.98	19.93	13.71	27.77
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.49	MT	**73574.90**	256774.89			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	229.61	Sqm	**578.60**	132852.93			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	75.14	Cum	**149.30**	11218.13			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	37.319	Cum	**1075.00**	40118.29			
	Coarse Aggregates (100 Km lead)	74.990	Cum	**1398.00**	104836.29			
	Cement (30 km lead)	41.447	MT	**742.00**	30753.37			
	Steel (30 Km lead)	3.49	MT	**742.00**	2589.56			
	TOTAL (In Rs.)				**1751676.49**			
	TOTAL (In Rs.)				**1751676.49**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	37.32	Cum	**584.64**	21818.38	2181.84		
	Coarse Aggregate	74.99	Cum	**944.26**	70810.24	7081.02		
	Total					9262.86		
	For 1 nos., Total Seigniorage charges					**9262.86**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR PATOI SUB DY.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.460								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	83.382	Cum	**195.20**	16276.24			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.72	Cum	**6381.70**	81195.42	4.12	5.73	11.45
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	61.52	Cum	**6914.20**	425332.05	25.38	26.45	52.90
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	47.06	Cum	**8151.40**	383599.46	26.68	18.35	37.18
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.82	MT	**73574.90**	354394.45			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	285.31	Sqm	**578.60**	165082.43			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	67.89	Cum	**149.30**	10135.69			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	50.530	Cum	**1075.00**	54320.10			
	Coarse Aggregates (100 Km lead)	101.531	Cum	**1398.00**	141940.69			
	Cement (30 km lead)	56.180	MT	**742.00**	41685.70			
	Steel (30 Km lead)	4.82	MT	**742.00**	3574.05			
TOTAL (In Rs.)					**2172024.53**			
TOTAL (In Rs.)					**2172024.53**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	50.53	Cum	**584.64**	29542.05	2954.21		
	Coarse Aggregate	101.53	Cum	**944.26**	95871.90	9587.19		
	Total					12541.39		
	For 1 nos., Total Seigniorage charges					**12541.39**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 2.045							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	79.271	Cum	**195.20**	15473.62			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.10	Cum	**6381.70**	77238.79	3.92	5.45	10.89
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	51.36	Cum	**6914.20**	355143.36	21.19	22.09	44.17
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	47.06	Cum	**8151.40**	383599.46	26.68	18.35	37.18
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.64	MT	**73574.90**	341034.74			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	269.67	Sqm	**578.60**	156033.20			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	76.93	Cum	**149.30**	11485.59			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	45.886	Cum	**1075.00**	49327.70			
	Coarse Aggregates (100 Km lead)	92.243	Cum	**1398.00**	128955.80			
	Cement (30 km lead)	51.792	MT	**742.00**	38429.56			
	Steel (30 Km lead)	4.64	MT	**742.00**	3439.32			
	TOTAL (In Rs.)				**2054649.39**			
	TOTAL (In Rs.)				**2054649.39**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	45.89	Cum	**584.64**	26826.93	2682.69		
	Coarse Aggregate	92.24	Cum	**944.26**	87101.44	8710.14		
	Total					11392.84		
	For 1 nos., Total Seigniorage charges					**11392.84**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 3.850							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	98.879	Cum	**195.20**	19301.12			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.71	Cum	**6381.70**	74750.62	3.80	5.27	10.54
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	45.29	Cum	**6914.20**	313155.34	18.68	19.48	38.95
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	43.51	Cum	**8151.40**	354665.87	24.67	16.97	34.37
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.44	MT	**73574.90**	326418.00			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	249.97	Sqm	**578.60**	144631.46			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	86.87	Cum	**149.30**	12970.19			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	41.715	Cum	**1075.00**	44843.84			
	Coarse Aggregates (100 Km lead)	83.865	Cum	**1398.00**	117243.96			
	Cement (30 km lead)	47.148	MT	**742.00**	34983.79			
	Steel (30 Km lead)	4.44	MT	**742.00**	3291.91			
	TOTAL (In Rs.)				**1941216.50**			
	TOTAL (In Rs.)				**1941216.50**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	41.72	Cum	**584.64**	24388.37	2438.84		
	Coarse Aggregate	83.87	Cum	**944.26**	79190.83	7919.08		
	Total					10357.92		
	For 1 nos., Total Seigniorage charges					**10357.92**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 5.005							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	99.196	Cum	**195.20**	19363.09			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.69	Cum	**6381.70**	74605.71	3.79	5.26	10.52
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	44.48	Cum	**6914.20**	307572.82	18.35	19.13	38.26
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.71	Cum	**8151.40**	339957.48	23.65	16.27	32.95
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.10	MT	**73574.90**	301869.31			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	246.94	Sqm	**578.60**	142880.36			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	82.43	Cum	**149.30**	12307.02			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	40.654	Cum	**1075.00**	43703.14			
	Coarse Aggregates (100 Km lead)	81.725	Cum	**1398.00**	114251.86			
	Cement (30 km lead)	45.784	MT	**742.00**	33972.07			
	Steel (30 Km lead)	4.10	MT	**742.00**	3044.34			
	TOTAL (In Rs.)				**1888133.48**			
	TOTAL (In Rs.)				**1888133.48**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	40.65	Cum	**584.64**	23768.00	2376.80		
	Coarse Aggregate	81.73	Cum	**944.26**	77169.86	7716.99		
	Total					10093.79		
	For 1 nos., Total Seigniorage charges					**10093.79**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 5.944							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	74.687	Cum	**195.20**	14578.89			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.61	Cum	**6381.70**	74072.00	3.76	5.22	10.45
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	43.24	Cum	**6914.20**	299002.69	17.84	18.60	37.19
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	38.88	Cum	**8151.40**	316901.36	22.04	15.16	30.71
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.85	MT	**73574.90**	282909.52			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	236.50	Sqm	**578.60**	136837.27			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	83.85	Cum	**149.30**	12519.02			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	38.980	Cum	**1075.00**	41903.88			
	Coarse Aggregates (100 Km lead)	78.349	Cum	**1398.00**	109532.57			
	Cement (30 km lead)	43.642	MT	**742.00**	32382.60			
	Steel (30 Km lead)	3.85	MT	**742.00**	2853.13			
	TOTAL (In Rs.)				**1818453.35**			
	TOTAL (In Rs.)				**1818453.35**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	38.98	Cum	**584.64**	22789.47	2278.95		
	Coarse Aggregate	78.35	Cum	**944.26**	73982.28	7398.23		
	Total					9677.18		
	For 1 nos., Total Seigniorage charges					**9677.18**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 6.750							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	101.189	Cum	**195.20**	19752.07			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.50	Cum	**6381.70**	73383.24	3.73	5.17	10.35
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.02	Cum	**6914.20**	283600.16	16.92	17.64	35.27
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	36.20	Cum	**8151.40**	295063.10	20.52	14.12	28.60
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.49	MT	**73574.90**	256845.81			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	227.51	Sqm	**578.60**	131635.76			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	77.31	Cum	**149.30**	11542.77			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	36.929	Cum	**1075.00**	39698.73			
	Coarse Aggregates (100 Km lead)	74.220	Cum	**1398.00**	103759.67			
	Cement (30 km lead)	41.169	MT	**742.00**	30547.69			
	Steel (30 Km lead)	3.49	MT	**742.00**	2590.28			
	TOTAL (In Rs.)				**1743025.56**			
	TOTAL (In Rs.)				**1743025.56**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	36.93	Cum	**584.64**	21590.20	2159.02		
	Coarse Aggregate	74.22	Cum	**944.26**	70083.05	7008.31		
	Total					9167.33		
	For 1 nos., Total Seigniorage charges					**9167.33**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 7.165							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	124.388	Cum	**195.20**	24280.62			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.50	Cum	**6381.70**	73383.24	3.73	5.17	10.35
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.02	Cum	**6914.20**	283600.16	16.92	17.64	35.27
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	36.20	Cum	**8151.40**	295063.10	20.52	14.12	28.60
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.49	MT	**73574.90**	256845.81			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	227.51	Sqm	**578.60**	131635.76			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	76.36	Cum	**149.30**	11400.09			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	36.929	Cum	**1075.00**	39698.73			
	Coarse Aggregates (100 Km lead)	74.220	Cum	**1398.00**	103759.67			
	Cement (30 km lead)	41.169	MT	**742.00**	30547.69			
	Steel (30 Km lead)	3.49	MT	**742.00**	2590.28			
	TOTAL (In Rs.)				**1747647.52**			
	TOTAL (In Rs.)				**1747647.52**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	36.93	Cum	**584.64**	21590.20	2159.02		
	Coarse Aggregate	74.22	Cum	**944.26**	70083.05	7008.31		
	Total					9167.33		
	For 1 nos., Total Seigniorage charges					**9167.33**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 7.405							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	83.754	Cum	**195.20**	16348.78			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.50	Cum	**6381.70**	73383.24	3.73	5.17	10.35
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.02	Cum	**6914.20**	283600.16	16.92	17.64	35.27
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	36.20	Cum	**8151.40**	295063.10	20.52	14.12	28.60
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.49	MT	**73574.90**	256845.81			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	227.51	Sqm	**578.60**	131635.76			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	65.69	Cum	**149.30**	9807.93			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	36.929	Cum	**1075.00**	39698.73			
	Coarse Aggregates (100 Km lead)	74.220	Cum	**1398.00**	103759.67			
	Cement (30 km lead)	41.169	MT	**742.00**	30547.69			
	Steel (30 Km lead)	3.49	MT	**742.00**	2590.28			
	TOTAL (In Rs.)				**1737887.43**			
	TOTAL (In Rs.)				**1737887.43**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	36.93	Cum	**584.64**	21590.20	2159.02		
	Coarse Aggregate	74.22	Cum	**944.26**	70083.05	7008.31		
	Total					9167.33		
	For 1 nos., Total Seigniorage charges					**9167.33**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 7.560							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	80.578	Cum	**195.20**	15728.82			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.49	Cum	**6381.70**	73324.85	3.72	5.17	10.34
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.04	Cum	**6914.20**	283791.76	16.93	17.65	35.30
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	36.20	Cum	**8151.40**	295063.10	20.52	14.12	28.60
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.49	MT	**73574.90**	256885.82			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	227.56	Sqm	**578.60**	131666.18			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	65.67	Cum	**149.30**	9804.80			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	36.937	Cum	**1075.00**	39707.11			
	Coarse Aggregates (100 Km lead)	74.236	Cum	**1398.00**	103781.47			
	Cement (30 km lead)	41.178	MT	**742.00**	30553.97			
	Steel (30 Km lead)	3.49	MT	**742.00**	2590.68			
	TOTAL (In Rs.)				**1737504.85**			
	TOTAL (In Rs.)				**1737504.85**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	36.94	Cum	**584.64**	21594.76	2159.48		
	Coarse Aggregate	74.24	Cum	**944.26**	70097.78	7009.78		
	Total					9169.25		
	For 1 nos., Total Seigniorage charges					**9169.25**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 8.030							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	94.514	Cum	**195.20**	18449.05			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.49	Cum	**6381.70**	73324.85	3.72	5.17	10.34
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.04	Cum	**6914.20**	283791.76	16.93	17.65	35.30
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	36.20	Cum	**8151.40**	295063.10	20.52	14.12	28.60
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.49	MT	**73574.90**	256885.82			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	227.56	Sqm	**578.60**	131666.18			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	67.39	Cum	**149.30**	10062.01			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	36.937	Cum	**1075.00**	39707.11			
	Coarse Aggregates (100 Km lead)	74.236	Cum	**1398.00**	103781.47			
	Cement (30 km lead)	41.178	MT	**742.00**	30553.97			
	Steel (30 Km lead)	3.49	MT	**742.00**	2590.68			
	TOTAL (In Rs.)				**1740482.29**			
	TOTAL (In Rs.)				**1740482.29**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	36.94	Cum	**584.64**	21594.76	2159.48		
	Coarse Aggregate	74.24	Cum	**944.26**	70097.78	7009.78		
	Total					9169.25		
	For 1 nos., Total Seigniorage charges					**9169.25**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 9.205							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	108.001	Cum	**195.20**	21081.76			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.33	Cum	**6381.70**	91451.50	4.64	6.45	12.90
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	54.59	Cum	**6914.20**	377422.85	22.52	23.47	46.94
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	44.73	Cum	**8151.40**	364604.13	25.36	17.44	35.34
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.24	MT	**73574.90**	312023.13			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	275.64	Sqm	**578.60**	159484.97			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	6.80	Sqm	**66.00**	448.80			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	17.00	RM	**36993.21**	628884.57			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	86.55	Cum	**149.30**	12922.22			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	47.365	Cum	**1075.00**	50917.58			
	Coarse Aggregates (100 Km lead)	95.178	Cum	**1398.00**	133058.38			
	Cement (30 km lead)	52.521	MT	**742.00**	38970.84			
	Steel (30 Km lead)	4.24	MT	**742.00**	3146.74			
	TOTAL (In Rs.)				**2208004.92**			
	TOTAL (In Rs.)				**2208004.92**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	47.37	Cum	**584.64**	27691.58	2769.16		
	Coarse Aggregate	95.18	Cum	**944.26**	89872.47	8987.25		
	Total					11756.41		
	For 1 nos., Total Seigniorage charges					**11756.41**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 9.632							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	83.018	Cum	**195.20**	16205.05			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.52	Cum	**6381.70**	73490.84	3.73	5.18	10.36
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.42	Cum	**6914.20**	286385.72	17.09	17.81	35.62
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	35.19	Cum	**8151.40**	286820.21	19.95	13.72	27.80
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.44	MT	**73574.90**	252952.63			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	224.96	Sqm	**578.60**	130162.25			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	68.60	Cum	**149.30**	10241.83			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	36.715	Cum	**1075.00**	39469.16			
	Coarse Aggregates (100 Km lead)	73.783	Cum	**1398.00**	103148.44			
	Cement (30 km lead)	40.768	MT	**742.00**	30249.62			
	Steel (30 Km lead)	3.44	MT	**742.00**	2551.02			
	TOTAL (In Rs.)				**1726283.05**			
	TOTAL (In Rs.)				**1726283.05**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	36.72	Cum	**584.64**	21465.35	2146.53		
	Coarse Aggregate	73.78	Cum	**944.26**	69670.20	6967.02		
	Total					9113.56		
	For 1 nos., Total Seigniorage charges					**9113.56**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 14.640							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.000	Sqm	**11.80**	1062.40			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	72.135	Cum	**195.20**	14080.66			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.94	Cum	**6381.70**	69824.50	3.55	4.92	9.85
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.26	Cum	**6914.20**	236911.27	14.13	14.73	29.47
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.81	Cum	**8151.40**	226721.96	15.77	10.85	21.97
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.90	MT	**73574.90**	213377.13			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	187.35	Sqm	**578.60**	108401.92			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	51.95	Cum	**149.30**	7755.41			

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	30.505	Cum	**1075.00**	32792.59			
	Coarse Aggregates (100 Km lead)	61.288	Cum	**1398.00**	85680.08			
	Cement (30 km lead)	33.450	MT	**742.00**	24819.57			
	Steel (30 Km lead)	2.90	MT	**742.00**	2151.90			
	TOTAL (In Rs.)				**1517241.32**			
	TOTAL (In Rs.)				**1517241.32**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	30.50	Cum	**584.64**	17834.29	1783.43		
	Coarse Aggregate	61.29	Cum	**944.26**	57871.44	5787.14		
	Total					7570.57		
	For 1 nos., Total Seigniorage charges					**7570.57**		

S.no.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 15.179							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	80.000	Cum	**195.20**	15616.00			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	3.64	Cum	**6381.70**	23229.39	1.18	1.64	3.28
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.39	Cum	**8151.40**	190637.63	13.26	9.12	18.48
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.19	MT	**73574.90**	87327.42			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	100.26	Sqm	**578.60**	58011.56			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	4.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	35.00	Cum	**149.30**	5225.50			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	10.759	Cum	**1075.00**	11565.89			
	Coarse Aggregates (100 Km lead)	21.752	Cum	**1398.00**	30409.03			
	Cement (30 km lead)	14.440	MT	**742.00**	10714.37			
	Steel (30 Km lead)	1.19	MT	**742.00**	880.69			
	TOTAL (In Rs.)				**928105.72**			
	TOTAL (In Rs.)				**928105.72**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	10.76	Cum	**584.64**	6290.12	629.01		
	Coarse Aggregate	21.75	Cum	**944.26**	20539.37	2053.94		
	Total					2682.95		
	For 1 nos., Total Seigniorage charges					**2682.95**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES FOR ANGRA BRANCH CANAL							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.914							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.40*	*2.29*	*4.05*	*44.35*	*Cum*
		1	*6.01*	*2.49*	*4.05*	*60.65*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.41*	*2.03*	*4.05*	*68.96*	*Cum*
	Left abutment	*2*	*2.40*	*2.49*	*4.05*	*48.30*	*Cum*
		1	*6.01*	*2.49*	*4.05*	*60.65*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.41*	*2.03*	*4.05*	*68.96*	*Cum*
	TOTAL					**351.88**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.10*	*1.99*	*0.20*	*1.66*	*Cum*
		1	*5.71*	*2.19*	*0.20*	*2.50*	*Cum*
	Left abutment	*2*	*2.10*	*1.99*	*0.20*	*1.66*	*Cum*
		1	*5.71*	*2.19*	*0.20*	*2.50*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.97**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.71*	*1.99*	*0.20*	*2.27*	*Cum*
		1	*5.71*	*1.79*	*0.80*	*8.18*	*Cum*
		1	*5.71*	*1.11*	*1.90*	*12.00*	*Cum*
		1	*5.71*	*0.82*	*0.95*	*4.45*	*Cum*
	Return wall	*2*	*2.00*	*1.79*	*0.20*	*1.43*	*Cum*
		2	*2.00*	*1.59*	*0.80*	*5.06*	*Cum*
		2	*2.00*	*0.79*	*2.37*	*7.50*	*Cum*
		2	*2.00*	*0.40*	*0.15*	*0.24*	*Cum*
	Left abutment	*1*	*5.71*	*1.99*	*0.20*	*2.27*	*Cum*
		1	*5.71*	*1.79*	*0.80*	*8.18*	*Cum*
		1	*5.71*	*1.11*	*1.90*	*12.00*	*Cum*
		1	*5.71*	*0.82*	*0.95*	*4.45*	*Cum*
	Return wall	*2*	*2.00*	*1.79*	*0.20*	*1.43*	*Cum*
		2	*2.00*	*1.59*	*0.80*	*5.06*	*Cum*
		2	*2.00*	*0.79*	*2.37*	*7.50*	*Cum*
		2	*2.00*	*0.40*	*0.15*	*0.24*	*Cum*
	DEDUCTION	*2*	*5.71*	*0.40*	*0.45*	*-2.06*	*Cum*
	TOTAL					**80.20**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	10.33	6.50	0.79	*52.68*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*17.33*	*5.50*	*0.08*	*7.15*	*Cum*
	Parapet	*2*	*17.33*	*0.44*	*0.18*	*2.70*	*Cum*
		2	*17.33*	*0.35*	*0.25*	*3.04*	*Cum*
		2	*17.33*	*0.22*	*0.55*	*4.17*	*Cum*
	TOTAL					**83.39**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*25*	*51*	*11.69*		*3.853*	*2296.1*	*Kg*
a2	*12*	*89*	*7.80*		*0.888*	*616.2*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*51*	*11.61*		*0.616*	*364.9*	*Kg*
a5	*10*	*83*	*7.70*		*0.616*	*394.0*	*Kg*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	APPROACH SLAB						
c1	*12*	*72*	*3.70*		*0.888*	*236.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*72*	*3.70*		*0.888*	*236.5*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*172*	*2.95*		*0.888*	*450.6*	*Kg*
x2	*16*	*172*	*1.69*		*1.578*	*459.8*	*Kg*
x3	*10*	*24*	*10.225*		*0.616*	*151.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*80.20*	*0.0025*	*0.201*	*7850.00*	*1574.00*	*Kg*
	Total Reinforcement Steel (in kg)					*7856.6*	*Kg*
	Total Weight in Metric Tonne					**7.86**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.71*		*0.20*	*2.29*	*Sqm*
		2		*1.99*	*0.20*	*0.80*	*Sqm*
		2	*5.71*		*0.80*	*9.14*	*Sqm*
		2		*1.79*	*0.80*	*2.86*	*Sqm*
		2	*5.71*		*1.90*	*21.71*	*Sqm*
		2		*1.11*	*1.90*	*4.20*	*Sqm*
		2	*5.71*		*0.95*	*10.86*	*Sqm*
		2		*0.82*	*0.95*	*1.56*	*Sqm*
	Return wall	*2*	*2.00*		*0.20*	*0.80*	*Sqm*
		2		*1.79*	*0.20*	*0.71*	*Sqm*
		2	*2.00*		*0.80*	*3.19*	*Sqm*
		2		*1.59*	*0.80*	*2.54*	*Sqm*
		2	*2.00*		*2.37*	*9.46*	*Sqm*
		2		*0.79*	*2.37*	*3.76*	*Sqm*
		2	*2.00*		*0.15*	*0.60*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.71*		*0.20*	*2.29*	*Sqm*
		2		*1.99*	*0.20*	*0.80*	*Sqm*
		2	*5.71*		*0.80*	*9.14*	*Sqm*
		2		*1.79*	*0.80*	*2.86*	*Sqm*
		2	*5.71*		*1.90*	*21.71*	*Sqm*
		2		*1.11*	*1.90*	*4.20*	*Sqm*
		2	*5.71*		*0.95*	*10.86*	*Sqm*
		2		*0.82*	*0.95*	*1.56*	*Sqm*
	Return wall	*2*	*2.00*		*0.20*	*0.80*	*Sqm*
		2		*1.79*	*0.20*	*0.71*	*Sqm*
		2	*2.00*		*0.80*	*3.19*	*Sqm*
		2		*1.59*	*0.80*	*2.54*	*Sqm*
		2	*2.00*		*2.37*	*9.46*	*Sqm*
		2		*0.79*	*2.37*	*3.76*	*Sqm*
		2	*2.00*		*0.15*	*0.60*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*10.33*		*0.79*	*16.21*	*Sqm*
		1	*10.33*	6.50		*67.11*	*Sqm*
		2		*6.50*	0.79	*10.21*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*17.33*		*0.18*	*12.13*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*17.33*		*0.25*	*17.33*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*17.33*		*0.55*	*38.12*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**368.92**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.71	1.86		*21.20*	*Cum*
	Right and left Return wall	4	2.40	3.33		*31.90*	*Cum*
	Extra slope	*1*	*8.409*	*2.025*	*4.05*	*68.96*	*Cum*
		1	*8.409*	*2.025*	*4.05*	*68.96*	*Cum*
	TOTAL					**191.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 2.925						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.68*	*2.85*	*1.20*	*18.30*	*Cum*
		1	*5.45*	*3.05*	*1.20*	*19.97*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.13*	*0.60*	*1.20*	*5.85*	*Cum*
	Left abutment	*2*	*2.68*	*3.05*	*1.20*	*19.61*	*Cum*
		1	*5.45*	*3.05*	*1.20*	*19.97*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.13*	*0.60*	*1.20*	*5.85*	*Cum*
	TOTAL					**89.56**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.38*	*2.55*	*0.20*	*2.42*	*Cum*
		1	*5.15*	*2.75*	*0.20*	*2.84*	*Cum*
	Left abutment	*2*	*2.38*	*2.55*	*0.20*	*2.42*	*Cum*
		1	*5.15*	*2.75*	*0.20*	*2.84*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**14.16**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.15*	*2.55*	*0.20*	*2.63*	*Cum*
		1	*5.15*	*2.35*	*0.80*	*9.70*	*Cum*
		1	*5.15*	*1.39*	*3.78*	*26.98*	*Cum*
		1	*5.15*	*0.82*	*0.95*	*4.01*	*Cum*
	Return wall	*2*	*2.28*	*2.35*	*0.20*	*2.14*	*Cum*
		2	*2.28*	*2.15*	*0.80*	*7.83*	*Cum*
		2	*2.28*	*1.07*	*4.50*	*22.01*	*Cum*
		2	*2.28*	*0.40*	*0.15*	*0.27*	*Cum*
	Left abutment	*1*	*5.15*	*2.55*	*0.20*	*2.63*	*Cum*
		1	*5.15*	*2.35*	*0.80*	*9.70*	*Cum*
		1	*5.15*	*1.39*	*3.78*	*26.98*	*Cum*
		1	*5.15*	*0.82*	*0.95*	*4.01*	*Cum*
	Return wall	*2*	*2.28*	*2.35*	*0.20*	*2.14*	*Cum*
		2	*2.28*	*2.15*	*0.80*	*7.83*	*Cum*
		2	*2.28*	*1.07*	*4.50*	*22.01*	*Cum*
		2	*2.28*	*0.40*	*0.15*	*0.27*	*Cum*
	DEDUCTION	*2*	*5.15*	*0.40*	*0.45*	*-1.85*	*Cum*
	TOTAL					**149.28**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	10.33	6.50	0.79	*52.68*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*17.33*	*5.50*	*0.08*	*7.15*	*Cum*
	Parapet	*2*	*17.33*	*0.44*	*0.18*	*2.70*	*Cum*
		2	*17.33*	*0.35*	*0.25*	*3.04*	*Cum*
		2	*17.33*	*0.22*	*0.55*	*4.17*	*Cum*
	TOTAL					**83.39**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*25*	*51*	*11.69*		*3.853*	*2296.1*	*Kg*
a2	*12*	*89*	*7.80*		*0.888*	*616.2*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*51*	*11.61*		*0.616*	*364.9*	*Kg*
a5	*10*	*83*	*7.70*		*0.616*	*394.0*	*Kg*
	APPROACH SLAB						
c1	*12*	*72*	*3.70*		*0.888*	*236.5*	*Kg*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*72*	*3.70*		*0.888*	*236.5*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*172*	*2.95*		*0.888*	*450.6*	*Kg*
x2	*16*	*172*	*1.69*		*1.578*	*459.8*	*Kg*
x3	*10*	*24*	*10.23*		*0.616*	*151.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*149.3*	*0.0025*	*0.373*	*7850.00*	*2929.56*	*Kg*
	Total Reinforcement Steel (in kg)					*9212.2*	*Kg*
	Total Weight in Metric Tonne					**9.21**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.15*		*0.20*	*2.06*	*Sqm*
		2		*2.55*	*0.20*	*1.02*	*Sqm*
		2	*5.15*		*0.80*	*8.24*	*Sqm*
		2		*2.35*	*0.80*	*3.76*	*Sqm*
		2	*5.15*		*3.78*	*38.92*	*Sqm*
		2		*1.39*	*3.78*	*10.48*	*Sqm*
		2	*5.15*		*0.95*	*9.79*	*Sqm*
		2		*0.82*	*0.95*	*1.56*	*Sqm*
	Return wall	*2*	*2.28*		*0.20*	*0.91*	*Sqm*
		2		*2.35*	*0.20*	*0.94*	*Sqm*
		2	*2.28*		*0.80*	*3.64*	*Sqm*
		2		*2.15*	*0.80*	*3.44*	*Sqm*
		2	*2.28*		*4.50*	*20.48*	*Sqm*
		2		*1.07*	*4.50*	*9.67*	*Sqm*
		2	*2.28*		*0.15*	*0.68*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.15*		*0.20*	*2.06*	*Sqm*
		2		*2.55*	*0.20*	*1.02*	*Sqm*
		2	*5.15*		*0.80*	*8.24*	*Sqm*
		2		*2.35*	*0.80*	*3.76*	*Sqm*
		2	*5.15*		*3.78*	*38.92*	*Sqm*
		2		*1.39*	*3.78*	*10.48*	*Sqm*
		2	*5.15*		*0.95*	*9.79*	*Sqm*
		2		*0.82*	*0.95*	*1.56*	*Sqm*
	Return wall	*2*	*2.28*		*0.20*	*0.91*	*Sqm*
		2		*2.35*	*0.20*	*0.94*	*Sqm*
		2	*2.28*		*0.80*	*3.64*	*Sqm*
		2		*2.15*	*0.80*	*3.44*	*Sqm*
		2	*2.28*		*4.50*	*20.48*	*Sqm*
		2		*1.07*	*4.50*	*9.67*	*Sqm*
		2	*2.28*		*0.15*	*0.68*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*10.33*		*0.79*	*16.21*	*Sqm*
		1	*10.33*	6.50		*67.11*	*Sqm*
		2		*6.50*	0.79	*10.21*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*17.33*		*0.18*	*12.13*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*17.33*		*0.25*	*17.33*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*17.33*		*0.55*	*38.12*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**451.16**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.15	4.26		*43.89*	*Cum*
	Right and left Return wall	4	2.68	7.31		*78.24*	*Cum*
	Below Approach Slab	*2*	*5.151*	*1.767*	*4.648*	*84.61*	*Cum*
	Extra slope	*1*	*8.128*	*0.6*	*1.2*	*5.85*	*Cum*
		1	*8.128*	*0.600*	*1.200*	*5.85*	*Cum*
	TOTAL					**218.44**	**Cum**
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 21.800						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.26*	*1.97*	*1.26*	*11.23*	*Cum*
		1	*6.33*	*2.22*	*1.26*	*17.72*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.59*	*0.63*	*1.26*	*6.83*	*Cum*
	Left abutment	*2*	*2.26*	*2.22*	*1.26*	*12.65*	*Cum*
		1	*6.33*	*2.22*	*1.26*	*17.72*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.59*	*0.63*	*1.26*	*6.83*	*Cum*
	TOTAL					**72.98**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.96*	*1.67*	*0.20*	*1.31*	*Cum*
		1	*6.03*	*1.92*	*0.20*	*2.32*	*Cum*
	Left abutment	*2*	*1.96*	*1.67*	*0.20*	*1.31*	*Cum*
		1	*6.03*	*1.92*	*0.20*	*2.32*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.89**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.03*	*1.72*	*0.20*	*2.07*	*Cum*
		1	*6.03*	*1.52*	*0.80*	*7.33*	*Cum*
		1	*6.03*	*0.97*	*1.00*	*5.85*	*Cum*
		1	*6.03*	*0.82*	*0.65*	*3.21*	*Cum*
	Return wall	*2*	*1.86*	*1.47*	*0.20*	*1.09*	*Cum*
		2	*1.86*	*1.27*	*0.80*	*3.78*	*Cum*
		2	*1.86*	*0.64*	*1.57*	*3.71*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.03*	*1.72*	*0.20*	*2.07*	*Cum*
		1	*6.03*	*1.52*	*0.80*	*7.33*	*Cum*
		1	*6.03*	*0.97*	*1.00*	*5.85*	*Cum*
		1	*6.03*	*0.82*	*0.65*	*3.21*	*Cum*
	Return wall	*2*	*1.86*	*1.47*	*0.20*	*1.09*	*Cum*
		2	*1.86*	*1.27*	*0.80*	*3.78*	*Cum*
		2	*1.86*	*0.64*	*1.57*	*3.71*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.03*	*0.40*	*0.45*	*-2.17*	*Cum*
	TOTAL					**52.39**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.60	6.50	0.64	*31.37*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.60*	*5.50*	*0.08*	*6.02*	*Cum*
	Parapet	*2*	*14.60*	*0.44*	*0.18*	*2.27*	*Cum*
		2	*14.60*	*0.35*	*0.25*	*2.56*	*Cum*
		2	*14.60*	*0.22*	*0.55*	*3.52*	*Cum*
	TOTAL					**59.39**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*64*	*8.66*		*2.466*	*1366.7*	*Kg*
a2	*12*	*54*	*7.50*		*0.888*	*359.5*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*46*	*8.58*		*0.616*	*243.3*	*Kg*
a5	*10*	*54*	*7.40*		*0.616*	*246.3*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*126*	*2.65*		*0.888*	*296.5*	*Kg*
x2	*16*	*126*	*1.55*		*1.578*	*307.2*	*Kg*
x3	*10*	*24*	*7.50*		*0.616*	*111.0*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.28*		*1.578*	*233.4*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*52.4*	*0.0025*	*0.131*	*7850.00*	*1028.09*	*Kg*
	Total Reinforcement Steel (in kg)					*5600.6*	*Kg*
	Total Weight in Metric Tonne					**5.60**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.03*		*0.20*	*2.41*	*Sqm*
		2		*1.72*	*0.20*	*0.69*	*Sqm*
		2	*6.03*		*0.80*	*9.65*	*Sqm*
		2		*1.52*	*0.80*	*2.43*	*Sqm*
		2	*6.03*		*1.00*	*12.06*	*Sqm*
		2		*0.97*	*1.00*	*1.94*	*Sqm*
		2	*6.03*		*0.65*	*7.84*	*Sqm*
		2		*0.82*	*0.65*	*1.07*	*Sqm*
	Return wall	*2*	*1.86*		*0.20*	*0.74*	*Sqm*
		2		*1.47*	*0.20*	*0.59*	*Sqm*
		2	*1.86*		*0.80*	*2.98*	*Sqm*
		2		*1.27*	*0.80*	*2.03*	*Sqm*
		2	*1.86*		*1.57*	*5.84*	*Sqm*
		2		*0.64*	*1.57*	*2.00*	*Sqm*
		2	*1.86*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.03*		*0.20*	*2.41*	*Sqm*
		2		*1.72*	*0.20*	*0.69*	*Sqm*
		2	*6.03*		*0.80*	*9.65*	*Sqm*
		2		*1.52*	*0.80*	*2.43*	*Sqm*
		2	*6.03*		*1.00*	*12.06*	*Sqm*
		2		*0.97*	*1.00*	*1.94*	*Sqm*
		2	*6.03*		*0.65*	*7.84*	*Sqm*
		2		*0.82*	*0.65*	*1.07*	*Sqm*
	Return wall	*2*	*1.86*		*0.20*	*0.74*	*Sqm*
		2		*1.47*	*0.20*	*0.59*	*Sqm*
		2	*1.86*		*0.80*	*2.98*	*Sqm*
		2		*1.27*	*0.80*	*2.03*	*Sqm*
		2	*1.86*		*1.57*	*5.84*	*Sqm*
		2		*0.64*	*1.57*	*2.00*	*Sqm*
		2	*1.86*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.60*		*0.64*	*9.65*	*Sqm*
		1	*7.60*	6.50		*49.40*	*Sqm*
		2		*6.50*	0.64	*8.26*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*14.60*		*0.18*	*10.22*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.60*		*0.25*	*14.60*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.60*		*0.55*	*32.12*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**288.76**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.03	1.14		*13.69*	*Cum*
	Right and left Return wall	4	2.26	2.18		*19.67*	*Cum*
	Below approch slab	2	6.03	2.27	2.60	*71.17*	*Cum*
	Extra slope	*1*	*8.59*	*0.63*	*1.26*	*6.83*	*Cum*
		1	*8.59*	*0.63*	*1.26*	*6.83*	*Cum*
	TOTAL					**118.18**	**Cum**
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 22.500						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.25*	*1.93*	*1.80*	*15.64*	*Cum*
		1	*6.37*	*2.21*	*1.80*	*25.33*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.63*	*0.90*	*1.80*	*14.01*	*Cum*
	Left abutment	*2*	*2.25*	*2.21*	*1.80*	*17.90*	*Cum*
		1	*6.37*	*2.21*	*1.80*	*25.33*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.63*	*0.90*	*1.80*	*14.01*	*Cum*
	TOTAL					**112.20**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.95*	*1.63*	*0.20*	*1.27*	*Cum*
		1	*6.07*	*1.91*	*0.20*	*2.31*	*Cum*
	Left abutment	*2*	*1.95*	*1.63*	*0.20*	*1.27*	*Cum*
		1	*6.07*	*1.91*	*0.20*	*2.31*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.81**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.07*	*1.71*	*0.20*	*2.07*	*Cum*
		1	*6.07*	*1.51*	*0.80*	*7.31*	*Cum*
		1	*6.07*	*0.96*	*0.95*	*5.55*	*Cum*
		1	*6.07*	*0.82*	*0.55*	*2.74*	*Cum*
	Return wall	*2*	*1.85*	*1.43*	*0.20*	*1.06*	*Cum*
		2	*1.85*	*1.23*	*0.80*	*3.63*	*Cum*
		2	*1.85*	*0.61*	*1.42*	*3.23*	*Cum*
		2	*1.85*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.07*	*1.71*	*0.20*	*2.07*	*Cum*
		1	*6.07*	*1.51*	*0.80*	*7.31*	*Cum*
		1	*6.07*	*0.96*	*0.95*	*5.55*	*Cum*
		1	*6.07*	*0.82*	*0.55*	*2.74*	*Cum*
	Return wall	*2*	*1.85*	*1.43*	*0.20*	*1.06*	*Cum*
		2	*1.85*	*1.23*	*0.80*	*3.63*	*Cum*
		2	*1.85*	*0.61*	*1.42*	*3.23*	*Cum*
		2	*1.85*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.07*	*0.40*	*0.45*	*-2.19*	*Cum*
	TOTAL					**49.44**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Slab	1	7.35	6.50	0.54	*25.56*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.35*	*5.50*	*0.08*	*5.92*	*Cum*
	Parapet	*2*	*14.35*	*0.44*	*0.18*	*2.23*	*Cum*
		2	*14.35*	*0.35*	*0.25*	*2.52*	*Cum*
		2	*14.35*	*0.22*	*0.55*	*3.46*	*Cum*
	TOTAL					**53.34**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*59*	*8.21*		*2.466*	*1194.4*	*Kg*
a2	*12*	*49*	*7.30*		*0.888*	*317.5*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*31*	*8.13*		*0.616*	*155.4*	*Kg*
a5	*10*	*37*	*7.20*		*0.616*	*164.2*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*122*	*2.55*		*0.888*	*276.4*	*Kg*
x2	*16*	*122*	*1.45*		*1.578*	*278.2*	*Kg*
x3	*10*	*24*	*7.25*		*0.616*	*107.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*49.4*	*0.0025*	*0.124*	*7850.00*	*970.35*	*Kg*
	Total Reinforcement Steel (in kg)					*5156.6*	*Kg*
	Total Weight in Metric Tonne					**5.16**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.07*		*0.20*	*2.43*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*6.07*		*0.80*	*9.72*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*6.07*		*0.95*	*11.54*	*Sqm*
		2		*0.96*	*0.95*	*1.83*	*Sqm*
		2	*6.07*		*0.55*	*6.68*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.85*		*0.20*	*0.74*	*Sqm*
		2		*1.43*	*0.20*	*0.57*	*Sqm*
		2	*1.85*		*0.80*	*2.96*	*Sqm*
		2		*1.23*	*0.80*	*1.96*	*Sqm*
		2	*1.85*		*1.42*	*5.26*	*Sqm*
		2		*0.61*	*1.42*	*1.74*	*Sqm*
		2	*1.85*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.07*		*0.20*	*2.43*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*6.07*		*0.80*	*9.72*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*6.07*		*0.95*	*11.54*	*Sqm*
		2		*0.96*	*0.95*	*1.83*	*Sqm*
		2	*6.07*		*0.55*	*6.68*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.85*		*0.20*	*0.74*	*Sqm*
		2		*1.43*	*0.20*	*0.57*	*Sqm*
		2	*1.85*		*0.80*	*2.96*	*Sqm*
		2		*1.23*	*0.80*	*1.96*	*Sqm*
		2	*1.85*		*1.42*	*5.26*	*Sqm*
		2		*0.61*	*1.42*	*1.74*	*Sqm*
		2	*1.85*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.35*		*0.54*	*7.86*	*Sqm*
		1	*7.35*	6.50		*47.78*	*Sqm*
		2		*6.50*	0.54	*6.96*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*14.35*		*0.18*	*10.05*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.35*		*0.25*	*14.35*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.35*		*0.55*	*31.57*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**277.41**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.07	1.03		*12.48*	*Cum*
	Right and left Return wall	4	2.25	1.98		*17.85*	*Cum*
	Below Approach Slab	2	6.07	*2.615*	*0.968*	*30.75*	*Cum*
	Extra slope	*1*	8.63	*0.901*	*1.802*	*14.01*	*Cum*
		1	8.63	*0.901*	*1.802*	*14.01*	*Cum*
	TOTAL					**89.09**	**Cum**
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 22.850						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.25*	*1.93*	*1.66*	*14.37*	*Cum*
		1	*6.37*	*2.21*	*1.66*	*23.27*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.63*	*0.83*	*1.66*	*11.83*	*Cum*
	Left abutment	*2*	*2.25*	*2.21*	*1.66*	*16.45*	*Cum*
		1	*6.37*	*2.21*	*1.66*	*23.27*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.63*	*0.83*	*1.66*	*11.83*	*Cum*
	TOTAL					**101.02**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.95*	*1.63*	*0.20*	*1.27*	*Cum*
		1	*6.07*	*1.91*	*0.20*	*2.31*	*Cum*
	Left abutment	*2*	*1.95*	*1.63*	*0.20*	*1.27*	*Cum*
		1	*6.07*	*1.91*	*0.20*	*2.31*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.81**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.07*	*1.71*	*0.20*	*2.07*	*Cum*
		1	*6.07*	*1.51*	*0.80*	*7.31*	*Cum*
		1	*6.07*	*0.96*	*0.95*	*5.55*	*Cum*
		1	*6.07*	*0.82*	*0.55*	*2.74*	*Cum*
	Return wall	*2*	*1.85*	*1.43*	*0.20*	*1.06*	*Cum*
		2	*1.85*	*1.23*	*0.80*	*3.63*	*Cum*
		2	*1.85*	*0.61*	*1.42*	*3.23*	*Cum*
		2	*1.85*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.07*	*1.71*	*0.20*	*2.07*	*Cum*
		1	*6.07*	*1.51*	*0.80*	*7.31*	*Cum*
		1	*6.07*	*0.96*	*0.95*	*5.55*	*Cum*
		1	*6.07*	*0.82*	*0.55*	*2.74*	*Cum*
	Return wall	*2*	*1.85*	*1.43*	*0.20*	*1.06*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.85*	*1.23*	*0.80*	*3.63*	*Cum*
		2	*1.85*	*0.61*	*1.42*	*3.23*	*Cum*
		2	*1.85*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.07*	*0.40*	*0.45*	*-2.19*	*Cum*
	TOTAL					**49.44**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.35	6.50	0.54	*25.56*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.35*	*5.50*	*0.08*	*5.92*	*Cum*
	Parapet	*2*	*14.35*	*0.44*	*0.18*	*2.23*	*Cum*
		2	*14.35*	*0.35*	*0.25*	*2.52*	*Cum*
		2	*14.35*	*0.22*	*0.55*	*3.46*	*Cum*
	TOTAL					**53.34**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*59*	*8.21*		*2.466*	*1194.4*	*Kg*
a2	*12*	*49*	*7.30*		*0.888*	*317.5*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*31*	*8.13*		*0.616*	*155.4*	*Kg*
a5	*10*	*37*	*7.20*		*0.616*	*164.2*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*122*	*2.55*		*0.888*	*276.4*	*Kg*
x2	*16*	*122*	*1.45*		*1.578*	*278.2*	*Kg*
x3	*10*	*24*	*7.25*		*0.616*	*107.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*49.4*	*0.0025*	*0.124*	*7850.00*	*970.35*	*Kg*
	Total Reinforcement Steel (in kg)					*5156.6*	*Kg*
	Total Weight in Metric Tonne					**5.16**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.07*		*0.20*	*2.43*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*6.07*		*0.80*	*9.72*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*6.07*		*0.95*	*11.54*	*Sqm*
		2		*0.96*	*0.95*	*1.83*	*Sqm*
		2	*6.07*		*0.55*	*6.68*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.85*		*0.20*	*0.74*	*Sqm*
		2		*1.43*	*0.20*	*0.57*	*Sqm*
		2	*1.85*		*0.80*	*2.96*	*Sqm*
		2		*1.23*	*0.80*	*1.96*	*Sqm*
		2	*1.85*		*1.42*	*5.26*	*Sqm*
		2		*0.61*	*1.42*	*1.74*	*Sqm*
		2	*1.85*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.07*		*0.20*	*2.43*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*6.07*		*0.80*	*9.72*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*6.07*		*0.95*	*11.54*	*Sqm*
		2		*0.96*	*0.95*	*1.83*	*Sqm*
		2	*6.07*		*0.55*	*6.68*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.85*		*0.20*	*0.74*	*Sqm*
		2		*1.43*	*0.20*	*0.57*	*Sqm*
		2	*1.85*		*0.80*	*2.96*	*Sqm*
		2		*1.23*	*0.80*	*1.96*	*Sqm*
		2	*1.85*		*1.42*	*5.26*	*Sqm*
		2		*0.61*	*1.42*	*1.74*	*Sqm*
		2	*1.85*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.35*		*0.54*	*7.86*	*Sqm*
		1	*7.35*	6.50		*47.78*	*Sqm*
		2		*6.50*	0.54	*6.96*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*14.35*		*0.18*	*10.05*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.35*		*0.25*	*14.35*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.35*		*0.55*	*31.57*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**277.41**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.07	1.03		*12.48*	*Cum*
	Right and left Return wall	4	2.25	1.98		*17.85*	*Cum*
	Below Approach slab	2	*6.074*	*2.615*	*1.114*	*35.39*	*Cum*
	Extra slope	*1*	*8.627*	*0.828*	*1.656*	*11.83*	*Cum*
		1	*8.6265*	*0.828*	*1.656*	*11.83*	*Cum*
	TOTAL					**89.37**	**Cum**
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 23.400						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.29*	*1.99*	*1.20*	*10.93*	*Cum*
		1	*6.31*	*2.27*	*1.20*	*17.20*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.59*	*1.99*	*1.20*	*20.55*	*Cum*
	Left abutment	*2*	*2.29*	*2.27*	*1.20*	*12.47*	*Cum*
		1	*6.31*	*2.27*	*1.20*	*17.20*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.59*	*0.60*	*1.20*	*6.19*	*Cum*
	TOTAL					**84.53**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.99*	*1.69*	*0.20*	*1.34*	*Cum*
		1	*6.01*	*1.97*	*0.20*	*2.37*	*Cum*
	Left abutment	*2*	*1.99*	*1.69*	*0.20*	*1.34*	*Cum*
		1	*6.01*	*1.97*	*0.20*	*2.37*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.07**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.01*	*1.77*	*0.20*	*2.13*	*Cum*
		1	*6.01*	*1.57*	*0.80*	*7.55*	*Cum*
		1	*6.01*	*1.00*	*1.17*	*7.01*	*Cum*
		1	*6.01*	*0.82*	*0.55*	*2.71*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Return wall	*2*	*1.89*	*1.49*	*0.20*	*1.13*	*Cum*
		2	*1.89*	*1.29*	*0.80*	*3.90*	*Cum*
		2	*1.89*	*0.65*	*1.64*	*4.00*	*Cum*
		2	*1.89*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*6.01*	*1.77*	*0.20*	*2.13*	*Cum*
		1	*6.01*	*1.57*	*0.80*	*7.55*	*Cum*
		1	*6.01*	*1.00*	*1.17*	*7.01*	*Cum*
		1	*6.01*	*0.82*	*0.55*	*2.71*	*Cum*
	Return wall	*2*	*1.89*	*1.49*	*0.20*	*1.13*	*Cum*
		2	*1.89*	*1.29*	*0.80*	*3.90*	*Cum*
		2	*1.89*	*0.65*	*1.64*	*4.00*	*Cum*
		2	*1.89*	*0.40*	*0.15*	*0.23*	*Cum*
	DEDUCTION	*2*	*6.01*	*0.40*	*0.45*	*-2.16*	*Cum*
	TOTAL					**55.16**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.35	6.50	0.54	*25.56*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.35*	*5.50*	*0.08*	*5.92*	*Cum*
	Parapet	*2*	*14.35*	*0.44*	*0.18*	*2.23*	*Cum*
		2	*14.35*	*0.35*	*0.25*	*2.52*	*Cum*
		2	*14.35*	*0.22*	*0.55*	*3.46*	*Cum*
	TOTAL					**53.34**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*59*	*8.21*		*2.466*	*1194.4*	*Kg*
a2	*12*	*49*	*7.30*		*0.888*	*317.5*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*31*	*8.13*		*0.616*	*155.4*	*Kg*
a5	*10*	*37*	*7.20*		*0.616*	*164.2*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*122*	*2.55*		*0.888*	*276.4*	*Kg*
x2	*16*	*122*	*1.45*		*1.578*	*278.2*	*Kg*
x3	*10*	*24*	*7.25*		*0.616*	*107.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*55.2*	*0.0025*	*0.138*	*7850.00*	*1082.59*	*Kg*
	Total Reinforcement Steel (in kg)					*5268.8*	*Kg*
	Total Weight in Metric Tonne					**5.27**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.01*		*0.20*	*2.40*	*Sqm*
		2		*1.77*	*0.20*	*0.71*	*Sqm*
		2	*6.01*		*0.80*	*9.61*	*Sqm*
		2		*1.57*	*0.80*	*2.52*	*Sqm*
		2	*6.01*		*1.17*	*14.08*	*Sqm*
		2		*1.00*	*1.17*	*2.33*	*Sqm*
		2	*6.01*		*0.55*	*6.61*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.89*		*0.20*	*0.75*	*Sqm*
		2		*1.49*	*0.20*	*0.60*	*Sqm*
		2	*1.89*		*0.80*	*3.02*	*Sqm*
		2		*1.29*	*0.80*	*2.07*	*Sqm*
		2	*1.89*		*1.64*	*6.19*	*Sqm*
		2		*0.65*	*1.64*	*2.12*	*Sqm*
		2	*1.89*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.01*		*0.20*	*2.40*	*Sqm*
		2		*1.77*	*0.20*	*0.71*	*Sqm*
		2	*6.01*		*0.80*	*9.61*	*Sqm*
		2		*1.57*	*0.80*	*2.52*	*Sqm*
		2	*6.01*		*1.17*	*14.08*	*Sqm*
		2		*1.00*	*1.17*	*2.33*	*Sqm*
		2	*6.01*		*0.55*	*6.61*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.89*		*0.20*	*0.75*	*Sqm*
		2		*1.49*	*0.20*	*0.60*	*Sqm*
		2	*1.89*		*0.80*	*3.02*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.29*	*0.80*	*2.07*	*Sqm*
		2	*1.89*		*1.64*	*6.19*	*Sqm*
		2		*0.65*	*1.64*	*2.12*	*Sqm*
		2	*1.89*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.35*		*0.54*	*7.86*	*Sqm*
		1	*7.35*	6.50		*47.78*	*Sqm*
		2		*6.50*	0.54	*6.96*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*14.35*		*0.18*	*10.05*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.35*		*0.25*	*14.35*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.35*		*0.55*	*31.57*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**286.41**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.01	1.06		*12.73*	*Cum*
	Right and left Return wall	4	2.29	2.28		*20.85*	*Cum*
	Below Approach Slab	2	6.31	*2.548*	*1.792*	*57.60*	*Cum*
	Extra slope	*1*	*8.593*	*1.993*	*1.2*	*20.55*	*Cum*
		1	*8.593*	*0.6*	*1.2*	*6.19*	*Cum*
	TOTAL					**117.92**	**Cum**
	DETAILS OF QUANTITIES FOR ASNI MR.						
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.155						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.47*	*2.31*	*2.28*	*25.94*	*Cum*
		1	*4.74*	*2.65*	*2.28*	*28.55*	*Cum*
	Extra for Slope (0.5:1)	*1*	*7.22*	*1.14*	*2.28*	*18.67*	*Cum*
	Left abutment	*2*	*2.47*	*2.65*	*2.28*	*29.76*	*Cum*
		1	*4.74*	*2.65*	*2.28*	*28.55*	*Cum*
	Extra for Slope (0.5:1)	*1*	*7.22*	*1.14*	*2.28*	*18.67*	*Cum*
	TOTAL					**150.14**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.17*	*2.01*	*0.20*	*1.74*	*Cum*
		1	*4.44*	*2.35*	*0.20*	*2.08*	*Cum*
	Left abutment	*2*	*2.17*	*2.01*	*0.20*	*1.74*	*Cum*
		1	*4.44*	*2.35*	*0.20*	*2.08*	*Cum*
	Levelling course	*2*	*5.25*	*3.50*	*0.08*	*2.94*	*Cum*
	TOTAL					**10.59**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*4.44*	*2.05*	*0.20*	*1.82*	*Cum*
		1	*4.44*	*1.80*	*0.80*	*6.38*	*Cum*
		1	*4.44*	*1.18*	*2.42*	*12.69*	*Cum*
		1	*4.44*	*0.82*	*0.50*	*1.82*	*Cum*
	Return wall	*2*	*2.07*	*1.81*	*0.20*	*1.50*	*Cum*
		2	*2.07*	*1.51*	*0.80*	*4.99*	*Cum*
		2	*2.07*	*0.80*	*2.69*	*8.94*	*Cum*
		2	*2.07*	*0.40*	*0.15*	*0.25*	*Cum*
	Left abutment	*1*	*4.44*	*2.05*	*0.20*	*1.82*	*Cum*
		1	*4.44*	*1.80*	*0.80*	*6.38*	*Cum*
		1	*4.44*	*1.18*	*2.42*	*12.69*	*Cum*
		1	*4.44*	*0.82*	*0.50*	*1.82*	*Cum*
	Return wall	*2*	*2.07*	*1.81*	*0.20*	*1.50*	*Cum*
		2	*2.07*	*1.51*	*0.80*	*4.99*	*Cum*
		2	*2.07*	*0.80*	*2.69*	*8.94*	*Cum*
		2	*2.07*	*0.40*	*0.15*	*0.25*	*Cum*
	DEDUCTION	*2*	*4.44*	*0.40*	*0.45*	*-1.60*	*Cum*
	TOTAL					**75.18**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.22	5.25	0.39	*4.55*	*Cum*
	Approch Slab	*2*	*3.50*	*5.25*	*0.30*	*11.03*	*Cum*
	Wearing coat	*1*	*9.22*	*4.25*	*0.08*	*2.94*	*Cum*
	Parapet	*2*	*9.22*	*0.44*	*0.18*	*1.43*	*Cum*
		2	*9.22*	*0.35*	*0.25*	*1.62*	*Cum*
		2	*9.22*	*0.22*	*0.55*	*2.22*	*Cum*
	TOTAL					**23.79**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*29*	*2.68*		*1.578*	*122.7*	*Kg*
a2	*10*	*11*	*5.65*		*0.616*	*38.3*	*Kg*
a3	*10*	*2*	*5.15*		*0.616*	*6.3*	*Kg*
a4	*10*	*18*	*2.60*		*0.616*	*28.9*	*Kg*
a5	*10*	*8*	*5.55*		*0.616*	*27.4*	*Kg*
	APPROACH SLAB						
c1	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c2	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
c3	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*36*	*2.32*		*0.888*	*74.2*	*Kg*
x2	*16*	*36*	*1.30*		*1.578*	*73.6*	*Kg*
x3	*10*	*24*	*2.12*		*0.616*	*31.4*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*75.2*	*0.0025*	*0.188*	*7850.00*	*1475.36*	*Kg*
	Total Reinforcement Steel (in kg)					*3355.8*	*Kg*
	Total Weight in Metric Tonne					**3.36**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*4.44*		*0.20*	*1.78*	*Sqm*
		2		*2.05*	*0.20*	*0.82*	*Sqm*
		2	*4.44*		*0.80*	*7.11*	*Sqm*
		2		*1.80*	*0.80*	*2.87*	*Sqm*
		2	*4.44*		*2.42*	*21.46*	*Sqm*
		2		*1.18*	*2.42*	*5.71*	*Sqm*
		2	*4.44*		*0.50*	*4.44*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*2.07*		*0.20*	*0.83*	*Sqm*
		2		*1.81*	*0.20*	*0.72*	*Sqm*
		2	*2.07*		*0.80*	*3.32*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*2.07*		*2.69*	*11.13*	*Sqm*
		2		*0.80*	*2.69*	*4.31*	*Sqm*
		2	*2.07*		*0.15*	*0.62*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*4.44*		*0.20*	*1.78*	*Sqm*
		2		*2.05*	*0.20*	*0.82*	*Sqm*
		2	*4.44*		*0.80*	*7.11*	*Sqm*
		2		*1.80*	*0.80*	*2.87*	*Sqm*
		2	*4.44*		*2.42*	*21.46*	*Sqm*
		2		*1.18*	*2.42*	*5.71*	*Sqm*
		2	*4.44*		*0.50*	*4.44*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*2.07*		*0.20*	*0.83*	*Sqm*
		2		*1.81*	*0.20*	*0.72*	*Sqm*
		2	*2.07*		*0.80*	*3.32*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*2.07*		*2.69*	*11.13*	*Sqm*
		2		*0.80*	*2.69*	*4.31*	*Sqm*
		2	*2.07*		*0.15*	*0.62*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.22*		*0.39*	*1.73*	*Sqm*
		1	*2.22*	5.25		*11.66*	*Sqm*
		2		*5.25*	0.39	*4.10*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.25		*36.75*	*Sqm*
		4		*5.25*	0.30	*6.30*	*Sqm*
	Parapet	*4*	*9.22*		*0.18*	*6.45*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.22*		*0.25*	*9.22*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.22*		*0.55*	*20.28*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**238.80**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	4				**4.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*5.25*	*0.40*		*4.20*	*Sqm*
	TOTAL					**4.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.25*			***10.50***	***RM***
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				**2.00**	**Nos**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	4.44	0.66		*5.82*	*Cum*
	Right and left Return wall	4	2.47	1.21		*11.97*	*Cum*
	Extra slope	*1*	*7.217*	*1.1375*	*2.275*	*18.67*	*Cum*
		1	*7.2165*	*1.1375*	*2.275*	*18.67*	*Cum*
	TOTAL					**55.14**	**Cum**
	DETAILS OF QUANTITIES FOR KAILASHPUR SUB DY.						
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.600						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.20*	*1.78*	*2.28*	*17.78*	*Cum*
		1	*6.52*	*2.10*	*2.28*	*31.17*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.72*	*1.14*	*2.28*	*22.58*	*Cum*
	Left abutment	*2*	*2.20*	*2.10*	*2.28*	*21.02*	*Cum*
		1	*6.52*	*2.10*	*2.28*	*31.17*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.72*	*1.14*	*2.28*	*22.58*	*Cum*
	TOTAL					**146.29**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.90*	*1.48*	*0.20*	*1.12*	*Cum*
		1	*6.22*	*1.80*	*0.20*	*2.24*	*Cum*
	Left abutment	*2*	*1.90*	*1.48*	*0.20*	*1.12*	*Cum*
		1	*6.22*	*1.80*	*0.20*	*2.24*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.36**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.22*	*1.60*	*0.20*	*1.99*	*Cum*
		1	*6.22*	*1.40*	*0.80*	*6.97*	*Cum*
		1	*6.22*	*0.91*	*0.60*	*3.40*	*Cum*
		1	*6.22*	*0.82*	*0.55*	*2.81*	*Cum*
	Return wall	*2*	*1.80*	*1.28*	*0.20*	*0.92*	*Cum*
		2	*1.80*	*1.08*	*0.80*	*3.10*	*Cum*
		2	*1.80*	*0.54*	*0.92*	*1.78*	*Cum*
		2	*1.80*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.22*	*1.60*	*0.20*	*1.99*	*Cum*
		1	*6.22*	*1.40*	*0.80*	*6.97*	*Cum*
		1	*6.22*	*0.91*	*0.60*	*3.40*	*Cum*
		1	*6.22*	*0.82*	*0.55*	*2.81*	*Cum*
	Return wall	*2*	*1.80*	*1.28*	*0.20*	*0.92*	*Cum*
		2	*1.80*	*1.08*	*0.80*	*3.10*	*Cum*
		2	*1.80*	*0.54*	*0.92*	*1.78*	*Cum*
		2	*1.80*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.22*	*0.40*	*0.45*	*-2.24*	*Cum*
	TOTAL					**40.13**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	3.70	6.50	0.39	*9.26*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*10.70*	*5.50*	*0.08*	*4.41*	*Cum*
	Parapet	*2*	*10.70*	*0.44*	*0.18*	*1.66*	*Cum*
		2	*10.70*	*0.35*	*0.25*	*1.88*	*Cum*
		2	*10.70*	*0.22*	*0.55*	*2.58*	*Cum*
	TOTAL					**33.44**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*46*	*4.26*		*1.578*	*309.3*	*Kg*
a2	*10*	*19*	*6.90*		*0.616*	*80.8*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.18*		*0.616*	*67.0*	*Kg*
a5	*10*	*15*	*6.80*		*0.616*	*62.9*	*Kg*
	APPROACH SLAB						
c1	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c2	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
c3	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*62*	*2.40*		*0.888*	*132.2*	*Kg*
x2	*16*	*62*	*1.30*		*1.578*	*126.7*	*Kg*
x3	*10*	*24*	*3.60*		*0.616*	*53.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.35*		*0.888*	*242.2*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*40.1*	*0.0025*	*0.100*	*7850.00*	*787.47*	*Kg*
	Total Reinforcement Steel (in kg)					*3108.4*	*Kg*
	Total Weight in Metric Tonne					**3.11**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.22*		*0.20*	*2.49*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.60	0.20	0.64	Sqm
		2	6.22		0.80	9.96	Sqm
		2		1.40	0.80	2.24	Sqm
		2	6.22		0.60	7.47	Sqm
		2		0.91	0.60	1.09	Sqm
		2	6.22		0.55	6.85	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.80		0.20	0.72	Sqm
		2		1.28	0.20	0.51	Sqm
		2	1.80		0.80	2.88	Sqm
		2		1.08	0.80	1.72	Sqm
		2	1.80		0.92	3.31	Sqm
		2		0.54	0.92	0.99	Sqm
		2	1.80		0.15	0.54	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.22		0.20	2.49	Sqm
		2		1.60	0.20	0.64	Sqm
		2	6.22		0.80	9.96	Sqm
		2		1.40	0.80	2.24	Sqm
		2	6.22		0.60	7.47	Sqm
		2		0.91	0.60	1.09	Sqm
		2	6.22		0.55	6.85	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.80		0.20	0.72	Sqm
		2		1.28	0.20	0.51	Sqm
		2	1.80		0.80	2.88	Sqm
		2		1.08	0.80	1.72	Sqm
		2	1.80		0.92	3.31	Sqm
		2		0.54	0.92	0.99	Sqm
		2	1.80		0.15	0.54	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	3.70		0.39	2.85	Sqm
		1	3.70	6.50		24.05	Sqm
		2		6.50	0.39	5.01	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	6.50		45.50	Sqm
		4		6.50	0.30	7.80	Sqm
	Parapet	4	10.70		0.18	7.49	Sqm
		4		0.44	0.18	0.31	Sqm
		4	10.70		0.25	10.70	Sqm
		4		0.35	0.25	0.35	Sqm
		4	10.70		0.55	23.54	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					**217.14**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	6.50	0.40		5.20	Sqm
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	2	6.50			13.00	RM
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.22	0.71		8.78	Cum
	Right and left Return wall	4	2.20	1.41		12.41	Cum
	Extra slope	1	8.724	1.1375	2.275	22.58	Cum
		1	8.724	1.1375	2.275	22.58	Cum
	TOTAL					**66.34**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 1.690						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.26*	*1.90*	*1.20*	*10.31*	*Cum*
		1	*6.40*	*2.22*	*1.20*	*17.08*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.66*	*0.60*	*1.20*	*6.24*	*Cum*
	Left abutment	*2*	*2.26*	*2.22*	*1.20*	*12.07*	*Cum*
		1	*6.40*	*2.22*	*1.20*	*17.08*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.66*	*0.60*	*1.20*	*6.24*	*Cum*
	TOTAL					**69.00**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.96*	*1.60*	*0.20*	*1.25*	*Cum*
		1	*6.10*	*1.92*	*0.20*	*2.35*	*Cum*
	Left abutment	*2*	*1.96*	*1.60*	*0.20*	*1.25*	*Cum*
		1	*6.10*	*1.92*	*0.20*	*2.35*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.84**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.10*	*1.62*	*0.20*	*1.98*	*Cum*
		1	*6.10*	*1.47*	*0.80*	*7.19*	*Cum*
		1	*6.10*	*0.97*	*1.01*	*5.99*	*Cum*
		1	*6.10*	*0.82*	*0.55*	*2.75*	*Cum*
	Return wall	*2*	*1.86*	*1.40*	*0.20*	*1.04*	*Cum*
		2	*1.86*	*1.20*	*0.80*	*3.57*	*Cum*
		2	*1.86*	*0.60*	*1.33*	*2.97*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.10*	*1.62*	*0.20*	*1.98*	*Cum*
		1	*6.10*	*1.47*	*0.80*	*7.19*	*Cum*
		1	*6.10*	*0.97*	*1.01*	*5.99*	*Cum*
		1	*6.10*	*0.82*	*0.55*	*2.75*	*Cum*
	Return wall	*2*	*1.86*	*1.40*	*0.20*	*1.04*	*Cum*
		2	*1.86*	*1.20*	*0.80*	*3.57*	*Cum*
		2	*1.86*	*0.60*	*1.33*	*2.97*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.10*	*0.40*	*0.45*	*-2.20*	*Cum*
	TOTAL					**49.23**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	3.70	6.50	0.39	*9.26*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*10.70*	*5.50*	*0.08*	*4.41*	*Cum*
	Parapet	*2*	*10.70*	*0.44*	*0.18*	*1.66*	*Cum*
		2	*10.70*	*0.35*	*0.25*	*1.88*	*Cum*
		2	*10.70*	*0.22*	*0.55*	*2.58*	*Cum*
	TOTAL					**33.44**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*46*	*4.26*		*1.578*	*309.3*	*Kg*
a2	*10*	*19*	*6.90*		*0.616*	*80.8*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.18*		*0.616*	*67.0*	*Kg*
a5	*10*	*15*	*6.80*		*0.616*	*62.9*	*Kg*
	APPROACH SLAB						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
c1	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c2	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
c3	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*62*	*2.40*		*0.888*	*132.2*	*Kg*
x2	*16*	*62*	*1.30*		*1.578*	*126.7*	*Kg*
x3	*10*	*24*	*3.60*		*0.616*	*53.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.35*		*0.888*	*242.2*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*49.2*	*0.0025*	*0.123*	*7850.00*	*966.11*	*Kg*
	Total Reinforcement Steel (in kg)					*3287.1*	*Kg*
	Total Weight in Metric Tonne					**3.29**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.10*		*0.20*	*2.44*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*6.10*		*0.80*	*9.76*	*Sqm*
		2		*1.47*	*0.80*	*2.36*	*Sqm*
		2	*6.10*		*1.01*	*12.32*	*Sqm*
		2		*0.97*	*1.01*	*1.96*	*Sqm*
		2	*6.10*		*0.55*	*6.71*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.86*		*0.20*	*0.74*	*Sqm*
		2		*1.40*	*0.20*	*0.56*	*Sqm*
		2	*1.86*		*0.80*	*2.98*	*Sqm*
		2		*1.20*	*0.80*	*1.92*	*Sqm*
		2	*1.86*		*1.33*	*4.95*	*Sqm*
		2		*0.60*	*1.33*	*1.59*	*Sqm*
		2	*1.86*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.10*		*0.20*	*2.44*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*6.10*		*0.80*	*9.76*	*Sqm*
		2		*1.47*	*0.80*	*2.36*	*Sqm*
		2	*6.10*		*1.01*	*12.32*	*Sqm*
		2		*0.97*	*1.01*	*1.96*	*Sqm*
		2	*6.10*		*0.55*	*6.71*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.86*		*0.20*	*0.74*	*Sqm*
		2		*1.40*	*0.20*	*0.56*	*Sqm*
		2	*1.86*		*0.80*	*2.98*	*Sqm*
		2		*1.20*	*0.80*	*1.92*	*Sqm*
		2	*1.86*		*1.33*	*4.95*	*Sqm*
		2		*0.60*	*1.33*	*1.59*	*Sqm*
		2	*1.86*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*3.70*		*0.39*	*2.85*	*Sqm*
		1	*3.70*	6.50		*24.05*	*Sqm*
		2		*6.50*	0.39	*5.01*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*10.70*		*0.18*	*7.49*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*10.70*		*0.25*	*10.70*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*10.70*		*0.55*	*23.54*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**233.34**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.10	1.18		*14.40*	*Cum*
	Right and left Return wall	4	2.26	1.88		*17.01*	*Cum*
	Below Approach Slab	*1*	*6.10*	*2.597*	*1.48*	*23.45*	*Cum*
	Extra slope	*1*	*8.663*	*0.6*	*1.2*	*6.24*	*Cum*
		1	*8.6625*	*0.6*	*1.2*	*6.24*	*Cum*
	TOTAL					**67.33**	**Cum**
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 6.85						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.20*	*1.76*	*1.20*	*9.26*	*Cum*
		1	*5.29*	*2.10*	*1.20*	*13.31*	*Cum*
	Extra for Slope (0.5:1)	*1*	*7.49*	*0.60*	*1.20*	*5.39*	*Cum*
	Left abutment	*2*	*2.20*	*2.10*	*1.20*	*11.05*	*Cum*
		1	*5.29*	*2.10*	*1.20*	*13.31*	*Cum*
	Extra for Slope (0.5:1)	*1*	*7.49*	*0.60*	*1.20*	*5.39*	*Cum*
	TOTAL					**57.72**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.90*	*1.46*	*0.20*	*1.11*	*Cum*
		1	*4.99*	*1.80*	*0.20*	*1.79*	*Cum*
	Left abutment	*2*	*1.90*	*1.46*	*0.20*	*1.11*	*Cum*
		1	*4.99*	*1.80*	*0.20*	*1.79*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**9.44**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*4.99*	*1.60*	*0.20*	*1.59*	*Cum*
		1	*4.99*	*1.40*	*0.80*	*5.57*	*Cum*
		1	*4.99*	*0.91*	*0.58*	*2.64*	*Cum*
		1	*4.99*	*0.82*	*0.50*	*2.05*	*Cum*
	Return wall	*2*	*1.80*	*1.26*	*0.20*	*0.90*	*Cum*
		2	*1.80*	*1.06*	*0.80*	*3.04*	*Cum*
		2	*1.80*	*0.53*	*0.85*	*1.62*	*Cum*
		2	*1.80*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*4.99*	*1.60*	*0.20*	*1.59*	*Cum*
		1	*4.99*	*1.40*	*0.80*	*5.57*	*Cum*
		1	*4.99*	*0.91*	*0.58*	*2.64*	*Cum*
		1	*4.99*	*0.82*	*0.50*	*2.05*	*Cum*
	Return wall	*2*	*1.80*	*1.26*	*0.20*	*0.90*	*Cum*
		2	*1.80*	*1.06*	*0.80*	*3.04*	*Cum*
		2	*1.80*	*0.53*	*0.85*	*1.62*	*Cum*
		2	*1.80*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*4.99*	*0.40*	*0.45*	*-1.80*	*Cum*
	TOTAL					**33.45**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.10	6.50	0.33	*4.46*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*9.10*	*5.50*	*0.08*	*3.75*	*Cum*
	Parapet	*2*	*9.10*	*0.44*	*0.18*	*1.42*	*Cum*
		2	*9.10*	*0.35*	*0.25*	*1.60*	*Cum*
		2	*9.10*	*0.22*	*0.55*	*2.19*	*Cum*
	TOTAL					**27.07**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*29*	*2.56*		*1.578*	*117.2*	*Kg*
a2	*10*	*11*	*5.65*		*0.616*	*38.3*	*Kg*
a3	*10*	*2*	*5.15*		*0.616*	*6.3*	*Kg*
a4	*10*	*18*	*2.48*		*0.616*	*27.5*	*Kg*
a5	*10*	*8*	*5.55*		*0.616*	*27.4*	*Kg*
	APPROACH SLAB						
c1	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c2	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
c3	*12*	*70*	*3.70*		*0.888*	*229.9*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*36*	*2.32*		*0.888*	*74.2*	*Kg*
x2	*16*	*36*	*1.27*		*1.578*	*72.4*	*Kg*
x3	*10*	*24*	*2.00*		*0.616*	*29.6*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*33.4*	*0.0025*	*0.084*	*7850.00*	*656.42*	*Kg*
	Total Reinforcement Steel (in kg)					*2527.0*	*Kg*
	Total Weight in Metric Tonne					**2.53**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*4.99*		*0.20*	*2.00*	*Sqm*
		2		*1.60*	*0.20*	*0.64*	*Sqm*
		2	*4.99*		*0.80*	*7.99*	*Sqm*
		2		*1.40*	*0.80*	*2.23*	*Sqm*
		2	*4.99*		*0.58*	*5.81*	*Sqm*
		2		*0.91*	*0.58*	*1.06*	*Sqm*
		2	*4.99*		*0.50*	*4.99*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.80*		*0.20*	*0.72*	*Sqm*
		2		*1.26*	*0.20*	*0.50*	*Sqm*
		2	*1.80*		*0.80*	*2.88*	*Sqm*
		2		*1.06*	*0.80*	*1.69*	*Sqm*
		2	*1.80*		*0.85*	*3.06*	*Sqm*
		2		*0.53*	*0.85*	*0.90*	*Sqm*
		2	*1.80*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*4.99*		*0.20*	*2.00*	*Sqm*
		2		*1.60*	*0.20*	*0.64*	*Sqm*
		2	*4.99*		*0.80*	*7.99*	*Sqm*
		2		*1.40*	*0.80*	*2.23*	*Sqm*
		2	*4.99*		*0.58*	*5.81*	*Sqm*
		2		*0.91*	*0.58*	*1.06*	*Sqm*
		2	*4.99*		*0.50*	*4.99*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.80*		*0.20*	*0.72*	*Sqm*
		2		*1.26*	*0.20*	*0.50*	*Sqm*
		2	*1.80*		*0.80*	*2.88*	*Sqm*
		2		*1.06*	*0.80*	*1.69*	*Sqm*
		2	*1.80*		*0.85*	*3.06*	*Sqm*
		2		*0.53*	*0.85*	*0.90*	*Sqm*
		2	*1.80*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.10*		*0.33*	*1.37*	*Sqm*
		1	*2.10*	6.50		*13.65*	*Sqm*
		2		*6.50*	0.33	*4.24*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*9.10*		*0.18*	*6.37*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.10*		*0.25*	*9.10*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.10*		*0.55*	*20.02*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**185.30**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	4.99	0.81		*8.09*	*Cum*
	Right and left Return wall	4	2.20	1.31		*11.51*	*Cum*
	Below Approach Slab	*2*	*4.994*	*2.275*	*1.00*	*22.75*	*Cum*
	Extra slope	*1*	*7.492*	*0.6*	*1.2*	*5.39*	*Cum*
		1	*7.4915*	*0.6*	*1.2*	*5.39*	*Cum*
	TOTAL					**53.14**	**Cum**
	DETAILS OF QUANTITIES FOR BUDHAUL SUB DY.						
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.500						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*80.00*			**80.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.23*	*1.87*	*1.36*	*11.30*	*Cum*
		1	*6.43*	*2.16*	*1.36*	*18.87*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.66*	*1.87*	*1.36*	*21.95*	*Cum*
	Left abutment	*2*	*2.23*	*2.16*	*1.36*	*13.08*	*Cum*
		1	*6.43*	*2.16*	*1.36*	*18.87*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.66*	*0.68*	*1.36*	*7.99*	*Cum*
	TOTAL					**92.07**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.93*	*1.57*	*0.20*	*1.21*	*Cum*
		1	*6.13*	*1.86*	*0.20*	*2.28*	*Cum*
	Left abutment	*2*	*1.93*	*1.57*	*0.20*	*1.21*	*Cum*
		1	*6.13*	*1.86*	*0.20*	*2.28*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.62**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.13*	*1.66*	*0.20*	*2.04*	*Cum*
		1	*6.13*	*1.46*	*0.80*	*7.16*	*Cum*
		1	*6.13*	*0.94*	*0.80*	*4.61*	*Cum*
		1	*6.13*	*0.82*	*0.60*	*3.02*	*Cum*
	Return wall	*2*	*1.83*	*1.37*	*0.20*	*1.00*	*Cum*
		2	*1.83*	*1.17*	*0.80*	*3.41*	*Cum*
		2	*1.83*	*0.58*	*1.22*	*2.60*	*Cum*
		2	*1.83*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.13*	*1.66*	*0.20*	*2.04*	*Cum*
		1	*6.13*	*1.46*	*0.80*	*7.16*	*Cum*
		1	*6.13*	*0.94*	*0.80*	*4.61*	*Cum*
		1	*6.13*	*0.82*	*0.60*	*3.02*	*Cum*
	Return wall	*2*	*1.83*	*1.37*	*0.20*	*1.00*	*Cum*
		2	*1.83*	*1.17*	*0.80*	*3.41*	*Cum*
		2	*1.83*	*0.58*	*1.22*	*2.60*	*Cum*
		2	*1.83*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.13*	*0.40*	*0.45*	*-2.21*	*Cum*
	TOTAL					**45.93**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Slab	1	4.53	6.50	0.44	12.81	Cum
	Approch Slab	2	3.50	6.50	0.30	13.65	Cum
	Wearing coat	1	11.53	5.50	0.08	4.76	Cum
	Parapet	2	11.53	0.44	0.18	1.79	Cum
		2	11.53	0.35	0.25	2.02	Cum
		2	11.53	0.22	0.55	2.78	Cum
	TOTAL					**37.81**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	16	41	5.19		1.578	335.8	Kg
a2	10	36	7.00		0.616	155.3	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	29	5.11		0.616	91.4	Kg
a5	10	20	6.90		0.616	85.1	Kg
	APPROACH SLAB						
c1	12	86	3.70		0.888	282.5	Kg
c2	12	46	6.70		0.888	273.6	Kg
c3	12	86	3.70		0.888	282.5	Kg
c4	12	46	6.70		0.888	273.6	Kg
	CRASH BARRIER FOR MAIN SLAB						
x1	12	76	2.40		0.888	162.1	Kg
x2	16	76	1.25		1.578	149.3	Kg
x3	10	24	4.43		0.616	65.5	Kg
	CRASH BARRIER FOR APPROACH SLAB						
y1	12	116	2.32		0.888	239.0	Kg
y2	16	116	1.27		1.578	233.2	Kg
y3	10	48	3.40		0.616	100.6	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	45.9	0.0025	0.115	7850.00	901.35	Kg
	Total Reinforcement Steel (in kg)					3638.7	Kg
	Total Weight in Metric Tonne					**3.64**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	6.13		0.20	2.45	Sqm
		2		1.66	0.20	0.66	Sqm
		2	6.13		0.80	9.81	Sqm
		2		1.46	0.80	2.34	Sqm
		2	6.13		0.80	9.81	Sqm
		2		0.94	0.80	1.50	Sqm
		2	6.13		0.60	7.36	Sqm
		2		0.82	0.60	0.98	Sqm
	Return wall	2	1.83		0.20	0.73	Sqm
		2		1.37	0.20	0.55	Sqm
		2	1.83		0.80	2.93	Sqm
		2		1.17	0.80	1.87	Sqm
		2	1.83		1.22	4.47	Sqm
		2		0.58	1.22	1.42	Sqm
		2	1.83		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.13		0.20	2.45	Sqm
		2		1.66	0.20	0.66	Sqm
		2	6.13		0.80	9.81	Sqm
		2		1.46	0.80	2.34	Sqm
		2	6.13		0.80	9.81	Sqm
		2		0.94	0.80	1.50	Sqm
		2	6.13		0.60	7.36	Sqm
		2		0.82	0.60	0.98	Sqm
	Return wall	2	1.83		0.20	0.73	Sqm
		2		1.37	0.20	0.55	Sqm
		2	1.83		0.80	2.93	Sqm
		2		1.17	0.80	1.87	Sqm
		2	1.83		1.22	4.47	Sqm
		2		0.58	1.22	1.42	Sqm
		2	1.83		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	4.53		0.44	3.94	Sqm
		1	4.53	6.50		29.45	Sqm
		2		6.50	0.44	5.66	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	6.50		45.50	Sqm
		4		6.50	0.30	7.80	Sqm
	Parapet	4	11.53		0.18	8.07	Sqm
		4		0.44	0.18	0.31	Sqm
		4	11.53		0.25	11.53	Sqm
		4		0.35	0.25	0.35	Sqm
		4	11.53		0.55	25.37	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					**237.77**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.13	0.89		*10.92*	*Cum*
	Right and left Return wall	4	2.23	1.74		*15.48*	*Cum*
	Below Approach Slab	*2*	*6.134*	*2.66*	*1.162*	*37.92*	*Cum*
	Extra slope	*1*	*8.664*	*1.866*	*1.358*	*21.95*	*Cum*
		1	*8.664*	*0.679*	*1.358*	*7.99*	*Cum*
	TOTAL					**94.26**	**Cum**
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 6.370						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.22*	*1.82*	*1.73*	*13.96*	*Cum*
		1	*6.48*	*2.14*	*1.73*	*24.01*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.70*	*0.86*	*1.73*	*13.01*	*Cum*
	Left abutment	*2*	*2.22*	*2.14*	*1.73*	*16.45*	*Cum*
		1	*6.48*	*2.14*	*1.73*	*24.01*	*Cum*
	Extra for Slope (0.5:1)	*1*	*8.70*	*0.86*	*1.73*	*13.01*	*Cum*
	TOTAL					**104.45**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.92*	*1.52*	*0.20*	*1.17*	*Cum*
		1	*6.18*	*1.84*	*0.20*	*2.28*	*Cum*
	Left abutment	*2*	*1.92*	*1.52*	*0.20*	*1.17*	*Cum*
		1	*6.18*	*1.84*	*0.20*	*2.28*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.53**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.18*	*1.64*	*0.20*	*2.03*	*Cum*
		1	*6.18*	*1.44*	*0.80*	*7.13*	*Cum*
		1	*6.18*	*0.93*	*0.74*	*4.26*	*Cum*
		1	*6.18*	*0.82*	*0.60*	*3.04*	*Cum*
	Return wall	*2*	*1.82*	*1.32*	*0.20*	*0.96*	*Cum*
		2	*1.82*	*1.12*	*0.80*	*3.26*	*Cum*
		2	*1.82*	*0.56*	*1.06*	*2.16*	*Cum*
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.18*	*1.64*	*0.20*	*2.03*	*Cum*
		1	*6.18*	*1.44*	*0.80*	*7.13*	*Cum*
		1	*6.18*	*0.93*	*0.74*	*4.26*	*Cum*
		1	*6.18*	*0.82*	*0.60*	*3.04*	*Cum*
	Return wall	*2*	*1.82*	*1.32*	*0.20*	*0.96*	*Cum*
		2	*1.82*	*1.12*	*0.80*	*3.26*	*Cum*
		2	*1.82*	*0.56*	*1.06*	*2.16*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.18*	*0.40*	*0.45*	*-2.23*	*Cum*
	TOTAL					**43.89**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.19	6.50	0.39	*10.49*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*11.19*	*5.50*	*0.08*	*4.62*	*Cum*
	Parapet	*2*	*11.19*	*0.44*	*0.18*	*1.74*	*Cum*
		2	*11.19*	*0.35*	*0.25*	*1.96*	*Cum*
		2	*11.19*	*0.22*	*0.55*	*2.70*	*Cum*
	TOTAL					**35.15**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*46*	*4.75*		*1.578*	*344.8*	*Kg*
a2	*10*	*21*	*7.00*		*0.616*	*90.6*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.61*		*0.616*	*73.9*	*Kg*
a5	*10*	*17*	*6.90*		*0.616*	*72.3*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*70*	*2.37*		*0.888*	*147.4*	*Kg*
x2	*16*	*70*	*1.32*		*1.578*	*146.3*	*Kg*
x3	*10*	*24*	*4.09*		*0.616*	*60.5*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*43.9*	*0.0025*	*0.110*	*7850.00*	*861.33*	*Kg*
	Total Reinforcement Steel (in kg)					*3490.0*	*Kg*
	Total Weight in Metric Tonne					**3.49**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.18*		*0.20*	*2.47*	*Sqm*
		2		*1.64*	*0.20*	*0.66*	*Sqm*
		2	*6.18*		*0.80*	*9.89*	*Sqm*
		2		*1.44*	*0.80*	*2.31*	*Sqm*
		2	*6.18*		*0.74*	*9.15*	*Sqm*
		2		*0.93*	*0.74*	*1.38*	*Sqm*
		2	*6.18*		*0.60*	*7.42*	*Sqm*
		2		*0.82*	*0.60*	*0.98*	*Sqm*
	Return wall	*2*	*1.82*		*0.20*	*0.73*	*Sqm*
		2		*1.32*	*0.20*	*0.53*	*Sqm*
		2	*1.82*		*0.80*	*2.91*	*Sqm*
		2		*1.12*	*0.80*	*1.79*	*Sqm*
		2	*1.82*		*1.06*	*3.86*	*Sqm*
		2		*0.56*	*1.06*	*1.19*	*Sqm*
		2	*1.82*		*0.15*	*0.55*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.18*		*0.20*	*2.47*	*Sqm*
		2		*1.64*	*0.20*	*0.66*	*Sqm*
		2	*6.18*		*0.80*	*9.89*	*Sqm*
		2		*1.44*	*0.80*	*2.31*	*Sqm*
		2	*6.18*		*0.74*	*9.15*	*Sqm*
		2		*0.93*	*0.74*	*1.38*	*Sqm*
		2	*6.18*		*0.60*	*7.42*	*Sqm*
		2		*0.82*	*0.60*	*0.98*	*Sqm*
	Return wall	*2*	*1.82*		*0.20*	*0.73*	*Sqm*
		2		*1.32*	*0.20*	*0.53*	*Sqm*
		2	*1.82*		*0.80*	*2.91*	*Sqm*
		2		*1.12*	*0.80*	*1.79*	*Sqm*
		2	*1.82*		*1.06*	*3.86*	*Sqm*
		2		*0.56*	*1.06*	*1.19*	*Sqm*
		2	*1.82*		*0.15*	*0.55*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*4.19*		*0.39*	*3.23*	*Sqm*
		1	*4.19*	6.50		*27.24*	*Sqm*
		2		*6.50*	0.39	*5.01*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Parapet	*4*	*11.19*		*0.18*	*7.83*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*11.19*		*0.25*	*11.19*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*11.19*		*0.55*	*24.62*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**229.61**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.18	0.80		*9.83*	*Cum*
	Right and left Return wall	4	2.22	1.59		*14.09*	*Cum*
	Below Approach Slab	*2*	*6.18*	*2.68*	*0.76*	*25.20*	*Cum*
	Extra slope	*1*	*8.70*	*0.86*	*1.73*	*13.01*	*Cum*
		1	*8.70*	*0.86*	*1.73*	*13.01*	*Cum*
	TOTAL					**75.14**	**Cum**

	DETAILS OF QUANTITIES FOR PATOI DY.						
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.460						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.34*	*2.04*	*1.19*	*16.25*	*Cum*
		1	*6.26*	*2.34*	*1.19*	*17.44*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.59*	*0.60*	*1.19*	*6.83*	*Cum*
	Left abutment	*2*	*3.34*	*2.34*	*1.19*	*18.59*	*Cum*
		1	*6.26*	*2.34*	*1.19*	*17.44*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.59*	*0.60*	*1.19*	*6.83*	*Cum*
	TOTAL					**83.38**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*3.04*	*1.74*	*0.20*	*2.12*	*Cum*
		1	*5.96*	*2.04*	*0.20*	*2.43*	*Cum*
	Left abutment	*2*	*3.04*	*1.74*	*0.20*	*2.12*	*Cum*
		1	*5.96*	*2.04*	*0.20*	*2.43*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**12.72**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.96*	*1.84*	*0.20*	*2.19*	*Cum*
		1	*5.96*	*1.64*	*0.80*	*7.80*	*Cum*
		1	*5.96*	*1.03*	*1.39*	*8.49*	*Cum*
		1	*5.96*	*0.82*	*0.65*	*3.18*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Return wall	*2*	*1.92*	*1.54*	*0.20*	*1.18*	*Cum*
		2	*1.92*	*1.34*	*0.80*	*4.12*	*Cum*
		2	*1.92*	*0.67*	*1.81*	*4.65*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*5.96*	*1.84*	*0.20*	*2.19*	*Cum*
		1	*5.96*	*1.64*	*0.80*	*7.80*	*Cum*
		1	*5.96*	*1.03*	*1.39*	*8.49*	*Cum*
		1	*5.96*	*0.82*	*0.65*	*3.18*	*Cum*
	Return wall	*2*	*1.92*	*1.54*	*0.20*	*1.18*	*Cum*
		2	*1.92*	*1.34*	*0.80*	*4.12*	*Cum*
		2	*1.92*	*0.67*	*1.81*	*4.65*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	DEDUCTION	*2*	*5.96*	*0.40*	*0.45*	*-2.14*	*Cum*
	TOTAL					**61.52**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	6.41	6.50	0.49	*20.21*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*13.41*	*5.50*	*0.08*	*5.53*	*Cum*
	Parapet	*2*	*13.41*	*0.44*	*0.18*	*2.09*	*Cum*
		2	*13.41*	*0.35*	*0.25*	*2.35*	*Cum*
		2	*13.41*	*0.22*	*0.55*	*3.23*	*Cum*
	TOTAL					**47.06**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*51*	*7.12*		*2.466*	*895.4*	*Kg*
a2	*12*	*37*	*7.00*		*0.888*	*229.9*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*29*	*7.04*		*0.616*	*125.9*	*Kg*
a5	*10*	*29*	*6.90*		*0.616*	*123.4*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*106*	*2.47*		*0.888*	*232.5*	*Kg*
x2	*16*	*106*	*1.27*		*1.578*	*213.1*	*Kg*
x3	*10*	*24*	*6.31*		*0.616*	*93.4*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.35*		*0.888*	*242.2*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*61.5*	*0.0025*	*0.154*	*7850.00*	*1207.25*	*Kg*
	Total Reinforcement Steel (in kg)					*4816.8*	*Kg*
	Total Weight in Metric Tonne					**4.82**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.96*		*0.20*	*2.38*	*Sqm*
		2		*1.84*	*0.20*	*0.73*	*Sqm*
		2	*5.96*		*0.80*	*9.53*	*Sqm*
		2		*1.64*	*0.80*	*2.62*	*Sqm*
		2	*5.96*		*1.39*	*16.52*	*Sqm*
		2		*1.03*	*1.39*	*2.85*	*Sqm*
		2	*5.96*		*0.65*	*7.75*	*Sqm*
		2		*0.82*	*0.65*	*1.07*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.54*	*0.20*	*0.62*	*Sqm*
		2	*1.92*		*0.80*	*3.07*	*Sqm*
		2		*1.34*	*0.80*	*2.15*	*Sqm*
		2	*1.92*		*1.81*	*6.93*	*Sqm*
		2		*0.67*	*1.81*	*2.42*	*Sqm*
		2	*1.92*		*0.15*	*0.58*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.96*		*0.20*	*2.38*	*Sqm*
		2		*1.84*	*0.20*	*0.73*	*Sqm*
		2	*5.96*		*0.80*	*9.53*	*Sqm*
		2		*1.64*	*0.80*	*2.62*	*Sqm*
		2	*5.96*		*1.39*	*16.52*	*Sqm*
		2		*1.03*	*1.39*	*2.85*	*Sqm*
		2	*5.96*		*0.65*	*7.75*	*Sqm*
		2		*0.82*	*0.65*	*1.07*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.54*	*0.20*	*0.62*	*Sqm*
		2	*1.92*		*0.80*	*3.07*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.34*	*0.80*	*2.15*	*Sqm*
		2	*1.92*		*1.81*	*6.93*	*Sqm*
		2		*0.67*	*1.81*	*2.42*	*Sqm*
		2	*1.92*		*0.15*	*0.58*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*6.41*		*0.49*	*6.22*	*Sqm*
		1	*6.41*	6.50		*41.67*	*Sqm*
		2		*6.50*	0.49	*6.31*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*13.41*		*0.18*	*9.39*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*13.41*		*0.25*	*13.41*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*13.41*		*0.55*	*29.50*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**285.31**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.96	0.80		*9.53*	*Cum*
	Right and left Return wall	4	3.34	1.53		*20.42*	*Cum*
	Below Approach slab	2	*5.96*	*2.68*	*0.76*	*24.28*	*Cum*
	Extra slope	1	*9.59*	*0.60*	*1.19*	*6.83*	*Cum*
		1	*9.59*	*0.60*	*1.19*	*6.83*	*Cum*
	TOTAL					**67.89**	**Cum**

	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 2.045						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.22*	*1.93*	*1.19*	*14.80*	*Cum*
		1	*6.37*	*2.22*	*1.19*	*16.88*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.59*	*0.60*	*1.19*	*6.83*	*Cum*
	Left abutment	*2*	*3.22*	*2.22*	*1.19*	*17.06*	*Cum*
		1	*6.37*	*2.22*	*1.19*	*16.88*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.59*	*0.60*	*1.19*	*6.83*	*Cum*
	TOTAL					**79.27**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.92*	*1.63*	*0.20*	*1.90*	*Cum*
		1	*6.07*	*1.92*	*0.20*	*2.33*	*Cum*
	Left abutment	*2*	*2.92*	*1.63*	*0.20*	*1.90*	*Cum*
		1	*6.07*	*1.92*	*0.20*	*2.33*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**12.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.07*	*1.72*	*0.20*	*2.09*	*Cum*
		1	*6.07*	*1.52*	*0.80*	*7.39*	*Cum*
		1	*6.07*	*0.97*	*1.00*	*5.89*	*Cum*
		1	*6.07*	*0.82*	*0.65*	*3.24*	*Cum*
	Return wall	*2*	*1.86*	*1.43*	*0.20*	*1.06*	*Cum*
		2	*1.86*	*1.23*	*0.80*	*3.65*	*Cum*
		2	*1.86*	*0.61*	*1.42*	*3.24*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.07*	*1.72*	*0.20*	*2.09*	*Cum*
		1	*6.07*	*1.52*	*0.80*	*7.39*	*Cum*
		1	*6.07*	*0.97*	*1.00*	*5.89*	*Cum*
		1	*6.07*	*0.82*	*0.65*	*3.24*	*Cum*
	Return wall	*2*	*1.86*	*1.43*	*0.20*	*1.06*	*Cum*
		2	*1.86*	*1.23*	*0.80*	*3.65*	*Cum*
		2	*1.86*	*0.61*	*1.42*	*3.24*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.07*	*0.40*	*0.45*	*-2.19*	*Cum*
	TOTAL					**51.36**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	6.41	6.50	0.49	*20.21*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*13.41*	*5.50*	*0.08*	*5.53*	*Cum*
	Parapet	*2*	*13.41*	*0.44*	*0.18*	*2.09*	*Cum*
		2	*13.41*	*0.35*	*0.25*	*2.35*	*Cum*
		2	*13.41*	*0.22*	*0.55*	*3.23*	*Cum*
	TOTAL					**47.06**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*51*	*7.12*		*2.466*	*895.4*	*Kg*
a2	*12*	*37*	*6.94*		*0.888*	*227.9*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*29*	*7.01*		*0.616*	*125.4*	*Kg*
a5	*10*	*29*	*6.80*		*0.616*	*121.6*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*106*	*2.47*		*0.888*	*232.5*	*Kg*
x2	*16*	*106*	*1.42*		*1.578*	*238.2*	*Kg*
x3	*10*	*24*	*6.31*		*0.616*	*93.4*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*51.4*	*0.0025*	*0.128*	*7850.00*	*1008.03*	*Kg*
	Total Reinforcement Steel (in kg)					*4635.2*	*Kg*
	Total Weight in Metric Tonne					**4.64**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.07*		*0.20*	*2.43*	*Sqm*
		2		*1.72*	*0.20*	*0.69*	*Sqm*
		2	*6.07*		*0.80*	*9.72*	*Sqm*
		2		*1.52*	*0.80*	*2.43*	*Sqm*
		2	*6.07*		*1.00*	*12.15*	*Sqm*
		2		*0.97*	*1.00*	*1.94*	*Sqm*
		2	*6.07*		*0.65*	*7.90*	*Sqm*
		2		*0.82*	*0.65*	*1.07*	*Sqm*
	Return wall	*2*	*1.86*		*0.20*	*0.74*	*Sqm*
		2		*1.43*	*0.20*	*0.57*	*Sqm*
		2	*1.86*		*0.80*	*2.98*	*Sqm*
		2		*1.23*	*0.80*	*1.96*	*Sqm*
		2	*1.86*		*1.42*	*5.28*	*Sqm*
		2		*0.61*	*1.42*	*1.74*	*Sqm*
		2	*1.86*		*0.15*	*0.56*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.07		0.20	2.43	Sqm
		2		1.72	0.20	0.69	Sqm
		2	6.07		0.80	9.72	Sqm
		2		1.52	0.80	2.43	Sqm
		2	6.07		1.00	12.15	Sqm
		2		0.97	1.00	1.94	Sqm
		2	6.07		0.65	7.90	Sqm
		2		0.82	0.65	1.07	Sqm
	Return wall	2	1.86		0.20	0.74	Sqm
		2		1.43	0.20	0.57	Sqm
		2	1.86		0.80	2.98	Sqm
		2		1.23	0.80	1.96	Sqm
		2	1.86		1.42	5.28	Sqm
		2		0.61	1.42	1.74	Sqm
		2	1.86		0.15	0.56	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	6.41		0.49	6.22	Sqm
		1	6.41	6.50		41.67	Sqm
		2		6.50	0.49	6.31	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	6.50		45.50	Sqm
		4		6.50	0.30	7.80	Sqm
	Parapet	4	13.41		0.18	9.39	Sqm
		4		0.44	0.18	0.31	Sqm
		4	13.41		0.25	13.41	Sqm
		4		0.35	0.25	0.35	Sqm
		4	13.41		0.55	29.50	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					**269.67**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	6.50	0.40		5.20	Sqm
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	2	6.50			13.00	RM
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.07	1.05		12.69	Cum
	Right and left Return wall	4	3.22	1.99		25.64	Cum
	Below Approach Slab	1	6.07	2.60	1.58	24.94	Cum
	Extra slope	1	9.59	0.60	1.19	6.83	Cum
		1	9.59	0.60	1.19	6.83	Cum
	TOTAL					**76.93**	**Cum**

BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 3.850							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	1	110.00			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	2	3.15	1.85	1.48	17.20	Cum
		1	6.45	2.15	1.48	20.42	Cum
	Extra for Slope (0.5:1)	1	9.59	0.74	1.48	10.45	Cum
	Left abutment	2	3.15	2.15	1.48	19.93	Cum
		1	6.45	2.15	1.48	20.42	Cum
	Extra for Slope (0.5:1)	1	9.59	0.74	1.48	10.45	Cum
	TOTAL					**98.88**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.85*	*1.55*	*0.20*	*1.77*	*Cum*
		1	*6.15*	*1.85*	*0.20*	*2.27*	*Cum*
	Left abutment	*2*	*2.85*	*1.55*	*0.20*	*1.77*	*Cum*
		1	*6.15*	*1.85*	*0.20*	*2.27*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.71**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.15*	*1.65*	*0.20*	*2.02*	*Cum*
		1	*6.15*	*1.45*	*0.80*	*7.11*	*Cum*
		1	*6.15*	*0.93*	*0.75*	*4.31*	*Cum*
		1	*6.15*	*0.82*	*0.65*	*3.28*	*Cum*
	Return wall	*2*	*1.82*	*1.35*	*0.20*	*0.99*	*Cum*
		2	*1.82*	*1.15*	*0.80*	*3.36*	*Cum*
		2	*1.82*	*0.58*	*1.17*	*2.46*	*Cum*
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.15*	*1.65*	*0.20*	*2.02*	*Cum*
		1	*6.15*	*1.45*	*0.80*	*7.11*	*Cum*
		1	*6.15*	*0.93*	*0.75*	*4.31*	*Cum*
		1	*6.15*	*0.82*	*0.65*	*3.28*	*Cum*
	Return wall	*2*	*1.82*	*1.35*	*0.20*	*0.99*	*Cum*
		2	*1.82*	*1.15*	*0.80*	*3.36*	*Cum*
		2	*1.82*	*0.58*	*1.17*	*2.46*	*Cum*
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.15*	*0.40*	*0.45*	*-2.21*	*Cum*
	TOTAL					**45.29**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	5.55	6.50	0.49	*17.50*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*12.55*	*5.50*	*0.08*	*5.18*	*Cum*
	Parapet	*2*	*12.55*	*0.44*	*0.18*	*1.95*	*Cum*
		2	*12.55*	*0.35*	*0.25*	*2.20*	*Cum*
		2	*12.55*	*0.22*	*0.55*	*3.02*	*Cum*
	TOTAL					**43.51**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*51*	*7.12*		*2.466*	*895.4*	*Kg*
a2	*12*	*37*	*7.00*		*0.888*	*229.9*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*29*	*7.04*		*0.616*	*125.9*	*Kg*
a5	*10*	*29*	*6.90*		*0.616*	*123.4*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*90*	*2.47*		*0.888*	*197.4*	*Kg*
x2	*16*	*90*	*1.42*		*1.578*	*202.3*	*Kg*
x3	*10*	*24*	*5.45*		*0.616*	*80.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*45.3*	*0.0025*	*0.113*	*7850.00*	*888.85*	*Kg*
	Total Reinforcement Steel (in kg)					*4436.5*	*Kg*
	Total Weight in Metric Tonne					**4.44**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.15*		*0.20*	*2.46*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.65	0.20	0.66	Sqm
		2	6.15		0.80	9.84	Sqm
		2		1.45	0.80	2.31	Sqm
		2	6.15		0.75	9.25	Sqm
		2		0.93	0.75	1.40	Sqm
		2	6.15		0.65	7.99	Sqm
		2		0.82	0.65	1.07	Sqm
	Return wall	2	1.82		0.20	0.73	Sqm
		2		1.35	0.20	0.54	Sqm
		2	1.82		0.80	2.92	Sqm
		2		1.15	0.80	1.84	Sqm
		2	1.82		1.17	4.27	Sqm
		2		0.58	1.17	1.35	Sqm
		2	1.82		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.15		0.20	2.46	Sqm
		2		1.65	0.20	0.66	Sqm
		2	6.15		0.80	9.84	Sqm
		2		1.45	0.80	2.31	Sqm
		2	6.15		0.75	9.25	Sqm
		2		0.93	0.75	1.40	Sqm
		2	6.15		0.65	7.99	Sqm
		2		0.82	0.65	1.07	Sqm
	Return wall	2	1.82		0.20	0.73	Sqm
		2		1.35	0.20	0.54	Sqm
		2	1.82		0.80	2.92	Sqm
		2		1.15	0.80	1.84	Sqm
		2	1.82		1.17	4.27	Sqm
		2		0.58	1.17	1.35	Sqm
		2	1.82		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	5.55		0.49	5.39	Sqm
		1	5.55	6.50		36.09	Sqm
		2		6.50	0.49	6.31	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	6.50		45.50	Sqm
		4		6.50	0.30	7.80	Sqm
	Parapet	4	12.55		0.18	8.79	Sqm
		4		0.44	0.18	0.31	Sqm
		4	12.55		0.25	12.55	Sqm
		4		0.35	0.25	0.35	Sqm
		4	12.55		0.55	27.61	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					**249.97**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	6.50	0.40		5.20	Sqm
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	2	6.50			13.00	RM
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.15	0.85		10.46	Cum
	Right and left Return wall	4	3.15	1.68		21.10	Cum
	Below Approach Bed	2	6.15	2.68	1.05	34.40	Cum
	Extra slope	1	9.59	0.74	1.48	10.45	Cum
		1	9.59	0.74	1.48	10.45	Cum
	TOTAL					**86.87**	**Cum**

BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 5.005							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	1	80.00			**80.00**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.15*	*1.84*	*1.48*	*17.11*	*Cum*
		1	*6.46*	*2.15*	*1.48*	*20.53*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.61*	*0.74*	*1.48*	*10.52*	*Cum*
	Left abutment	*2*	*3.15*	*2.15*	*1.48*	*19.98*	*Cum*
		1	*6.46*	*2.15*	*1.48*	*20.53*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.61*	*0.74*	*1.48*	*10.52*	*Cum*
	TOTAL					**99.20**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.85*	*1.54*	*0.20*	*1.75*	*Cum*
		1	*6.16*	*1.85*	*0.20*	*2.28*	*Cum*
	Left abutment	*2*	*2.85*	*1.54*	*0.20*	*1.75*	*Cum*
		1	*6.16*	*1.85*	*0.20*	*2.28*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.69**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.16*	*1.65*	*0.20*	*2.03*	*Cum*
		1	*6.16*	*1.45*	*0.80*	*7.13*	*Cum*
		1	*6.16*	*0.93*	*0.75*	*4.32*	*Cum*
		1	*6.16*	*0.82*	*0.60*	*3.03*	*Cum*
	Return wall	*2*	*1.82*	*1.34*	*0.20*	*0.97*	*Cum*
		2	*1.82*	*1.14*	*0.80*	*3.32*	*Cum*
		2	*1.82*	*0.57*	*1.12*	*2.33*	*Cum*
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.16*	*1.65*	*0.20*	*2.03*	*Cum*
		1	*6.16*	*1.45*	*0.80*	*7.13*	*Cum*
		1	*6.16*	*0.93*	*0.75*	*4.32*	*Cum*
		1	*6.16*	*0.82*	*0.60*	*3.03*	*Cum*
	Return wall	*2*	*1.82*	*1.34*	*0.20*	*0.97*	*Cum*
		2	*1.82*	*1.14*	*0.80*	*3.32*	*Cum*
		2	*1.82*	*0.57*	*1.12*	*2.33*	*Cum*
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.16*	*0.40*	*0.45*	*-2.22*	*Cum*
	TOTAL					**44.48**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	5.55	6.50	0.44	*15.70*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*12.55*	*5.50*	*0.08*	*5.18*	*Cum*
	Parapet	*2*	*12.55*	*0.44*	*0.18*	*1.95*	*Cum*
		2	*12.55*	*0.35*	*0.25*	*2.20*	*Cum*
		2	*12.55*	*0.22*	*0.55*	*3.02*	*Cum*
	TOTAL					**41.71**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*43*	*6.21*		*2.466*	*658.7*	*Kg*
a2	*10*	*44*	*7.00*		*0.616*	*189.9*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*29*	*6.07*		*0.616*	*108.6*	*Kg*
a5	*10*	*24*	*6.90*		*0.616*	*102.1*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
x1	*12*	*92*	*2.42*		*0.888*	*197.7*	*Kg*
x2	*16*	*92*	*1.37*		*1.578*	*199.5*	*Kg*
x3	*10*	*24*	*5.45*		*0.616*	*80.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*44.5*	*0.0025*	*0.111*	*7850.00*	*873.00*	*Kg*
	Total Reinforcement Steel (in kg)					*4102.9*	*Kg*
	Total Weight in Metric Tonne					**4.10**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.16*		*0.20*	*2.47*	*Sqm*
		2		*1.65*	*0.20*	*0.66*	*Sqm*
		2	*6.16*		*0.80*	*9.86*	*Sqm*
		2		*1.45*	*0.80*	*2.31*	*Sqm*
		2	*6.16*		*0.75*	*9.27*	*Sqm*
		2		*0.93*	*0.75*	*1.40*	*Sqm*
		2	*6.16*		*0.60*	*7.40*	*Sqm*
		2		*0.82*	*0.60*	*0.98*	*Sqm*
	Return wall	*2*	*1.82*		*0.20*	*0.73*	*Sqm*
		2		*1.34*	*0.20*	*0.53*	*Sqm*
		2	*1.82*		*0.80*	*2.92*	*Sqm*
		2		*1.14*	*0.80*	*1.82*	*Sqm*
		2	*1.82*		*1.12*	*4.09*	*Sqm*
		2		*0.57*	*1.12*	*1.28*	*Sqm*
		2	*1.82*		*0.15*	*0.55*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.16*		*0.20*	*2.47*	*Sqm*
		2		*1.65*	*0.20*	*0.66*	*Sqm*
		2	*6.16*		*0.80*	*9.86*	*Sqm*
		2		*1.45*	*0.80*	*2.31*	*Sqm*
		2	*6.16*		*0.75*	*9.27*	*Sqm*
		2		*0.93*	*0.75*	*1.40*	*Sqm*
		2	*6.16*		*0.60*	*7.40*	*Sqm*
		2		*0.82*	*0.60*	*0.98*	*Sqm*
	Return wall	*2*	*1.82*		*0.20*	*0.73*	*Sqm*
		2		*1.34*	*0.20*	*0.53*	*Sqm*
		2	*1.82*		*0.80*	*2.92*	*Sqm*
		2		*1.14*	*0.80*	*1.82*	*Sqm*
		2	*1.82*		*1.12*	*4.09*	*Sqm*
		2		*0.57*	*1.12*	*1.28*	*Sqm*
		2	*1.82*		*0.15*	*0.55*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*5.55*		*0.44*	*4.83*	*Sqm*
		1	*5.55*	6.50		*36.09*	*Sqm*
		2		*6.50*	0.44	*5.66*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*12.55*		*0.18*	*8.79*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*12.55*		*0.25*	*12.55*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*12.55*		*0.55*	*27.61*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**246.94**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.16	0.83		*10.23*	*Cum*
	Right and left Return wall	4	3.15	1.62		*20.35*	*Cum*
	Below Approach Slab	*2*	*6.164*	*2.479*	*1.008*	*30.80*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Extra slope	*1*	*9.610*	*0.74*	*1.48*	*10.52*	*Cum*
		1	*9.610*	*0.74*	*1.48*	*10.52*	*Cum*
	TOTAL					**82.43**	**Cum**

	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 5.944						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*110.00*			**110.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.13*	*1.82*	*1.17*	*13.38*	*Cum*
		1	*6.48*	*2.13*	*1.17*	*16.20*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.61*	*0.59*	*1.17*	*6.62*	*Cum*
	Left abutment	*2*	*3.13*	*2.13*	*1.17*	*15.65*	*Cum*
		1	*6.48*	*2.13*	*1.17*	*16.20*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.61*	*0.59*	*1.17*	*6.62*	*Cum*
	TOTAL					**74.69**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.83*	*1.52*	*0.20*	*1.72*	*Cum*
		1	*6.18*	*1.83*	*0.20*	*2.26*	*Cum*
	Left abutment	*2*	*2.83*	*1.52*	*0.20*	*1.72*	*Cum*
		1	*6.18*	*1.83*	*0.20*	*2.26*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.61**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.18*	*1.63*	*0.20*	*2.01*	*Cum*
		1	*6.18*	*1.43*	*0.80*	*7.07*	*Cum*
		1	*6.18*	*0.93*	*0.70*	*4.00*	*Cum*
		1	*6.18*	*0.82*	*0.60*	*3.04*	*Cum*
	Return wall	*2*	*1.82*	*1.32*	*0.20*	*0.96*	*Cum*
		2	*1.82*	*1.12*	*0.80*	*3.26*	*Cum*
		2	*1.82*	*0.56*	*1.07*	*2.18*	*Cum*
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.18*	*1.63*	*0.20*	*2.01*	*Cum*
		1	*6.18*	*1.43*	*0.80*	*7.07*	*Cum*
		1	*6.18*	*0.93*	*0.70*	*4.00*	*Cum*
		1	*6.18*	*0.82*	*0.60*	*3.04*	*Cum*
	Return wall	*2*	*1.82*	*1.32*	*0.20*	*0.96*	*Cum*
		2	*1.82*	*1.12*	*0.80*	*3.26*	*Cum*
		2	*1.82*	*0.56*	*1.07*	*2.18*	*Cum*
		2	*1.82*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.18*	*0.40*	*0.45*	*-2.22*	*Cum*
	TOTAL					**43.24**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.81	6.50	0.44	*13.60*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*11.81*	*5.50*	*0.08*	*4.87*	*Cum*
	Parapet	*2*	*11.81*	*0.44*	*0.18*	*1.84*	*Cum*
		2	*11.81*	*0.35*	*0.25*	*2.07*	*Cum*
		2	*11.81*	*0.22*	*0.55*	*2.85*	*Cum*
	TOTAL					**38.88**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*41*	*5.47*		*2.466*	*553.0*	*Kg*
a2	*10*	*38*	*7.00*		*0.616*	*164.0*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
a4	*10*	*29*	*5.39*		*0.616*	*96.4*	*Kg*
a5	*10*	*21*	*6.90*		*0.616*	*89.3*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*80*	*2.45*		*0.888*	*174.1*	*Kg*
x2	*16*	*80*	*1.25*		*1.578*	*157.2*	*Kg*
x3	*10*	*24*	*4.71*		*0.616*	*69.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*43.2*	*0.0025*	*0.108*	*7850.00*	*848.68*	*Kg*
	Total Reinforcement Steel (in kg)					*3845.2*	*Kg*
	Total Weight in Metric Tonne					**3.85**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.18*		*0.20*	*2.47*	*Sqm*
		2		*1.63*	*0.20*	*0.65*	*Sqm*
		2	*6.18*		*0.80*	*9.89*	*Sqm*
		2		*1.43*	*0.80*	*2.29*	*Sqm*
		2	*6.18*		*0.70*	*8.65*	*Sqm*
		2		*0.93*	*0.70*	*1.30*	*Sqm*
		2	*6.18*		*0.60*	*7.42*	*Sqm*
		2		*0.82*	*0.60*	*0.98*	*Sqm*
	Return wall	*2*	*1.82*		*0.20*	*0.73*	*Sqm*
		2		*1.32*	*0.20*	*0.53*	*Sqm*
		2	*1.82*		*0.80*	*2.90*	*Sqm*
		2		*1.12*	*0.80*	*1.79*	*Sqm*
		2	*1.82*		*1.07*	*3.88*	*Sqm*
		2		*0.56*	*1.07*	*1.20*	*Sqm*
		2	*1.82*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.18*		*0.20*	*2.47*	*Sqm*
		2		*1.63*	*0.20*	*0.65*	*Sqm*
		2	*6.18*		*0.80*	*9.89*	*Sqm*
		2		*1.43*	*0.80*	*2.29*	*Sqm*
		2	*6.18*		*0.70*	*8.65*	*Sqm*
		2		*0.93*	*0.70*	*1.30*	*Sqm*
		2	*6.18*		*0.60*	*7.42*	*Sqm*
		2		*0.82*	*0.60*	*0.98*	*Sqm*
	Return wall	*2*	*1.82*		*0.20*	*0.73*	*Sqm*
		2		*1.32*	*0.20*	*0.53*	*Sqm*
		2	*1.82*		*0.80*	*2.90*	*Sqm*
		2		*1.12*	*0.80*	*1.79*	*Sqm*
		2	*1.82*		*1.07*	*3.88*	*Sqm*
		2		*0.56*	*1.07*	*1.20*	*Sqm*
		2	*1.82*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*4.81*		*0.44*	*4.18*	*Sqm*
		1	*4.81*	6.50		*31.27*	*Sqm*
		2		*6.50*	0.44	*5.66*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*11.81*		*0.18*	*8.27*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*11.81*		*0.25*	*11.81*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*11.81*		*0.55*	*25.98*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**236.50**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.18	0.79		*9.71*	*Cum*
	Right and left Return wall	4	3.13	1.56		*19.47*	*Cum*
	Below Approach Slab	*2*	*6.18*	*2.69*	*1.25*	*41.42*	*Cum*
	Extra slope	*1*	*9.61*	*0.59*	*1.17*	*6.62*	*Cum*
		1	*9.61*	*0.59*	*1.17*	*6.62*	*Cum*
	TOTAL					**83.85**	**Cum**

	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 6.750						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*80.00*			**80.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.11*	*1.79*	*1.52*	*17.01*	*Cum*
		1	*6.51*	*2.11*	*1.52*	*20.93*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.76*	*1.52*	*11.15*	*Cum*
	Left abutment	*2*	*3.11*	*2.11*	*1.52*	*20.02*	*Cum*
		1	*6.51*	*2.11*	*1.52*	*20.93*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.76*	*1.52*	*11.15*	*Cum*
	TOTAL					**101.19**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.81*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Left abutment	*2*	*2.81*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.50**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.01*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*
		2	*1.81*	*0.54*	*0.96*	*1.89*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.01*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*
		2	*1.81*	*0.54*	*0.96*	*1.89*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.21*	*0.40*	*0.45*	*-2.23*	*Cum*
	TOTAL					**41.02**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.49	6.50	0.39	*11.24*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*11.49*	*5.50*	*0.08*	*4.74*	*Cum*
	Parapet	*2*	*11.49*	*0.44*	*0.18*	*1.79*	*Cum*
		2	*11.49*	*0.35*	*0.25*	*2.02*	*Cum*
		2	*11.49*	*0.22*	*0.55*	*2.77*	*Cum*
	TOTAL					**36.20**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*46*	*5.05*		*1.578*	*366.6*	*Kg*
a2	*10*	*22*	*7.00*		*0.616*	*94.9*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.97*		*0.616*	*79.7*	*Kg*
a5	*10*	*18*	*6.90*		*0.616*	*76.6*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*74*	*2.37*		*0.888*	*155.8*	*Kg*
x2	*16*	*74*	*1.32*		*1.578*	*154.6*	*Kg*
x3	*10*	*24*	*4.39*		*0.616*	*65.0*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*41.0*	*0.0025*	*0.103*	*7850.00*	*804.96*	*Kg*
	Total Reinforcement Steel (in kg)					*3490.9*	*Kg*
	Total Weight in Metric Tonne					**3.49**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.21*		*0.20*	*2.48*	*Sqm*
		2		*1.61*	*0.20*	*0.64*	*Sqm*
		2	*6.21*		*0.80*	*9.93*	*Sqm*
		2		*1.41*	*0.80*	*2.26*	*Sqm*
		2	*6.21*		*0.64*	*7.94*	*Sqm*
		2		*0.92*	*0.64*	*1.17*	*Sqm*
		2	*6.21*		*0.55*	*6.83*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.29*	*0.20*	*0.52*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.09*	*0.80*	*1.74*	*Sqm*
		2	*1.81*		*0.96*	*3.47*	*Sqm*
		2		*0.54*	*0.96*	*1.04*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.21*		*0.20*	*2.48*	*Sqm*
		2		*1.61*	*0.20*	*0.64*	*Sqm*
		2	*6.21*		*0.80*	*9.93*	*Sqm*
		2		*1.41*	*0.80*	*2.26*	*Sqm*
		2	*6.21*		*0.64*	*7.94*	*Sqm*
		2		*0.92*	*0.64*	*1.17*	*Sqm*
		2	*6.21*		*0.55*	*6.83*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.29*	*0.20*	*0.52*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.09*	*0.80*	*1.74*	*Sqm*
		2	*1.81*		*0.96*	*3.47*	*Sqm*
		2		*0.54*	*0.96*	*1.04*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*4.49*		*0.39*	*3.46*	*Sqm*
		1	*4.49*	6.50		*29.19*	*Sqm*
		2		*6.50*	0.39	*5.01*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*11.49*		*0.18*	*8.04*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*11.49*		*0.25*	*11.49*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*11.49*		*0.55*	*25.28*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**227.51**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.51	0.73		*9.45*	*Cum*
	Right and left Return wall	4	3.11	1.43		*17.83*	*Cum*
	Below Approach Slab	*2*	*6.51*	*2.71*	*0.79*	*27.73*	*Cum*
	Extra slope	*1*	*9.62*	*0.76*	*1.52*	*11.15*	*Cum*
		1	*9.62*	*0.76*	*1.52*	*11.15*	*Cum*
	TOTAL					**77.31**	**Cum**

BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 7.165							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*100.00*			**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.11*	*1.79*	*1.80*	*20.10*	*Cum*
		1	*6.51*	*2.11*	*1.80*	*24.73*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.90*	*1.80*	*15.58*	*Cum*
	Left abutment	*2*	*3.11*	*2.11*	*1.80*	*23.66*	*Cum*
		1	*6.51*	*2.11*	*1.80*	*24.73*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.90*	*1.80*	*15.58*	*Cum*
	TOTAL					**124.39**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.81*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Left abutment	*2*	*2.81*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.50**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.01*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*
		2	*1.81*	*0.54*	*0.96*	*1.89*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.01*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*
		2	*1.81*	*0.54*	*0.96*	*1.89*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.21*	*0.40*	*0.45*	*-2.23*	*Cum*
	TOTAL					**41.02**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Slab	1	4.49	6.50	0.39	11.24	Cum
	Approch Slab	2	3.50	6.50	0.30	13.65	Cum
	Wearing coat	1	11.49	5.50	0.08	4.74	Cum
	Parapet	2	11.49	0.44	0.18	1.79	Cum
		2	11.49	0.35	0.25	2.02	Cum
		2	11.49	0.22	0.55	2.77	Cum
	TOTAL					**36.20**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	16	46	5.05		1.578	366.6	Kg
a2	10	22	7.00		0.616	94.9	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	26	4.97		0.616	79.7	Kg
a5	10	18	6.90		0.616	76.6	Kg
	APPROACH SLAB						
c1	12	86	3.70		0.888	282.5	Kg
c2	12	46	6.70		0.888	273.6	Kg
c3	12	86	3.70		0.888	282.5	Kg
c4	12	46	6.70		0.888	273.6	Kg
	CRASH BARRIER FOR MAIN SLAB						
x1	12	74	2.37		0.888	155.8	Kg
x2	16	74	1.32		1.578	154.6	Kg
x3	10	24	4.39		0.616	65.0	Kg
	CRASH BARRIER FOR APPROACH SLAB						
y1	12	116	2.32		0.888	239.0	Kg
y2	16	116	1.27		1.578	233.2	Kg
y3	10	48	3.40		0.616	100.6	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	41.0	0.0025	0.103	7850.00	804.96	Kg
	Total Reinforcement Steel (in kg)					3490.9	Kg
	Total Weight in Metric Tonne					**3.49**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	6.21		0.20	2.48	Sqm
		2		1.61	0.20	0.64	Sqm
		2	6.21		0.80	9.93	Sqm
		2		1.41	0.80	2.26	Sqm
		2	6.21		0.64	7.94	Sqm
		2		0.92	0.64	1.17	Sqm
		2	6.21		0.55	6.83	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.81		0.20	0.72	Sqm
		2		1.29	0.20	0.52	Sqm
		2	1.81		0.80	2.89	Sqm
		2		1.09	0.80	1.74	Sqm
		2	1.81		0.96	3.47	Sqm
		2		0.54	0.96	1.04	Sqm
		2	1.81		0.15	0.54	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.21		0.20	2.48	Sqm
		2		1.61	0.20	0.64	Sqm
		2	6.21		0.80	9.93	Sqm
		2		1.41	0.80	2.26	Sqm
		2	6.21		0.64	7.94	Sqm
		2		0.92	0.64	1.17	Sqm
		2	6.21		0.55	6.83	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.81		0.20	0.72	Sqm
		2		1.29	0.20	0.52	Sqm
		2	1.81		0.80	2.89	Sqm
		2		1.09	0.80	1.74	Sqm
		2	1.81		0.96	3.47	Sqm
		2		0.54	0.96	1.04	Sqm
		2	1.81		0.15	0.54	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	4.49		0.39	3.46	Sqm
		1	4.49	6.50		29.19	Sqm
		2		6.50	0.39	5.01	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	6.50		45.50	Sqm
		4		6.50	0.30	7.80	Sqm
	Parapet	4	11.49		0.18	8.04	Sqm
		4		0.44	0.18	0.31	Sqm
		4	11.49		0.25	11.49	Sqm
		4		0.35	0.25	0.35	Sqm
		4	11.49		0.55	25.28	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					**227.51**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.51	0.73		*9.43*	*Cum*
	Right and left Return wall	4	3.11	1.43		*17.83*	*Cum*
	Below Approach Slab	*2*	*6.51*	*2.71*	*0.51*	*17.94*	*Cum*
	Extra slope	*1*	*9.618*	*0.9*	*1.8*	*15.58*	*Cum*
		1	*9.618*	*0.9*	*1.8*	*15.58*	*Cum*
	TOTAL					**76.36**	**Cum**

BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 7.405							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*80.00*			**80.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.11*	*1.79*	*1.21*	*13.54*	*Cum*
		1	*6.51*	*2.11*	*1.21*	*16.67*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.90*	*1.21*	*10.46*	*Cum*
	Left abutment	*2*	*3.11*	*2.11*	*1.21*	*15.94*	*Cum*
		1	*6.51*	*2.11*	*1.21*	*16.67*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.90*	*1.21*	*10.46*	*Cum*
	TOTAL					**83.75**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.81*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Left abutment	*2*	*2.81*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.50**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.01*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*
		2	*1.81*	*0.54*	*0.96*	*1.89*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.01*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	1.81	0.54	0.96	1.89	Cum
		2	1.81	0.40	0.15	0.22	Cum
	DEDUCTION	2	6.21	0.40	0.45	-2.23	Cum
	TOTAL					**41.02**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.49	6.50	0.39	11.24	Cum
	Approch Slab	2	3.50	6.50	0.30	13.65	Cum
	Wearing coat	1	11.49	5.50	0.08	4.74	Cum
	Parapet	2	11.49	0.44	0.18	1.79	Cum
		2	11.49	0.35	0.25	2.02	Cum
		2	11.49	0.22	0.55	2.77	Cum
	TOTAL					**36.20**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	16	46	5.05		1.578	366.6	Kg
a2	10	22	7.00		0.616	94.9	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	26	4.97		0.616	79.7	Kg
a5	10	18	6.90		0.616	76.6	Kg
	APPROACH SLAB						
c1	12	86	3.70		0.888	282.5	Kg
c2	12	46	6.70		0.888	273.6	Kg
c3	12	86	3.70		0.888	282.5	Kg
c4	12	46	6.70		0.888	273.6	Kg
	CRASH BARRIER FOR MAIN SLAB						
x1	12	74	2.37		0.888	155.8	Kg
x2	16	74	1.32		1.578	154.6	Kg
x3	10	24	4.39		0.616	65.0	Kg
	CRASH BARRIER FOR APPROACH SLAB						
y1	12	116	2.32		0.888	239.0	Kg
y2	16	116	1.27		1.578	233.2	Kg
y3	10	48	3.40		0.616	100.6	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	41.0	0.0025	0.103	7850.00	804.96	Kg
	Total Reinforcement Steel (in kg)					3490.9	Kg
	Total Weight in Metric Tonne					**3.49**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	6.21		0.20	2.48	Sqm
		2		1.61	0.20	0.64	Sqm
		2	6.21		0.80	9.93	Sqm
		2		1.41	0.80	2.26	Sqm
		2	6.21		0.64	7.94	Sqm
		2		0.92	0.64	1.17	Sqm
		2	6.21		0.55	6.83	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.81		0.20	0.72	Sqm
		2		1.29	0.20	0.52	Sqm
		2	1.81		0.80	2.89	Sqm
		2		1.09	0.80	1.74	Sqm
		2	1.81		0.96	3.47	Sqm
		2		0.54	0.96	1.04	Sqm
		2	1.81		0.15	0.54	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.21		0.20	2.48	Sqm
		2		1.61	0.20	0.64	Sqm
		2	6.21		0.80	9.93	Sqm
		2		1.41	0.80	2.26	Sqm
		2	6.21		0.64	7.94	Sqm
		2		0.92	0.64	1.17	Sqm
		2	6.21		0.55	6.83	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.81		0.20	0.72	Sqm
		2		1.29	0.20	0.52	Sqm
		2	1.81		0.80	2.89	Sqm
		2		1.09	0.80	1.74	Sqm
		2	1.81		0.96	3.47	Sqm
		2		0.54	0.96	1.04	Sqm
		2	1.81		0.15	0.54	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	4.49		0.39	3.46	Sqm
		1	4.49	6.50		29.19	Sqm
		2		6.50	0.39	5.01	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	6.50		45.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*11.49*		*0.18*	*8.04*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*11.49*		*0.25*	*11.49*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*11.49*		*0.55*	*25.28*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**227.51**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.51	0.53		*6.90*	*Cum*
	Right and left Return wall	4	3.11	1.43		*17.83*	*Cum*
	Below Approch Slab	*1*	*6.506*	*2.808*	*1.097*	*20.04*	*Cum*
	Extra slope	*1*	*9.618*	*0.897*	*1.213*	*10.46*	*Cum*
		1	*9.618*	*0.897*	*1.213*	*10.46*	*Cum*
	TOTAL					**65.69**	**Cum**

	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 7.560						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*80.00*			**80.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.11*	*1.79*	*1.17*	*13.00*	*Cum*
		1	*6.51*	*2.11*	*1.17*	*16.06*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.89*	*1.17*	*10.05*	*Cum*
	Left abutment	*2*	*3.11*	*2.11*	*1.17*	*15.35*	*Cum*
		1	*6.51*	*2.11*	*1.17*	*16.06*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.89*	*1.17*	*10.05*	*Cum*
	TOTAL					**80.58**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.81*	*1.49*	*0.20*	*1.67*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Left abutment	*2*	*2.81*	*1.49*	*0.20*	*1.67*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.49**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.02*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	1.81	1.09	0.80	3.14	Cum
		2	1.81	0.54	0.96	1.89	Cum
		2	1.81	0.40	0.15	0.22	Cum
	Left abutment	1	6.21	1.61	0.20	2.00	Cum
		1	6.21	1.41	0.80	7.02	Cum
		1	6.21	0.92	0.64	3.64	Cum
		1	6.21	0.82	0.55	2.80	Cum
	Return wall	2	1.81	1.29	0.20	0.93	Cum
		2	1.81	1.09	0.80	3.14	Cum
		2	1.81	0.54	0.96	1.89	Cum
		2	1.81	0.40	0.15	0.22	Cum
	DEDUCTION	2	6.21	0.40	0.45	-2.24	Cum
	TOTAL					**41.04**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.49	6.50	0.39	11.24	Cum
	Approch Slab	2	3.50	6.50	0.30	13.65	Cum
	Wearing coat	1	11.49	5.50	0.08	4.74	Cum
	Parapet	2	11.49	0.44	0.18	1.79	Cum
		2	11.49	0.35	0.25	2.02	Cum
		2	11.49	0.22	0.55	2.77	Cum
	TOTAL					**36.20**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	16	46	5.05		1.578	366.6	Kg
a2	10	22	7.00		0.616	94.9	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	26	4.97		0.616	79.7	Kg
a5	10	18	6.90		0.616	76.6	Kg
	APPROACH SLAB						
c1	12	86	3.70		0.888	282.5	Kg
c2	12	46	6.70		0.888	273.6	Kg
c3	12	86	3.70		0.888	282.5	Kg
c4	12	46	6.70		0.888	273.6	Kg
	CRASH BARRIER FOR MAIN SLAB						
x1	12	74	2.37		0.888	155.8	Kg
x2	16	74	1.32		1.578	154.6	Kg
x3	10	24	4.39		0.616	65.0	Kg
	CRASH BARRIER FOR APPROACH SLAB						
y1	12	116	2.32		0.888	239.0	Kg
y2	16	116	1.27		1.578	233.2	Kg
y3	10	48	3.40		0.616	100.6	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	41.0	0.0025	0.103	7850.00	805.50	Kg
	Total Reinforcement Steel (in kg)					3491.5	Kg
	Total Weight in Metric Tonne					**3.49**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	6.21		0.20	2.48	Sqm
		2		1.61	0.20	0.64	Sqm
		2	6.21		0.80	9.94	Sqm
		2		1.41	0.80	2.26	Sqm
		2	6.21		0.64	7.95	Sqm
		2		0.92	0.64	1.17	Sqm
		2	6.21		0.55	6.83	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.81		0.20	0.72	Sqm
		2		1.29	0.20	0.52	Sqm
		2	1.81		0.80	2.89	Sqm
		2		1.09	0.80	1.74	Sqm
		2	1.81		0.96	3.47	Sqm
		2		0.54	0.96	1.04	Sqm
		2	1.81		0.15	0.54	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.21		0.20	2.48	Sqm
		2		1.61	0.20	0.64	Sqm
		2	6.21		0.80	9.94	Sqm
		2		1.41	0.80	2.26	Sqm
		2	6.21		0.64	7.95	Sqm
		2		0.92	0.64	1.17	Sqm
		2	6.21		0.55	6.83	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.81		0.20	0.72	Sqm
		2		1.29	0.20	0.52	Sqm
		2	1.81		0.80	2.89	Sqm
		2		1.09	0.80	1.74	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.81*		*0.96*	*3.47*	*Sqm*
		2		*0.54*	*0.96*	*1.04*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*4.49*		*0.39*	*3.46*	*Sqm*
		1	*4.49*	6.50		*29.19*	*Sqm*
		2		*6.50*	0.39	*5.01*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*11.49*		*0.18*	*8.04*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*11.49*		*0.25*	*11.49*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*11.49*		*0.55*	*25.28*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**227.56**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.51	0.53		*6.90*	*Cum*
	Right and left Return wall	4	3.11	1.43		*17.79*	*Cum*
	Below Approach Slab	*1*	*6.512*	*2.808*	*1.142*	*20.88*	*Cum*
	Extra slope	*1*	*9.624*	*0.894*	*1.168*	*10.05*	*Cum*
		1	*9.624*	*0.894*	*1.168*	*10.05*	*Cum*
	TOTAL					**65.67**	**Cum**

BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 8.030							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*80.00*			**80.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.11*	*1.79*	*1.37*	*15.25*	*Cum*
		1	*6.51*	*2.11*	*1.37*	*18.84*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.89*	*1.37*	*11.79*	*Cum*
	Left abutment	*2*	*3.11*	*2.11*	*1.37*	*18.01*	*Cum*
		1	*6.51*	*2.11*	*1.37*	*18.84*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.89*	*1.37*	*11.79*	*Cum*
	TOTAL					**94.51**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.81*	*1.49*	*0.20*	*1.67*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Left abutment	*2*	*2.81*	*1.49*	*0.20*	*1.67*	*Cum*
		1	*6.21*	*1.81*	*0.20*	*2.25*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.49**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.02*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*
		2	*1.81*	*0.54*	*0.96*	*1.89*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.21*	*1.61*	*0.20*	*2.00*	*Cum*
		1	*6.21*	*1.41*	*0.80*	*7.02*	*Cum*
		1	*6.21*	*0.92*	*0.64*	*3.64*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.14*	*Cum*
		2	*1.81*	*0.54*	*0.96*	*1.89*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.21*	*0.40*	*0.45*	*-2.24*	*Cum*
	TOTAL					**41.04**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.49	6.50	0.39	*11.24*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*11.49*	*5.50*	*0.08*	*4.74*	*Cum*
	Parapet	*2*	*11.49*	*0.44*	*0.18*	*1.79*	*Cum*
		2	*11.49*	*0.35*	*0.25*	*2.02*	*Cum*
		2	*11.49*	*0.22*	*0.55*	*2.77*	*Cum*
	TOTAL					**36.20**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*46*	*5.05*		*1.578*	*366.6*	*Kg*
a2	*10*	*22*	*7.00*		*0.616*	*94.9*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.97*		*0.616*	*79.7*	*Kg*
a5	*10*	*18*	*6.90*		*0.616*	*76.6*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*74*	*2.37*		*0.888*	*155.8*	*Kg*
x2	*16*	*74*	*1.32*		*1.578*	*154.6*	*Kg*
x3	*10*	*24*	*4.39*		*0.616*	*65.0*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*41.0*	*0.0025*	*0.103*	*7850.00*	*805.50*	*Kg*
	Total Reinforcement Steel (in kg)					*3491.5*	*Kg*
	Total Weight in Metric Tonne					**3.49**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.21*		*0.20*	*2.48*	*Sqm*
		2		*1.61*	*0.20*	*0.64*	*Sqm*
		2	*6.21*		*0.80*	*9.94*	*Sqm*
		2		*1.41*	*0.80*	*2.26*	*Sqm*
		2	*6.21*		*0.64*	*7.95*	*Sqm*
		2		*0.92*	*0.64*	*1.17*	*Sqm*
		2	*6.21*		*0.55*	*6.83*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.29*	*0.20*	*0.52*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.09*	*0.80*	*1.74*	*Sqm*
		2	*1.81*		*0.96*	*3.47*	*Sqm*
		2		*0.54*	*0.96*	*1.04*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.21*		*0.20*	*2.48*	*Sqm*
		2		*1.61*	*0.20*	*0.64*	*Sqm*
		2	*6.21*		*0.80*	*9.94*	*Sqm*
		2		*1.41*	*0.80*	*2.26*	*Sqm*
		2	*6.21*		*0.64*	*7.95*	*Sqm*
		2		*0.92*	*0.64*	*1.17*	*Sqm*
		2	*6.21*		*0.55*	*6.83*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.29*	*0.20*	*0.52*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.09*	*0.80*	*1.74*	*Sqm*
		2	*1.81*		*0.96*	*3.47*	*Sqm*
		2		*0.54*	*0.96*	*1.04*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*4.49*		*0.39*	*3.46*	*Sqm*
		1	*4.49*	6.50		*29.19*	*Sqm*
		2		*6.50*	0.39	*5.01*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*11.49*		*0.18*	*8.04*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*11.49*		*0.25*	*11.49*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*11.49*		*0.55*	*25.28*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**227.56**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.51	0.73		*9.46*	*Cum*
	Right and left Return wall	4	3.11	1.43		*17.79*	*Cum*
	Below Approach Slab	*1*	*6.512*	*2.708*	*0.94*	*16.58*	*Cum*
	Extra slope	*1*	*9.624*	*0.894*	*1.37*	*11.79*	*Cum*
		1	*9.624*	*0.894*	*1.37*	*11.79*	*Cum*
	TOTAL					**67.39**	**Cum**

BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 9.205							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*100.00*			**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.16*	*1.83*	*1.20*	*13.89*	*Cum*
		1	*8.47*	*2.16*	*1.20*	*21.92*	*Cum*
	Extra for Slope (0.5:1)	*1*	*11.62*	*1.83*	*1.20*	*25.57*	*Cum*
	Left abutment	*2*	*3.16*	*2.16*	*1.20*	*16.34*	*Cum*
		1	*8.47*	*2.16*	*1.20*	*21.92*	*Cum*
	Extra for Slope (0.5:1)	*1*	*11.62*	*0.60*	*1.20*	*8.37*	*Cum*
	TOTAL					**108.00**	**Cum**

10501.1

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.86*	*1.53*	*0.20*	*1.75*	*Cum*
		1	*8.17*	*1.86*	*0.20*	*3.03*	*Cum*
	Left abutment	*2*	*2.86*	*1.53*	*0.20*	*1.75*	*Cum*
		1	*8.17*	*1.86*	*0.20*	*3.03*	*Cum*
	Levelling course	*2*	*8.50*	*3.50*	*0.08*	*4.76*	*Cum*
	TOTAL					**14.33**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*8.17*	*1.66*	*0.20*	*2.71*	*Cum*
		1	*8.17*	*1.46*	*0.80*	*9.52*	*Cum*
		1	*8.17*	*0.94*	*0.79*	*6.05*	*Cum*
		1	*8.17*	*0.82*	*0.55*	*3.68*	*Cum*
	Return wall	*2*	*1.83*	*1.33*	*0.20*	*0.97*	*Cum*
		2	*1.83*	*1.13*	*0.80*	*3.31*	*Cum*
		2	*1.83*	*0.57*	*1.11*	*2.30*	*Cum*
		2	*1.83*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*8.17*	*1.66*	*0.20*	*2.71*	*Cum*
		1	*8.17*	*1.46*	*0.80*	*9.52*	*Cum*
		1	*8.17*	*0.94*	*0.79*	*6.05*	*Cum*
		1	*8.17*	*0.82*	*0.55*	*3.68*	*Cum*
	Return wall	*2*	*1.83*	*1.33*	*0.20*	*0.97*	*Cum*
		2	*1.83*	*1.13*	*0.80*	*3.31*	*Cum*
		2	*1.83*	*0.57*	*1.11*	*2.30*	*Cum*
		2	*1.83*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*8.17*	*0.40*	*0.45*	*-2.94*	*Cum*
	TOTAL					**54.59**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.20	8.50	0.40	*14.17*	*Cum*
	Approch Slab	*2*	*3.50*	*8.50*	*0.30*	*17.85*	*Cum*
	Wearing coat	*1*	*11.20*	*7.50*	*0.08*	*6.30*	*Cum*
	Parapet	*2*	*11.20*	*0.44*	*0.18*	*1.74*	*Cum*
		2	*11.20*	*0.35*	*0.25*	*1.97*	*Cum*
		2	*11.20*	*0.22*	*0.55*	*2.70*	*Cum*
	TOTAL					**44.73**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*61*	*4.76*		*1.578*	*458.2*	*Kg*
a2	*10*	*21*	*8.90*		*0.616*	*115.2*	*Kg*
a3	*10*	*2*	*8.40*		*0.616*	*10.4*	*Kg*
a4	*10*	*38*	*4.62*		*0.616*	*108.2*	*Kg*
a5	*10*	*17*	*8.69*		*0.616*	*91.1*	*Kg*
	APPROACH SLAB						
c1	*12*	*114*	*3.70*		*0.888*	*374.4*	*Kg*
c2	*12*	*46*	*8.70*		*0.888*	*355.3*	*Kg*
c3	*12*	*114*	*3.70*		*0.888*	*374.4*	*Kg*
c4	*12*	*46*	*8.70*		*0.888*	*355.3*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*70*	*2.37*		*0.888*	*147.4*	*Kg*
x2	*16*	*70*	*1.32*		*1.578*	*146.3*	*Kg*
x3	*10*	*24*	*4.10*		*0.616*	*60.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*54.6*	*0.0025*	*0.136*	*7850.00*	*1071.26*	*Kg*
	Total Reinforcement Steel (in kg)					*4240.9*	*Kg*
	Total Weight in Metric Tonne					**4.24**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*8.17*		*0.20*	*3.27*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.66	0.20	0.66	Sqm
		2	8.17		0.80	13.07	Sqm
		2		1.46	0.80	2.33	Sqm
		2	8.17		0.79	12.89	Sqm
		2		0.94	0.79	1.48	Sqm
		2	8.17		0.55	8.98	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.83		0.20	0.73	Sqm
		2		1.33	0.20	0.53	Sqm
		2	1.83		0.80	2.93	Sqm
		2		1.13	0.80	1.81	Sqm
		2	1.83		1.11	4.06	Sqm
		2		0.57	1.11	1.26	Sqm
		2	1.83		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	8.17		0.20	3.27	Sqm
		2		1.66	0.20	0.66	Sqm
		2	8.17		0.80	13.07	Sqm
		2		1.46	0.80	2.33	Sqm
		2	8.17		0.79	12.89	Sqm
		2		0.94	0.79	1.48	Sqm
		2	8.17		0.55	8.98	Sqm
		2		0.82	0.55	0.90	Sqm
	Return wall	2	1.83		0.20	0.73	Sqm
		2		1.33	0.20	0.53	Sqm
		2	1.83		0.80	2.93	Sqm
		2		1.13	0.80	1.81	Sqm
		2	1.83		1.11	4.06	Sqm
		2		0.57	1.11	1.26	Sqm
		2	1.83		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	4.20		0.40	3.33	Sqm
		1	4.20	8.50		35.70	Sqm
		2		8.50	0.40	6.75	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	8.50		59.50	Sqm
		4		8.50	0.30	10.20	Sqm
	Parapet	4	11.20		0.18	7.84	Sqm
		4		0.44	0.18	0.31	Sqm
		4	11.20		0.25	11.20	Sqm
		4		0.35	0.25	0.35	Sqm
		4	11.20		0.55	24.64	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					**275.64**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	8.50	0.40		6.80	Sqm
	TOTAL					**6.80**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	2	8.50			17.00	RM
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	8.47	0.92		15.55	Cum
	Right and left Return wall	4	3.16	0.69		8.68	Cum
	Below Approach Slab	1	8.467	2.663	1.259	28.39	Cum
	Extra slope	1	11.624	1.833	1.2	25.57	Cum
		1	11.624	0.6	1.2	8.37	Cum
	TOTAL					**86.55**	**Cum**

BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 9.632							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	1	80.00			**80.00**	**Sqm**

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S.No.	Items	No.	Length	Width	Height	Quantity	Unit
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.12*	*1.79*	*1.20*	*13.41*	*Cum*
		1	*6.51*	*2.12*	*1.20*	*16.53*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.90*	*1.20*	*10.35*	*Cum*
	Left abutment	*2*	*3.12*	*2.12*	*1.20*	*15.84*	*Cum*
		1	*6.51*	*2.12*	*1.20*	*16.53*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.62*	*0.90*	*1.20*	*10.35*	*Cum*
	TOTAL					**83.02**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.82*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.82*	*0.20*	*2.26*	*Cum*
	Left abutment	*2*	*2.82*	*1.49*	*0.20*	*1.68*	*Cum*
		1	*6.21*	*1.82*	*0.20*	*2.26*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**11.52**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.21*	*1.62*	*0.20*	*2.01*	*Cum*
		1	*6.21*	*1.42*	*0.80*	*7.04*	*Cum*
		1	*6.21*	*0.92*	*0.66*	*3.74*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.94*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.16*	*Cum*
		2	*1.81*	*0.55*	*0.98*	*1.93*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.21*	*1.62*	*0.20*	*2.01*	*Cum*
		1	*6.21*	*1.42*	*0.80*	*7.04*	*Cum*
		1	*6.21*	*0.92*	*0.66*	*3.74*	*Cum*
		1	*6.21*	*0.82*	*0.55*	*2.80*	*Cum*
	Return wall	*2*	*1.81*	*1.29*	*0.20*	*0.94*	*Cum*
		2	*1.81*	*1.09*	*0.80*	*3.16*	*Cum*
		2	*1.81*	*0.55*	*0.98*	*1.93*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	DEDUCTION	*2*	*6.21*	*0.40*	*0.45*	*-2.23*	*Cum*
	TOTAL					**41.42**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	4.20	6.50	0.39	*10.51*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*11.20*	*5.50*	*0.08*	*4.62*	*Cum*
	Parapet	*2*	*11.20*	*0.44*	*0.18*	*1.74*	*Cum*
		2	*11.20*	*0.35*	*0.25*	*1.97*	*Cum*
		2	*11.20*	*0.22*	*0.55*	*2.70*	*Cum*
	TOTAL					**35.19**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*46*	*4.76*		*1.578*	*345.5*	*Kg*
a2	*10*	*21*	*6.90*		*0.616*	*89.3*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.56*		*0.616*	*73.1*	*Kg*
a5	*10*	*17*	*6.69*		*0.616*	*70.1*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
x1	*12*	*70*	*2.37*		*0.888*	*147.3*	*Kg*
x2	*16*	*70*	*1.32*		*1.578*	*146.3*	*Kg*
x3	*10*	*24*	*4.10*		*0.616*	*60.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*41.4*	*0.0025*	*0.104*	*7850.00*	*812.87*	*Kg*
	Total Reinforcement Steel (in kg)					*3438.0*	*Kg*
	Total Weight in Metric Tonne					**3.44**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.21*		*0.20*	*2.48*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*6.21*		*0.80*	*9.93*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*6.21*		*0.66*	*8.14*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*6.21*		*0.55*	*6.83*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.29*	*0.20*	*0.52*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.09*	*0.80*	*1.75*	*Sqm*
		2	*1.81*		*0.98*	*3.53*	*Sqm*
		2		*0.55*	*0.98*	*1.07*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.21*		*0.20*	*2.48*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*6.21*		*0.80*	*9.93*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*6.21*		*0.66*	*8.14*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*6.21*		*0.55*	*6.83*	*Sqm*
		2		*0.82*	*0.55*	*0.90*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.29*	*0.20*	*0.52*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.09*	*0.80*	*1.75*	*Sqm*
		2	*1.81*		*0.98*	*3.53*	*Sqm*
		2		*0.55*	*0.98*	*1.07*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*4.20*		*0.39*	*3.23*	*Sqm*
		1	*4.20*	6.50		*27.30*	*Sqm*
		2		*6.50*	0.39	*5.01*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*11.20*		*0.18*	*7.84*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*11.20*		*0.25*	*11.20*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*11.20*		*0.55*	*24.64*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**224.96**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.51	0.77		*10.03*	*Cum*
	Right and left Return wall	4	3.12	1.45		*18.05*	*Cum*
	Below Approach Slab	*1*	*6.507*	*2.703*	*1.126*	*19.80*	*Cum*

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S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Extra slope	*1*	*9.624*	*0.8965*	*1.2*	*10.35*	*Cum*
		1	*9.624*	*0.8965*	*1.2*	*10.35*	*Cum*
	TOTAL					**68.60**	**Cum**

	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 14.64						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*90.00*			**90.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*3.01*	*1.67*	*1.16*	*11.63*	*Cum*
		1	*6.63*	*2.01*	*1.16*	*15.40*	*Cum*
	Extra for Slope (0.5:1)	*1*	*9.64*	*0.84*	*1.16*	*9.31*	*Cum*
	Left abutment	*2*	*3.01*	*2.01*	*1.16*	*13.99*	*Cum*
		1	*6.63*	*2.01*	*1.16*	*15.40*	*Cum*
	Extra for Slope (0.5:1)	*1*	*6.63*	*0.84*	*1.16*	*6.40*	*Cum*
	TOTAL					**72.13**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.71*	*1.37*	*0.20*	*1.49*	*Cum*
		1	*6.33*	*1.71*	*0.20*	*2.16*	*Cum*
	Left abutment	*2*	*2.71*	*1.37*	*0.20*	*1.49*	*Cum*
		1	*6.33*	*1.71*	*0.20*	*2.16*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.94**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*6.33*	*1.71*	*0.20*	*2.16*	*Cum*
		1	*6.33*	*1.41*	*0.80*	*7.14*	*Cum*
		1	*6.33*	*0.87*	*0.30*	*1.64*	*Cum*
		1	*6.33*	*0.82*	*0.50*	*2.59*	*Cum*
	Return wall	*2*	*1.76*	*1.17*	*0.20*	*0.82*	*Cum*
		2	*1.76*	*0.97*	*0.80*	*2.73*	*Cum*
		2	*1.76*	*0.49*	*0.57*	*0.97*	*Cum*
		2	*1.76*	*0.40*	*0.15*	*0.21*	*Cum*
	Left abutment	*1*	*6.33*	*1.71*	*0.20*	*2.16*	*Cum*
		1	*6.33*	*1.41*	*0.80*	*7.14*	*Cum*
		1	*6.33*	*0.87*	*0.30*	*1.64*	*Cum*
		1	*6.33*	*0.82*	*0.50*	*2.59*	*Cum*
	Return wall	*2*	*1.76*	*1.17*	*0.20*	*0.82*	*Cum*
		2	*1.76*	*0.97*	*0.80*	*2.73*	*Cum*
		2	*1.76*	*0.49*	*0.57*	*0.97*	*Cum*
		2	*1.76*	*0.40*	*0.15*	*0.21*	*Cum*
	DEDUCTION	*2*	*6.33*	*0.40*	*0.45*	*-2.28*	*Cum*
	TOTAL					**34.26**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.30	6.50	0.34	*5.01*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*9.30*	*5.50*	*0.08*	*3.84*	*Cum*
	Parapet	*2*	*9.30*	*0.44*	*0.18*	*1.45*	*Cum*
		2	*9.30*	*0.35*	*0.25*	*1.63*	*Cum*
		2	*9.30*	*0.22*	*0.55*	*2.24*	*Cum*
	TOTAL					**27.81**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*36*	*2.76*		*1.578*	*156.8*	*Kg*
a2	*10*	*12*	*6.90*		*0.616*	*51.0*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
a4	*10*	*23*	*2.62*		*0.616*	*37.1*	*Kg*
a5	*10*	*7*	*6.80*		*0.616*	*29.3*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*56*	*2.32*		*0.888*	*115.4*	*Kg*
x2	*16*	*56*	*1.27*		*1.578*	*112.6*	*Kg*
x3	*10*	*24*	*2.20*		*0.616*	*32.5*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*34.3*	*0.0025*	*0.086*	*7850.00*	*672.44*	*Kg*
	Total Reinforcement Steel (in kg)					*2900.1*	*Kg*
	Total Weight in Metric Tonne					**2.90**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*6.33*		*0.20*	*2.53*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*6.33*		*0.80*	*10.13*	*Sqm*
		2		*1.41*	*0.80*	*2.26*	*Sqm*
		2	*6.33*		*0.30*	*3.80*	*Sqm*
		2		*0.87*	*0.30*	*0.52*	*Sqm*
		2	*6.33*		*0.50*	*6.33*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.76*		*0.20*	*0.70*	*Sqm*
		2		*1.17*	*0.20*	*0.47*	*Sqm*
		2	*1.76*		*0.80*	*2.81*	*Sqm*
		2		*0.97*	*0.80*	*1.55*	*Sqm*
		2	*1.76*		*0.57*	*2.00*	*Sqm*
		2		*0.49*	*0.57*	*0.55*	*Sqm*
		2	*1.76*		*0.15*	*0.53*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*6.33*		*0.20*	*2.53*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*6.33*		*0.80*	*10.13*	*Sqm*
		2		*1.41*	*0.80*	*2.26*	*Sqm*
		2	*6.33*		*0.30*	*3.80*	*Sqm*
		2		*0.87*	*0.30*	*0.52*	*Sqm*
		2	*6.33*		*0.50*	*6.33*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.76*		*0.20*	*0.70*	*Sqm*
		2		*1.17*	*0.20*	*0.47*	*Sqm*
		2	*1.76*		*0.80*	*2.81*	*Sqm*
		2		*0.97*	*0.80*	*1.55*	*Sqm*
		2	*1.76*		*0.57*	*2.00*	*Sqm*
		2		*0.49*	*0.57*	*0.55*	*Sqm*
		2	*1.76*		*0.15*	*0.53*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.30*		*0.34*	*1.54*	*Sqm*
		1	*2.30*	6.50		*14.95*	*Sqm*
		2		*6.50*	0.34	*4.36*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*9.30*		*0.18*	*6.51*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.30*		*0.25*	*9.30*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.30*		*0.55*	*20.46*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**187.35**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos

10501.1

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	6.63	0.52		*6.93*	*Cum*
	Right and left Return wall	4	3.01	1.01		*12.16*	*Cum*
	Below Approach Slab	*1*	*6.629*	*2.81*	*0.764*	*14.23*	*Cum*
	Extra slope	*1*	*9.639*	*0.8355*	*1.156*	*9.31*	*Cum*
		1	*9.639*	*0.8355*	*1.156*	*9.31*	*Cum*
	TOTAL					**51.95**	**Cum**

	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 15.179						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	TOTAL					**80.00**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**3.64**	**Cum**
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	0.90	6.50	0.34	*1.96*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*7.90*	*5.50*	*0.08*	*3.26*	*Cum*
	Parapet	*2*	*7.90*	*0.44*	*0.18*	*1.23*	*Cum*
		2	*7.90*	*0.35*	*0.25*	*1.39*	*Cum*
		2	*7.90*	*0.22*	*0.55*	*1.90*	*Cum*
	TOTAL					**23.39**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*36*	*1.36*		*1.578*	*77.3*	*Kg*
a2	*10*	*5*	*6.90*		*0.616*	*21.3*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*23*	*2.62*		*0.616*	*37.1*	*Kg*
a5	*10*	*3*	*6.80*		*0.616*	*12.6*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*2.20*		*0.888*	*168.0*	*Kg*
c2	*12*	*26*	*6.70*		*0.888*	*154.6*	*Kg*
c3	*12*	*86*	*2.20*		*0.888*	*168.0*	*Kg*
c4	*12*	*26*	*6.70*		*0.888*	*154.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*14*	*2.32*		*0.888*	*28.8*	*Kg*
x2	*16*	*14*	*1.27*		*1.578*	*28.1*	*Kg*
x3	*10*	*24*	*0.80*		*0.616*	*11.8*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*64*	*2.32*		*0.888*	*131.9*	*Kg*
y2	*16*	*64*	*1.27*		*1.578*	*128.7*	*Kg*
y3	*10*	*48*	*1.90*		*0.616*	*56.2*	*Kg*
	Total Reinforcement Steel (in kg)					*1186.9*	*Kg*
	Total Weight in Metric Tonne					**1.19**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Slab	*2*	*0.90*		*0.34*	*0.60*	*Sqm*
		1	*0.90*	6.50		*5.85*	*Sqm*
		2		*6.50*	0.34	*4.36*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Parapet	*4*	*7.90*		*0.18*	*5.53*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*7.90*		*0.25*	*7.90*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*7.90*		*0.55*	*17.38*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**100.26**	**Sqm**
7	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	4				**4.00**	**No.**
8	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
9	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	TOTAL					**35.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF ANGRA BRANCH CANAL

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	H.R. OF PALUA MR.	0.350	₹ 0.00
2	SLR BRIDGE	0.914	₹ 0.00
3	SLR BRIDGE/FALL (1.220)	1.219	₹ 4,26,843.57
4	FALL (2.438 M) (NEW)	1.676	₹ 0.00
5	DLR BRIDGE	2.440	₹ 18,121.67
6	SLR BRIDGE(NEW)	2.925	₹ 0.00
7	C.D. WORKS(AQUEDUCT)	3.280	₹ 14,90,775.64
8	H.R OF ASNI MINOR	4.240	₹ 19,681.26
9	BRIDGE	5.870	₹ 11,677.44
10	CD WORK	6.100	₹ 75,952.02
11	SLR BRIDGE	7.850	₹ 1,25,910.58
12	FALL (2.438M)	8.687	₹ 24,940.42
13	C.D. WORKS	8.960	₹ 64,503.44
14	HR FOR KAILASPUR DY. / BUDAUL SUB DY	9.050	₹ 1,81,468.20
15	FALL (2.348 M)	9.784	₹ 3,40,619.41
16	SLR BRIDGE	11.170	₹ 6,037.66
17	FALL (0.610 M)	11.735	₹ 50,397.67
18	FALL (1.524 M)(NEW)	12.750	₹ 0.00
19	HR FOR PATHARA MR	13.200	₹ 28,456.10
20	FALL (0.61M)	14.021	₹ 1,68,576.88
21	SLR BRIDGE	15.200	₹ 6,745.92
22	HR FOR DABUR MR	15.722	₹ 24,610.69
23	FALL (0.914 M)/HR OF SADOPUR MR	16.002	₹ 72,510.72
24	FALL (0.914 M)(NEW)	17.450	₹ 0.00
25	SLR BRIDGE	17.600	₹ 37,306.85
26	FALL (0.914 M)	17.739	₹ 68,616.56
27	DLR BRIDGE	18.670	₹ 0.00
28	FALL (0.914 M)(NEW)	19.150	₹ 97,292.91
29	FALL (0.610 M)(NEW)	19.500	₹ 0.00
30	RAILWAY BRIDGE	19.665	₹ 0.00
31	SLR BRIDGE /HR/CR	19.780	₹ 1,37,375.69
32	FALL (1.524 M)(Eliminated)	20.574	₹ 72,346.88
33	CULVERT	20.850	₹ 2,951.10
34	FALL (1.828 M)(NEW)	21.050	₹ 0.00
35	SLR BRIDGE (NEW)	21.800	₹ 0.00
36	FALL (1.066 M)(NEW)	22.300	₹ 0.00
37	SLR BRIDGE	22.500	₹ 0.00
38	SLR BRIDGE(NEW)	22.850	₹ 21,665.20
39	SLR BRIDGE	23.400	₹ 20,087.09
40	FALL (0.762 M)	23.700	₹ 1,14,983.28
41	CULVERT	24.250	₹ 61,504.07
42	SLR BRIDGE	24.660	₹ 0.00
43	C.D. WORKS	24.900	₹ 1,94,213.83
44	FALL (0.762 M)(NEW)	25.350	₹ 0.00

45	SLR BRIDGE	25.790	₹ 1,888.70
46	FALL (0.610 M)	26.213	₹ 1,09,494.80
47	FALL (1.067 M)(NEW)	26.650	₹ 0.00
48	FALL (0.61 M)/HR OF MALHAD SUB DY(NEW)	26.975	₹ 95,631.47
49	FALL (0.914 M)	27.889	₹ 27,073.92
50	FALL (0.914 M) (NEW)	28.500	₹ 0.00
51	SLR BRIDGE	29.030	₹ 26,391.41
52	FALL (0.914 M)(NEW)	29.550	₹ 0.00
53	SLR BRIDGE	30.090	₹ 5,752.04
54	FALL (0.914 M)(NEW)	30.800	₹ 0.00
55	HR FOR RAMPUR- MR-II (NEW)	31.530	₹ 0.00
56	FALL (0.914 M)	31.852	₹ 32,641.80
57	SLR BRIDGE	32.690	₹ 0.00
58	FALL (.914M)	33.680	₹ 69,843.48
59	DLR BRIDGE	34.380	₹ 0.00
60	FALL (0.914 M)(NEW)	34.500	₹ 0.00
61	SLR BRIDGE	36.430	₹ 0.00
Total In Rs.			**₹ 43,34,890.41**
Total In Lakhs.			**₹ 43.35**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF PALUA MR. (ANGRA BRANCH CANAL)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	SLR BRIDGE	0.152	₹ 23,678.51
2	FALL (1.524 M)(Eliminated)	1.150	₹ 13,801.14
3	FALL (0.610 M) (New)	1.650	₹ 0.00
4	FALL (1.372 M)	1.768	₹ 13,801.14
5	FALL (0.914 M) (New)	2.022	₹ 0.00
6	FALL (1.524 M) (NEW)	2.225	₹ 0.00
7	SLR BRIDGE	2.469	₹ 31,177.86
Total In Rs.			**₹ 82,458.65**
Total In Lakhs.			**₹ 0.82**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF ASNI MR. (ANGRA BRANCH CANAL)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	SLR BRIDGE(New)	0.155	₹ 0.00
2	SLR BRIDGE	0.823	₹ 18,107.28
3	FALL (0.610 M)(New)	1.700	₹ 0.00
4	SLR BRIDGE (New)	1.951	₹ 0.00
5	SLR BRIDGE	3.609	₹ 33,951.15
6	FALL (0.610 M)(New)	4.084	₹ 0.00
Total In Rs.			**₹ 52,058.44**
Total In Lakhs.			**₹ 0.52**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KAILASHPUR SUB DY. (ANGARA BRANCH CANAL)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	HR CUM FALL (1.981 M)	0.000	₹ 0.00
2	FALL (1.524 M)(Eliminated)	0.305	₹ 54,237.00
3	SLR BRIDGE (NEW)	0.600	₹ 0.00
4	PIPE CULVERT (New)	0.800	₹ 0.00
5	C.D. WORKS	1.160	₹ 26,066.93
6	FALL (0.457 M)(NEW)	1.575	₹ 0.00
7	CULVERT	1.690	₹ 0.00
8	SLR BRIDGE	2.030	₹ 44,225.17
9	FALL (0.610 M)(NEW)	2.250	₹ 0.00
10	C.D. WORKS	2.650	₹ 23,729.40
11	CULVERT	2.840	₹ 41,932.75
12	SLR BRIDGE	3.110	₹ 41,983.75
13	C.D. WORKS	3.770	₹ 28,050.33
14	SLR BRIDGE/ INLET	4.210	₹ 33,142.89
15	SLR BRIDGE	4.820	₹ 30,497.90
16	CULVERT	5.250	₹ 20,227.19
17	FALL (0.610 M) (NEW)	5.400	₹ 0.00
18	SLR BRIDGE	5.670	₹ 30,025.57
19	FALL (0.610 M) (NEW)	6.000	₹ 0.00
20	SLR BRIDGE (NEW)	6.850	₹ 0.00
21	SLR BRIDGE	7.160	₹ 43,227.48
22	FALL (1.524 M)	7.175	₹ 0.00
Total In Rs.			**₹ 4,17,346.35**
Total In Lakhs.			**₹ 4.17**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF BUDHAUL SUB DY. (ANGARA BRANCH CANAL)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	SLR BRIDGE	0.500	₹ 9,053.64
2	FALL (1.067 M)	0.525	₹ 43,675.20
3	CD WORK	0.950	₹ 0.00
4	FALL (1.220 M) (ELIMINATED)	1.050	₹ 96,634.07
5	FALL (1.219 M) (NEW)	1.260	₹ 0.00
6	FALL (0.914 M) (NEW)	1.700	₹ 0.00
7	FALL (0.457 M)/ SLR BRIDGE	2.050	₹ 55,181.35
8	SLR BRIDGE	2.470	₹ 7,263.27
9	SLR BRIDGE	2.850	₹ 20,282.96
10	FALL(0.457 M) (ELIMINATED)	3.048	₹ 0.00
11	C.D. WORKS	3.250	₹ 25,240.62
12	FALL (0.305M)	3.500	₹ 45,369.33
13	SLR BRIDGE	3.790	₹ 41,344.00
14	FALL(0.305)	3.800	₹ 0.00
15	FALL (0.762 M)	4.500	₹ 0.00
16	C.D. WORKS	4.600	₹ 0.00
17	FALL (ELIMINATED)	4.850	₹ 65,876.73
18	FALL (0.457 M)	5.060	₹ 1,34,993.21
19	SLR BRIDGE	5.700	₹ 30,628.36
20	FALL (1.524 M)	5.910	₹ 0.00
21	SLR BRIDGE	6.370	₹ 0.00
22	FALL(0.457 M) (ELIMINATED)	3.048	₹ 0.00
23	FALL (1.981 M)	7.190	₹ 0.00
24	FALL(0.457 M) (ELIMINATED)	7.350	₹ 0.00
25	FALL (1.830 M)	7.620	₹ 94,219.52
26	SLR BRIDGE	7.650	₹ 28,388.89
27	C.D. WORKS	7.920	₹ 1,180.44
28	SLR BRIDGE	7.960	₹ 24,215.63
29	FALL (1.066 M)	8.100	₹ 0.00
30	PIPE CULVERT	8.250	₹ 18,756.00
31	FALL (0.914 M)	8.425	₹ 21,815.18
32	FALL (0.914 M)	8.850	₹ 1,37,281.05
33	SLR BRIDGE	9.190	₹ 24,442.92
34	FALL (0.762 M)	9.200	₹ 22,213.60
35	FALL (0.914 M)	9.800	₹ 13,260.53
36	SLR BRIDGE	10.175	₹ 13,464.59
37	SLR BRIDGE	11.450	₹ 20,598.55
38	FALL (0.610 M)	11.500	₹ 0.00
39	RAILWAY BRIDGE	12.250	₹ 0.00
40	SLR BRIDGE	12.300	₹ 23,889.70
Total In Rs.			**₹ 10,19,269.35**
Total In Lakhs.			**₹ 10.19**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF PATOI SUB DY. (ANGARA BRANCH CANAL)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	SLR BRIDGE	0.460	₹ 52,094.92
2	FALL (0.305 M) (NEW)	0.475	₹ 0.00
3	CD WORK (SYPHON)	1.554	₹ 75,274.90
4	SLR BRIDGE	2.045	₹ 49,795.03
5	CR + HR ANTI MR.	2.469	₹ 20,770.00
6	DLR BRIDGE	3.078	₹ 43,414.92
7	FALL (1.220 M)	3.725	₹ 15,236.47
8	SLR BRIDGE (NEW)	3.850	₹ 0.00
9	SLR BRIDGE + FALL (0.457 M) (NEW)	4.510	₹ 77,088.92
10	CD WORK	4.816	₹ 40,365.80
11	HR OF MARUKA MR (NEW)	5.730	₹ 0.00
12	SLR BRIDGE (NEW)	5.944	₹ 0.00
13	HR OF RAMPUR MR (NEW)	5.950	₹ 0.00
14	SLR BRIDGE	6.750	₹ 53,071.71
15	FALL(0.609 M) (NEW)	6.950	₹ 0.00
16	SLR BRIDGE (NEW)	7.165	₹ 0.00
17	SLR BRIDGE (NEW)	7.405	₹ 0.00
18	SLR BRIDGE (NEW)	7.560	₹ 0.00
19	FALL(0.609 M) (NEW)	7.900	₹ 0.00
20	SLR BRIDGE (NEW)	8.030	₹ 0.00
21	FALL (0.610 M) + CD WORK FOR DHAWA CANAL (NEW)	8.382	₹ 0.00
22	HR OF GULAB BIGHA MR (NEW)	8.400	₹ 0.00
23	DLR BRIDGE (NEW)	9.205	₹ 0.00
24	FALL (0.610 M) (NEW)	9.240	₹ 0.00
25	DLR BRIDGE (NEW)	9.350	₹ 0.00
26	SLR BRIDGE (NEW)	9.632	₹ 0.00
27	FALL (1.520 M) (NEW)	10.025	₹ 0.00
28	FALL (0.914 M) (NEW)	11.125	₹ 0.00
29	FALL (1.220 M) (NEW)	12.000	₹ 0.00
30	CD WORK + SLR BRIDGE	12.482	₹ 0.00
31	FALL + SLR (0.914M) (NEW)	12.689	₹ 0.00
32	FALL (0.610 M) (NEW)	13.500	₹ 0.00
33	CD WORK (NEW)	13.800	₹ 0.00
34	FOOT BRIDGE (NEW)	14.640	₹ 0.00
35	CD WORK (NEW)	14.865	₹ 0.00
36	SLR BRIDGE	14.960	₹ 49,795.03
37	FALL (0.610 M) (NEW)	15.000	₹ 0.00
38	SLR BRIDGE (NEW)	15.179	₹ 0.00
Total In Rs.			**₹ 4,76,907.69**
Total In Lakhs.			**₹ 4.77**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF ANGRA BRANCH CANAL									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR HR OF PALUA MINOR (Ch.-0.350Km)									
1		**A new structure is proposed at this location as the existing one is completely damaged.**							
AOC FOR SLR BRIDGE (Ch.-0.914 Km)									
1		**A new structure is proposed at this location as the existing one is completely damaged.**							
AOC FOR BRIDGE/FALL (Ch.-1.219Km)									
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	20.625	Cum	**6914.20**	142605.38	8.51	8.87	17.74
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	21.060	Cum	**6381.70**	134398.60	6.82	9.48	18.95
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	116.570	Sqm	**578.60**	67447.40			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	18.346	Cum	**1075.00**	19721.68			
		Coarse Aggregates (100 Km lead)	36.692	Cum	**1398.00**	51294.72			
		Cement (30 km lead)	15.331	MT	**742.00**	11375.79			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**426843.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	18.35	Cum	**584.64**	10725.66	1072.57		
		Coarse Aggregate	36.69	Cum	**944.26**	34646.32	3464.63		
		Total					**4537.20**		
AOC FOR DLR BRIDGE (Ch.-2.440 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	31.500	Sqm	**340.20**	10716.30	3.402	0.460	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	31.500	Sqm	**63.20**	1990.80	0.05		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.460	Cum	**1075.00**	494.39			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.449	MT	**742.00**	2559.30			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
TOTAL (In Rs.)						**18121.67**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.46	Cum	**584.64**	268.88	26.89		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**26.89**		
AOC FOR SLR BRIDGE (Ch.-2.925 Km)									
1		**New Structure is proposed here.**							
AOC FOR SUPER PASSAGE (Ch.-3.280 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	597.375	Cum	**2492.58**	1489004.98			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**1490775.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR HR OF ASNI MINOR (Ch.-4.240 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.043	Cum	**2492.58**	17556.47			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**19681.26**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-5.870 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	19.800	Sqm	**340.20**	6735.96	2.138	0.289	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	19.800	Sqm	**63.20**	1251.36	0.03		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.289	Cum	**1075.00**	310.76			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.168	MT	**742.00**	1608.70			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**11677.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.29	Cum	**584.64**	169.01	16.90		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**16.90**		
		AOC FOR CD WORKS (Ch.-6.100 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	151.800	Sqm	**340.20**	51642.36	16.394	2.216	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	151.800	Sqm	**63.20**	9593.76	0.23		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.216	Cum	**1075.00**	2382.50			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	16.622	MT	**742.00**	12333.40			
		Brick (15 km lead)	0.00	No.	3.17	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		TOTAL (In Rs.)				**75952.02**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.22	Cum	**584.64**	1295.73	129.57		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**129.57**		
		AOC FOR CD WORKS /BRIDGE (Ch.-7.850 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	6.90	Cum	**680.10**	4692.69	0.79	2.21	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	214.500	Sqm	**340.20**	72972.90	23.166	3.132	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	214.500	Sqm	**63.20**	13556.40	0.32		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.340	Cum	**1075.00**	5740.18			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	24.282	MT	**742.00**	18017.44			
		Brick (15 km lead)	3450.00	No.	3.17	10930.98			
		TOTAL (In Rs.)				**125910.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.34	Cum	**584.64**	3121.80	312.18		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**312.18**		
		AOC FOR FALL (Ch.-8.687 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	45.600	Sqm	**340.20**	15513.12	4.925	0.666	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	45.600	Sqm	**63.20**	2881.92	0.07		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.666	Cum	**1075.00**	715.69			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.993	MT	**742.00**	3704.90			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**24940.42**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.67	Cum	**584.64**	389.23	38.92		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**38.92**		
		AOC FOR CD WORKS (Ch.-8.960 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	124.200	Sqm	**340.20**	42252.84	13.413	1.813	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	124.200	Sqm	**63.20**	7849.44	0.19		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.813	Cum	**1075.00**	1949.32			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	13.600	MT	**742.00**	10090.97			
		Brick (15 km lead)	0.00	No.	3.17	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		TOTAL (In Rs.)				**64503.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.81	Cum	**584.64**	1060.14	106.01		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**106.01**		
		AOC FOR HR OF HR OF KAILASHPUR DY & HR OF BUDAUL SUB DY (Ch.-9.050Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	45.566	Cum	**2492.58**	113576.90			
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	138.000	Sqm	**340.20**	46947.60	14.904	2.015	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	98.000	Sqm	**63.20**	6193.60	0.15		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.015	Cum	**1075.00**	2165.91			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	15.051	MT	**742.00**	11167.67			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**181468.20**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.01	Cum	**584.64**	1177.93	117.79		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**117.79**		
		AOC FOR BRIDGE/FALL (Ch.-9.784 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	32.150	Cum	**6914.20**	222291.53	13.26	13.82	27.65
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	91.950	Sqm	**578.60**	53202.27			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	13.825	Cum	**1075.00**	14861.34			
		Coarse Aggregates (100 Km lead)	27.649	Cum	**1398.00**	38653.30			
		Cement (30 km lead)	13.262	MT	**742.00**	9840.31			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**340619.41**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	13.82	Cum	**584.64**	8082.36	808.24		
		Coarse Aggregate	27.65	Cum	**944.26**	26107.84	2610.78		
		Total					**3419.02**		
		AOC FOR BRIDGE (Ch.-11.170 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.000	Sqm	**340.20**	3061.80	0.972	0.131	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.000	Sqm	**63.20**	568.80	0.01		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.131	Cum	**1075.00**	141.26			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.985	MT	**742.00**	731.23			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**6037.66**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.13	Cum	**584.64**	76.82	7.68		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**7.68**		
		AOC FOR FALL (Ch.-11.735 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	230.000	Sqm	**11.80**	2715.01			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	95.300	Sqm	**340.20**	32421.06	10.292	1.391	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	95.300	Sqm	**63.20**	6022.96	0.14		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.391	Cum	**1075.00**	1495.73			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	10.435	MT	**742.00**	7742.91			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**50397.67**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.39	Cum	**584.64**	813.46	81.35		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**81.35**		
		AOC FOR FALL (Ch.-12.750 Km)							
1		**New Structure is proposed here.**							
		AOC FOR HR OF PATHARA MINOR (Ch.-13.200 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	11.416	Cum	**2492.58**	28456.10			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**28456.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.-14.021 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	240.000	Sqm	**11.80**	2833.05			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	13.020	Cum	**6914.20**	90022.88	5.37	5.60	11.20
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.920	Sqm	**578.60**	4582.51			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
4	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	90.900	Sqm	**340.20**	30924.18	9.817	1.327	
5	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	90.900	Sqm	**63.20**	5744.88	0.14		
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	6.926	Cum	**1075.00**	7445.17			
		Coarse Aggregates (100 Km lead)	11.197	Cum	**1398.00**	15653.69			
		Cement (30 km lead)	15.324	MT	**742.00**	11370.51			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**168576.88**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.93	Cum	**584.64**	4049.06	404.91		
		Coarse Aggregate	11.20	Cum	**944.26**	10573.07	1057.31		
		Total					**1462.21**		
		AOC FOR SLR BRIDGE (Ch.-15.200 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	190.000	Sqm	**11.80**	2242.83			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.000	Sqm	**340.20**	3061.80	0.972	0.131	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.000	Sqm	**63.20**	568.80	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.131	Cum	**1075.00**	141.26			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.985	MT	**742.00**	731.23			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**6745.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.13	Cum	**584.64**	76.82	7.68		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**7.68**		
		AOC FOR HR OF HR OF DABURA MINOR (Ch.-15.722 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	170.000	Sqm	**11.80**	2006.75			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.068	Cum	**2492.58**	22603.95			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**24610.69**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR HR OF FALL/HR OF SADOPUR MINOR (Ch.-16.002 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.068	Cum	**2492.58**	22603.95			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	97.150	Sqm	**340.20**	33050.43	10.492	1.418	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	97.150	Sqm	**63.20**	6139.88	0.15		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.418	Cum	**1075.00**	1524.77			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	10.638	MT	**742.00**	7893.22			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**72510.72**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.42	Cum	**584.64**	829.25	82.92		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**82.92**		
		AOC FOR FALL (Ch.-17.450 Km)							
1		**New Fall Is Proposed Here.**							
		AOC FOR SLR BRIDGE (Ch.-17.600 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	190.000	Sqm	**11.80**	2242.83			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	70.080	Sqm	**340.20**	23841.22	7.569	1.023	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	70.080	Sqm	**63.20**	4429.06	0.11		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.023	Cum	**1075.00**	1099.91			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.674	MT	**742.00**	5693.84			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**37306.85**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.02	Cum	**584.64**	598.18	59.82		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**59.82**		
		AOC FOR FALL(Ch.-17.739 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.342	Cum	**6914.20**	23107.26	1.38	1.44	2.87
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	14.482	Sqm	**578.60**	8379.29			
4	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	56.800	Sqm	**340.20**	19323.36	6.134	0.829	
5	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	56.800	Sqm	**63.20**	3589.76	0.09		
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.266	Cum	**1075.00**	2436.32			
		Coarse Aggregates (100 Km lead)	2.874	Cum	**1398.00**	4018.02			
		Cement (30 km lead)	7.598	MT	**742.00**	5637.77			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**68616.56**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.27	Cum	**584.64**	1324.99	132.50		
		Coarse Aggregate	2.87	Cum	**944.26**	2713.92	271.39		
		Total					**403.89**		
		AOC FOR BRIDGE (Ch.-18.670 Km)							
1	**DLR Bridge is newley Constructed requires no repair work.**								
		AOC FOR FALL (Ch.-19.150 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	140.000	Sqm	**11.80**	1652.61			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	38.370	Cum	**2492.58**	95640.29			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**97292.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.-19.500 Km)							
1		**New Fall Is Proposed Here.**							
		AOC FOR RAILWAY BRIDGE (Ch.-19.665 Km)							
1	**Required No Need to repair it maintaned by Railway Department.**								
		AOC FOR HR OF DHARAMPUR SUB DY & HR OF PATOI DY +CR + SLR BRIDGE (Ch.-19.780Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	33.850	Cum	**2492.58**	84373.83			
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	103.100	Sqm	**340.20**	35074.62	11.135	1.505	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	103.100	Sqm	**63.20**	6515.92	0.15		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.505	Cum	**1075.00**	1618.15			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	11.289	MT	**742.00**	8376.64			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**137375.69**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.51	Cum	**584.64**	880.04	88.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**88.00**		
		AOC FOR FALL(Ch.-20.574 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	28.457	Cum	**2492.58**	70930.35			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**72346.88**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR HUME PIPE CULVERT (Ch.-20.850 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	250.000	Sqm	**11.80**	2951.10			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**2951.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-21.800 Km)							
1		**New SLR Bridge is Proposed here.**							
		AOC FOR SLR BRIDGE (Ch.-22.500 Km)							
1		**New SLR Bridge is Proposed here there is no existing Bridge at site. Excavation Quantity taken in Canal earthwork**							
		AOC FOR SLR BRIDGE (Ch.-22.850 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	220.000	Sqm	**11.80**	2596.97			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.650	Cum	**2492.58**	19068.24			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**21665.20**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-23.400 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	35.900	Sqm	**340.20**	12213.18	3.877	0.524	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	35.900	Sqm	**63.20**	2268.88	0.05		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.524	Cum	**1075.00**	563.45			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.931	MT	**742.00**	2916.79			
		Brick (15 km lead)	0.00	No.	3.17	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		TOTAL (In Rs.)				**20087.09**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.52	Cum	**584.64**	306.43	30.64		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**30.64**		
		AOC FOR FALL(Ch.-23.700 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.000	Sqm	**11.80**	1888.70			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.746	Cum	**6914.20**	53553.94	3.20	3.33	6.66
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	12.966	Sqm	**578.60**	7502.13			
4	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	73.500	Sqm	**340.20**	25004.70	7.938	1.073	
5	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	73.500	Sqm	**63.20**	4645.20	0.11		
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.404	Cum	**1075.00**	4733.94			
		Coarse Aggregates (100 Km lead)	6.661	Cum	**1398.00**	9312.26			
		Cement (30 km lead)	11.243	MT	**742.00**	8342.41			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**114983.28**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.40	Cum	**584.64**	2574.56	257.46		
		Coarse Aggregate	6.66	Cum	**944.26**	6289.84	628.98		
		Total					**886.44**		
		AOC FOR SLR BRIDGE (Ch.-24.250 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.000	Cum	**6914.20**	41485.20	2.48	2.58	5.16
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	3.200	Sqm	**578.60**	1851.52			
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	65.600	Sqm	**63.20**	4145.92	0.10		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.580	Cum	**1075.00**	2773.50			
		Coarse Aggregates (100 Km lead)	5.160	Cum	**1398.00**	7213.68			
		Cement (30 km lead)	2.573	MT	**742.00**	1909.46			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**61504.07**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.58	Cum	**584.64**	1508.37	150.84		
		Coarse Aggregate	5.16	Cum	**944.26**	4872.38	487.24		
		Total					**638.08**		
		AOC FOR SLR BRIDGE (Ch.-24.660 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1		**New SLR Bridge is Proposed here there is no existing Bridge at site. Excavation Quantity taken in Canal earthwork**							
		AOC FOR CD WORK (Ch.-24.900 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	304.460	Sqm	**340.20**	103577.29	32.881	4.445	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	304.460	Sqm	**63.20**	19241.87	0.46		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.060	Cum	**6914.20**	21157.45	1.26	1.32	2.63
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	21.720	Sqm	**578.60**	12567.19			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.761	Cum	**1075.00**	6192.98			
		Coarse Aggregates (100 Km lead)	2.632	Cum	**1398.00**	3678.98			
		Cement (30 km lead)	34.600	MT	**742.00**	25673.27			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**194213.83**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.76	Cum	**584.64**	3368.06	336.81		
		Coarse Aggregate	2.63	Cum	**944.26**	2484.91	248.49		
		Total					**585.30**		
		AOC FOR SLR FALL (Ch.-25.350 Km)							
	1	**New Structure is Proposed at this location**							
		AOC FOR SLR BRIDGE (Ch.-25.790 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.000	Sqm	**11.80**	1888.70			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	46.600	Sqm	**340.20**	15853.32	5.033	0.680	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	78.600	Sqm	**63.20**	4967.52	0.12		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.680	Cum	**1075.00**	731.39			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.151	MT	**742.00**	3821.76			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**27262.69**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.68	Cum	**584.64**	397.77	39.78		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**39.78**		
		AOC FOR FALL(Ch.-26.213 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.265	Cum	**6914.20**	50231.66	3.00	3.12	6.25
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	14.300	Sqm	**578.60**	8273.98			
4	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	70.700	Sqm	**340.20**	24052.14	7.635	1.032	
5	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	70.700	Sqm	**63.20**	4468.24	0.11		
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.156	Cum	**1075.00**	4467.88			
		Coarse Aggregates (100 Km lead)	6.248	Cum	**1398.00**	8734.56			
		Cement (30 km lead)	10.738	MT	**742.00**	7967.85			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**109494.80**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.16	Cum	**584.64**	2429.86	242.99		
		Coarse Aggregate	6.25	Cum	**944.26**	5899.64	589.96		
		Total					**832.95**		
		AOC FOR FALL(Ch.-26.650 Km)							
1	**New Structure is Proposed at this location**								
		AOC FOR HR OF FALL/HR OF MALHAD SUB DY (Ch.-26.975 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.000	Sqm	**11.80**	1888.70			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	74.010	Sqm	**340.20**	25178.20	7.993	1.081	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	74.010	Sqm	**63.20**	4677.43	0.11		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.320	Cum	**6914.20**	29869.34	1.78	1.86	3.72
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	31.680	Sqm	**578.60**	18330.05			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.938	Cum	**1075.00**	3158.51			
		Coarse Aggregates (100 Km lead)	3.715	Cum	**1398.00**	5193.85			
		Cement (30 km lead)	9.886	MT	**742.00**	7335.39			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**95631.47**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.94	Cum	**584.64**	1717.76	171.78		
		Coarse Aggregate	3.72	Cum	**944.26**	3508.11	350.81		
		Total					**522.59**		
		AOC FOR FALL(Ch.-27.889 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	170.000	Sqm	**11.80**	2006.75			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	50.100	Sqm	**340.20**	17044.02	5.411	0.731	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	50.100	Sqm	**63.20**	3166.32	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.731	Cum	**1075.00**	786.32			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.486	MT	**742.00**	4070.51			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**27073.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	427.64	42.76		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**42.76**		
		AOC FOR FALL(Ch.-28.500 Km)							
	1	**New Structure is Proposed at this location**							
		AOC FOR SLR BRIDGE (Ch.-29.030 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	48.500	Sqm	**340.20**	16499.70	5.238	0.708	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	48.500	Sqm	**63.20**	3065.20	0.07		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.708	Cum	**1075.00**	761.21			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.311	MT	**742.00**	3940.51			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**26391.41**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.71	Cum	**584.64**	413.98	41.40		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**41.40**		
		AOC FOR FALL(Ch.-29.550 Km)							
	1	**New Structure is Proposed at this location**							
		AOC FOR SLR BRIDGE (Ch.-30.090 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	56.400	Sqm	**63.20**	3564.48	0.08		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.085	MT	**742.00**	62.77			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**5752.04**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR HR OF RAMPUR MINOR (Ch.-31.530 Km)									
1		**New HR is Proposed at this location existing HR is not present there.**							
AOC FOR FALL(Ch.-31.852 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	61.700	Sqm	**340.20**	20990.34	6.663	0.901	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	61.700	Sqm	**63.20**	3899.44	0.09		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.901	Cum	**1075.00**	968.38			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	6.756	MT	**742.00**	5012.98			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**32641.80**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.90	Cum	**584.64**	526.66	52.67		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**52.67**		
AOC FOR SLR BRIDGE (Ch.-32.690 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL(Ch.-33.680 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.412	Cum	**6914.20**	44331.08	2.64	2.76	5.51
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	19.808	Sqm	**578.60**	11461.14			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.757	Cum	**1075.00**	2963.76			
		Coarse Aggregates (100 Km lead)	5.514	Cum	**1398.00**	7708.54			
		Cement (30 km lead)	2.645	MT	**742.00**	1962.43			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**69843.48**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.76	Cum	**584.64**	1611.85	161.18		
		Coarse Aggregate	5.51	Cum	**944.26**	5206.63	520.66		
		Total					**681.85**		
AOC FOR DLR BRIDGE (Ch.-34.380 Km)									
1		**Structure requires no repair work well maintained and also a SH DLR Bridge.**							
AOC FOR FALL(Ch.-34.500 Km)									
1		**Structure requires no repair work.**							
AOC FOR SLR BRIDGE (Ch.-36.430 Km)									
1		**Existing Canal is 35.334 km**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF PALUA MINOR									
AOC FOR SLR BRIDGE (Ch.-0.152 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.000	Sqm	**11.80**	1888.70			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.31	Cum	**680.10**	2252.49	0.38	1.06	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	25.680	Sqm	**340.20**	8736.34	2.773	0.375	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	25.680	Sqm	**63.20**	1622.98	0.04		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.435	Cum	**1075.00**	1542.38			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.193	MT	**742.00**	2369.55			
		Brick (15 km lead)	1656.00	No.	**3.18**	5266.08			
TOTAL (In Rs.)						**23678.51**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.43	Cum	**584.64**	838.82	83.88		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**83.88**		
AOC FOR FALL (Ch.-1.150 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.537	Cum	**2492.58**	13801.14			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**13801.14**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall+ Culvert has been Proposed.							
AOC FOR FALL (Ch.-1.768 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.537	Cum	**2492.58**	13801.14			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**13801.14**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall+ Culvert has been Proposed.							
AOC FOR SLR BRIDGE (Ch.-2.469 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	4.42	Cum	**680.10**	3003.32	0.51	1.41	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	34.240	Sqm	**340.20**	11648.45	3.698	0.500	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	34.240	Sqm	**63.20**	2163.97	0.05		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.913	Cum	**1075.00**	2056.50			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.258	MT	**742.00**	3159.39			
		Brick (15 km lead)	2208.00	No.	**3.18**	7021.44			
TOTAL (In Rs.)						**31177.86**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.91	Cum	**584.64**	1118.43	111.84		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**111.84**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF ASNI MINOR									
AOC FOR SLR BRIDGE (Ch.-0.155 Km)									
1	**New Structure is proposed at this location.**								
AOC FOR SLR BRIDGE (Ch.-0.823 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.31	Cum	**680.10**	2252.49	0.38	1.06	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	18.320	Sqm	**340.20**	6232.46	1.979	0.267	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	18.320	Sqm	**63.20**	1157.82	0.03		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.327	Cum	**1075.00**	1426.86			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.388	MT	**742.00**	1771.56			
		Brick (15 km lead)	1656.00	No.	**3.18**	5266.08			
TOTAL (In Rs.)						**18107.28**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.33	Cum	**584.64**	776.00	77.60		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**77.60**		
AOC FOR FALL (Ch.-1.700 Km)									
1	**New Structure is proposed at this location.**								
AOC FOR SLR BRIDGE (Ch.-1.951 Km)									
1	**New Structure is proposed at this location.**								
AOC FOR SLR BRIDGE (Ch.-3.609 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	6.21	Cum	**680.10**	4223.42	0.72	1.99	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	34.350	Sqm	**340.20**	11685.87	3.710	0.502	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	34.350	Sqm	**63.20**	2170.92	0.05		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.489	Cum	**1075.00**	2675.36			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.477	MT	**742.00**	3321.68			
		Brick (15 km lead)	3105.00	No.	**3.18**	9873.90			
TOTAL (In Rs.)						**33951.15**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.49	Cum	**584.64**	1455.00	145.50		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**145.50**		
AOC FOR FALL (Ch.-4.804 Km)									
1	**New Structure is proposed at this location.**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF KAILASHPUR SUB DY.									
AOC FOR FALL /HR (Ch.-0.00 Km)									
1	**FALL is taken in HR and New HR for Sub Dy is Proposed Here.**								
AOC FOR FALL(Ch.-0.305 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	21.759	Cum	**2492.58**	54237.00			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**54237.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR SLR BRIDGE (Ch.-0.600 Km)									
1		**New Structure is proposed Here.**							
AOC FOR PIPE CULVERT (Ch.-0.800 Km)									
1	**New Structure is proposed at this location.**								
AOC FOR CD WORK (Ch.-1.160 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	250.000	Sqm	**11.80**	2951.10			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	46.200	Sqm	**340.20**	15717.24	4.990	0.675	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	46.200	Sqm	**63.20**	2919.84	0.07		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.675	Cum	**1075.00**	725.11			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.059	MT	**742.00**	3753.64			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**26066.93**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.67	Cum	**584.64**	394.35	39.44		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**39.44**		
AOC FOR FALL (Ch.-1.575 Km)									
1	**New Structure is proposed at this location.**								
AOC FOR CULVERT (Ch.-1.690 Km)									
1	**New Structure is proposed Here Existing Structure is Completely Damaged Excavation quantity is taken in Canal Eathwork**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR CULVERT (Ch.-2.030 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.31	Cum	**680.10**	2252.49	0.38	1.06	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	70.520	Sqm	**340.20**	23990.90	7.616	1.030	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	70.520	Sqm	**63.20**	4456.86	0.11		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.089	Cum	**1075.00**	2246.14			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	8.103	MT	**742.00**	6012.69			
		Brick (15 km lead)	1656.00	No.	**3.18**	5266.08			
		TOTAL (In Rs.)				**44225.17**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.09	Cum	**584.64**	1221.57	122.16		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**122.16**		
		AOC FOR FALL (Ch.-2.250Km)							
1	**New Structure is proposed at this location.**								
		AOC FOR CD WORK (Ch.-2.650Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	230.000	Sqm	**11.80**	2715.01			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	42.000	Sqm	**340.20**	14288.40	4.536	0.613	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	42.000	Sqm	**63.20**	2654.40	0.06		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.613	Cum	**1075.00**	659.19			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.599	MT	**742.00**	3412.40			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**23729.40**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.61	Cum	**584.64**	358.50	35.85		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**35.85**		
		AOC FOR CULVERT (Ch.-2.840 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.86	Cum	**680.10**	2627.91	0.45	1.24	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	62.960	Sqm	**340.20**	21418.99	6.800	0.919	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	62.960	Sqm	**63.20**	3979.07	0.09		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.156	Cum	**1075.00**	2317.37			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.339	MT	**742.00**	5445.64			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Brick (15 km lead)	1932.00	No.	**3.18**	6143.76			
		TOTAL (In Rs.)				**41932.75**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.16	Cum	**584.64**	1260.31	126.03		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**126.03**		
		AOC FOR SLR BRIDGE (Ch.-3.110 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.76	Cum	**680.10**	1877.08	0.32	0.88	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	64.300	Sqm	**340.20**	21874.86	6.944	0.939	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	64.300	Sqm	**63.20**	4063.76	0.10		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.822	Cum	**1075.00**	1958.63			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.359	MT	**742.00**	5460.15			
		Brick (15 km lead)	1380.00	No.	**3.18**	4388.40			
		TOTAL (In Rs.)				**41983.75**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.82	Cum	**584.64**	1065.20	106.52		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**106.52**		
		AOC FOR CD WORK (Ch.-3.770 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	240.000	Sqm	**11.80**	2833.05			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	50.400	Sqm	**340.20**	17146.08	5.443	0.736	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	50.400	Sqm	**63.20**	3185.28	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.736	Cum	**1075.00**	791.03			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.519	MT	**742.00**	4094.88			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**28050.33**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.74	Cum	**584.64**	430.20	43.02		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**43.02**		
		AOC FOR SLR BRIDGE/INLET (Ch.-4.210 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	220.000	Sqm	**11.80**	2596.97			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	61.050	Sqm	**340.20**	20769.21	6.593	0.891	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	61.050	Sqm	**63.20**	3858.36	0.09		
4		**Carriage of materials**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand (60 Km lead)	0.891	Cum	**1075.00**	958.18			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	6.685	MT	**742.00**	4960.17			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**33142.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.89	Cum	**584.64**	521.11	52.11		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**52.11**		
		AOC FOR SLR BRIDGE (Ch.-4.820 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.93	Cum	**680.10**	1313.95	0.22	0.62	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	50.530	Sqm	**340.20**	17190.31	5.457	0.738	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	50.530	Sqm	**63.20**	3193.50	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.356	Cum	**1075.00**	1457.68			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.756	MT	**742.00**	4270.59			
		Brick (15 km lead)	966.00	No.	**3.18**	3071.88			
		TOTAL (In Rs.)				**30497.90**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.36	Cum	**584.64**	792.76	79.28		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**79.28**		
		AOC FOR SLR BRIDGE (Ch.-5.250 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	36.180	Sqm	**340.20**	12308.44	3.907	0.528	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	36.180	Sqm	**63.20**	2286.58	0.05		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.528	Cum	**1075.00**	567.85			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.962	MT	**742.00**	2939.54			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**20227.19**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.53	Cum	**584.64**	308.82	30.88		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**30.88**		
		AOC FOR FALL (Ch.-5.400 Km)							
1		**New Structure is proposed Here.**							
		AOC FOR SLR BRIDGE (Ch.-5.670 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	60.010	Sqm	**340.20**	20415.40	6.481	0.876	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	60.010	Sqm	**63.20**	3792.63	0.09		
3		**Carriage of materials**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand (60 Km lead)	0.876	Cum	**1075.00**	941.86			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	6.571	MT	**742.00**	4875.68			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**30025.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.88	Cum	**584.64**	512.23	51.22		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**51.22**		
AOC FOR FALL (0.610 M) (Ch.-6.000 Km)									
1	**New Structure is proposed at this location.**								
AOC FOR CULVERT (Ch.-6.850 Km)									
1	**New Structure is proposed at this location.**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR SLR BRIDGE (Ch.-7.160 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.38	Cum	**680.10**	938.54	0.16	0.44	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	78.950	Sqm	**340.20**	26858.79	8.526	1.153	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	78.950	Sqm	**63.20**	4989.64	0.12		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.594	Cum	**1075.00**	1713.84			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	8.804	MT	**742.00**	6532.47			
		Brick (15 km lead)	690.00	No.	**3.18**	2194.20			
TOTAL (In Rs.)						**43227.48**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.59	Cum	**584.64**	932.07	93.21		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**93.21**		
AOC FOR FALL (Ch.-7.175 Km)									
1	**New Structure is proposed existing is completley damaged.**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF BUDHAUL SUB DY.									
AOC FOR FALL (Ch.-0.000Km)									
1	**New Structure is proposed at this location.**								
AOC FOR SLR BRIDGE (Ch.-0.500 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.66	Cum	**680.10**	1126.25	0.19	0.53	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.160	Sqm	**340.20**	3116.23	0.989	0.134	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.160	Sqm	**63.20**	578.91	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.664	Cum	**1075.00**	713.43			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.194	MT	**742.00**	885.78			
		Brick (15 km lead)	828.00	No.	**3.18**	2633.04			
TOTAL (In Rs.)						**9053.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.66	Cum	**584.64**	388.00	38.80		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**38.80**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL(Ch.-0.525 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.743	Cum	**6914.20**	32794.05	1.96	2.04	4.08
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.039	Cum	**1075.00**	2192.45			
		Coarse Aggregates (100 Km lead)	4.079	Cum	**1398.00**	5702.41			
		Cement (30 km lead)	1.956	MT	**742.00**	1451.71			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**43675.20**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.04	Cum	**584.64**	1192.37	119.24		
		Coarse Aggregate	4.08	Cum	**944.26**	3851.62	385.16		
		Total					**504.40**		
		AOC FOR SLR BRIDGE (Ch.-0.950 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-1.050 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	70.700	Sqm	**340.20**	24052.14	7.635	1.032	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	70.700	Sqm	**63.20**	4468.24	0.11		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	5.843	Cum	**6914.20**	40396.21	2.41	2.51	5.02
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	12.080	Sqm	**578.60**	6989.49			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.544	Cum	**1075.00**	3810.33			
		Coarse Aggregates (100 Km lead)	5.025	Cum	**1398.00**	7024.32			
		Cement (30 km lead)	10.152	MT	**742.00**	7532.46			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**96634.07**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.54	Cum	**584.64**	2072.25	207.23		
		Coarse Aggregate	5.02	Cum	**944.26**	4744.48	474.45		
		Total					**681.67**		
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-2.050 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	21.759	Cum	**2492.58**	54237.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**55181.35**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-2.470 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.10	Cum	**680.10**	750.83	0.13	0.35	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.560	Sqm	**340.20**	2912.11	0.924	0.125	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	8.560	Sqm	**63.20**	540.99	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.478	Cum	**1075.00**	514.13			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.064	MT	**742.00**	789.85			
		Brick (15 km lead)	552.00	No.	**3.18**	1755.36			
		TOTAL (In Rs.)				**7263.27**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.48	Cum	**584.64**	279.61	27.96		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**27.96**		
		AOC FOR SLR BRIDGE (Ch.-2.850 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.76	Cum	**680.10**	1877.08	0.32	0.88	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	21.400	Sqm	**340.20**	7280.28	2.311	0.312	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	21.400	Sqm	**63.20**	1352.48	0.03		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.196	Cum	**1075.00**	1285.31			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.661	MT	**742.00**	1974.62			
		Brick (15 km lead)	1380.00	No.	**3.18**	4388.40			
		TOTAL (In Rs.)				**20282.96**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.20	Cum	**584.64**	699.02	69.90		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**69.90**		
		AOC FOR CD WORK (Ch.-3.250 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	46.200	Sqm	**340.20**	15717.24	4.990	0.675	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	46.200	Sqm	**63.20**	2919.84	0.07		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.675	Cum	**1075.00**	725.11			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.059	MT	**742.00**	3753.64			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**25240.62**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.67	Cum	**584.64**	394.35	39.44		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**39.44**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch.-3.500 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	250.000	Sqm	**11.80**	2951.10			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	17.018	Cum	**2492.58**	42418.23			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**45369.33**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-3.790 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	170.000	Sqm	**11.80**	2006.75			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.04	Cum	**680.10**	2064.78	0.35	0.97	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	62.240	Sqm	**340.20**	21174.05	6.722	0.909	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	62.240	Sqm	**63.20**	3933.57	0.09		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.880	Cum	**1075.00**	2021.24			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.165	MT	**742.00**	5316.37			
		Brick (15 km lead)	1518.00	No.	**3.18**	4827.24			
		TOTAL (In Rs.)				**41344.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.88	Cum	**584.64**	1099.25	109.93		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**109.93**		
		AOC FOR FALL (Ch.-3.800 Km)							
1	**New Structure is Proposed at this location**								
		AOC FOR FALL (Ch.-4.500 Km)							
1	**New Structure is Proposed at this location**								
		AOC FOR CD WORKS (Ch.-4.600 Km)							
1	**New Structure is Proposed at this location**								
		AOC FOR FALL (Ch.-4.850 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	250.000	Sqm	**11.80**	2951.10			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	25.245	Cum	**2492.58**	62925.63			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**65876.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.-5.060 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	14.384	Cum	**6914.20**	99453.85	5.93	6.19	12.37
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.394	Sqm	**578.60**	6013.74			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	6.185	Cum	**1075.00**	6649.00			
		Coarse Aggregates (100 Km lead)	12.370	Cum	**1398.00**	17293.60			
		Cement (30 km lead)	5.933	MT	**742.00**	4402.58			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**134993.21**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.19	Cum	**584.64**	3616.07	361.61		
		Coarse Aggregate	12.37	Cum	**944.26**	11680.72	1168.07		
		Total					**1529.68**		
		AOC FOR SLR BRIDGE (Ch.-5.700 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	170.000	Sqm	**11.80**	2006.75			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.93	Cum	**680.10**	1313.95	0.22	0.62	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	46.780	Sqm	**340.20**	15914.56	5.052	0.683	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	46.780	Sqm	**63.20**	2956.50	0.07		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.301	Cum	**1075.00**	1398.82			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.345	MT	**742.00**	3965.91			
		Brick (15 km lead)	966.00	No.	**3.18**	3071.88			
		TOTAL (In Rs.)				**30628.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.30	Cum	**584.64**	760.75	76.07		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**76.07**		
		AOC FOR FALL (Ch.-5.910 Km)							
1	**New Structure is proposed at this location.**								
		AOC FOR SLR BRIDGE (Ch.-6.370 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-7.620 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	37.800	Cum	**2492.58**	94219.52			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**94219.52**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							
		AOC FOR SLR BRIDGE (Ch.-7.650 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	53.200	Sqm	**340.20**	18098.64	5.746	0.777	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	53.200	Sqm	**63.20**	3362.24	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.777	Cum	**1075.00**	834.97			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	5.825	MT	**742.00**	4322.38			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**28388.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.78	Cum	**584.64**	454.10	45.41		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**45.41**		
		AOC FOR CD WORK (Ch.-7.920 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
		TOTAL (In Rs.)				***1180.44***			
		AOC FOR SLR BRIDGE (Ch.-7.960 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	4.43	Cum	**680.10**	3012.71	0.51	1.42	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	24.503	Sqm	**340.20**	8335.92	2.646	0.358	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	24.503	Sqm	**63.20**	1548.59	0.04		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.775	Cum	**1075.00**	1908.43			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.193	MT	**742.00**	2369.47			
		Brick (15 km lead)	2214.00	No.	**3.18**	7040.52			
		TOTAL (In Rs.)				**24215.63**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.78	Cum	**584.64**	1037.90	103.79		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**103.79**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR PIPE CULVERTCh.-(Ch.-8.250 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	230.000	Sqm	**11.80**	2715.01			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	32.060	Sqm	**340.20**	10906.81	3.462	0.468	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	32.060	Sqm	**63.20**	2026.19	0.05		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.468	Cum	**1075.00**	503.18			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.511	MT	**742.00**	2604.80			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**18756.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.47	Cum	**584.64**	273.66	27.37		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**27.37**		
AOC FOR FALL (Ch.-8.425 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	8.752	Cum	**2492.58**	21815.18			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**21815.18**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							
AOC FOR FALL (Ch.-8.850 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	14.863	Cum	**6914.20**	102762.30	6.13	6.39	12.78
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.000	Sqm	**578.60**	4050.20			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	6.391	Cum	**1075.00**	6870.19			
		Coarse Aggregates (100 Km lead)	12.782	Cum	**1398.00**	17868.89			
		Cement (30 km lead)	6.131	MT	**742.00**	4549.04			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**137281.05**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.39	Cum	**584.64**	3736.36	373.64		
		Coarse Aggregate	12.78	Cum	**944.26**	12069.30	1206.93		
		Total					**1580.57**		
AOC FOR SLR BRIDGE (Ch.-9.190 Km)									

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	4.47	Cum	**680.10**	3040.86	0.52	1.43	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	24.732	Sqm	**340.20**	8413.83	2.671	0.361	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	24.732	Sqm	**63.20**	1563.06	0.04		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.792	Cum	**1075.00**	1926.26			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.223	MT	**742.00**	2391.61			
		Brick (15 km lead)	2235.00	No.	**3.18**	7107.30			
		TOTAL (In Rs.)				**24442.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.79	Cum	**584.64**	1047.60	104.76		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**104.76**		
		AOC FOR FALL (Ch.-9.200 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	8.912	Cum	**2492.58**	22213.60			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**22213.60**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							
		AOC FOR FALL (Ch.-9.800 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.320	Cum	**2492.58**	13260.53			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**13260.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							
		AOC FOR SLR BRIDGE (Ch.-10.175 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	170.000	Sqm	**11.80**	2006.75			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	22.900	Sqm	**340.20**	7790.58	2.473	0.334	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	22.900	Sqm	**63.20**	1447.28	0.03		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.334	Cum	**1075.00**	359.42			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.508	MT	**742.00**	1860.57			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**13464.59**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.33	Cum	**584.64**	195.47	19.55		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**19.55**		
		AOC FOR SLR BRIDGE (Ch.-11.450 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	37.630	Sqm	**340.20**	12801.73	4.064	0.549	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	37.630	Sqm	**63.20**	2378.22	0.06		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.549	Cum	**1075.00**	590.60			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.120	MT	**742.00**	3057.35			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**20598.55**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.55	Cum	**584.64**	321.20	32.12		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**32.12**		
		AOC FOR FALL (Ch.-11.500 Km)							
1		**New Fall Is proposed at this Location**							
		AOC FOR RAILWAY BRIDGE (Ch.-12.300 Km)							
1		**To be Constructed by Railway Dept**							
		AOC FOR SLR BRIDGE (Ch.-12.300 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	43.500	Sqm	**340.20**	14798.70	4.698	0.635	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	43.500	Sqm	**63.20**	2749.20	0.07		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.635	Cum	**1075.00**	682.73			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.763	MT	**742.00**	3534.28			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**23889.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.64	Cum	**584.64**	371.30	37.13		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**37.13**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF PATOI SUB DY.									
AOC FOR SLR BRIDGE (Ch.-0.460 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	20.900	Cum	**2492.58**	52094.92			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**52094.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							
AOC FOR FALL (Ch.-0.475 Km)									
1	**New Structure is Proposed at this Location**								
AOC FOR CD WORK (Ch.-1.554 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	146.200	Sqm	**340.20**	49737.24	15.789	2.135	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	146.200	Sqm	**63.20**	9239.84	0.22		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.135	Cum	**1075.00**	2294.61			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	16.009	MT	**742.00**	11878.42			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**75274.90**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.13	Cum	**584.64**	1247.93	124.79		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**124.79**		
AOC FOR SLR BRIDGE (Ch.-2.405 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	9.11	Cum	**680.10**	6194.35	1.05	2.91	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	50.380	Sqm	**340.20**	17139.28	5.441	0.736	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	50.380	Sqm	**63.20**	3184.02	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.650	Cum	**1075.00**	3923.87			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	6.566	MT	**742.00**	4871.80			
		Brick (15 km lead)	4554.00	No.	**3.18**	14481.72			
TOTAL (In Rs.)						**49795.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.65	Cum	**584.64**	2134.00	213.40		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**213.40**		
AOC FOR HR OF ANTI MINOR (Ch.-2.469 Km)									

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.000	Sqm	**11.80**	1888.70			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.575	Cum	**2492.58**	18881.29			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**20770.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR DLR BRIDGE (Ch.-3.078 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	220.000	Sqm	**11.80**	2596.97			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	81.580	Sqm	**340.20**	27753.52	8.810	1.191	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	81.580	Sqm	**63.20**	5155.86	0.12		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.191	Cum	**1075.00**	1280.40			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	8.933	MT	**742.00**	6628.19			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**43414.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.19	Cum	**584.64**	696.35	69.63		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**69.63**		
		AOC FOR FALL (Ch.-3.725 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.000	Sqm	**11.80**	1888.70			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.355	Cum	**2492.58**	13347.77			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**15236.47**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE +FALL (Ch.-4.510 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	29.980	Cum	**2492.58**	74728.05			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**77088.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR CD WORK (Ch.-4.816 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	230.000	Sqm	**11.80**	2715.01			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	75.250	Sqm	**340.20**	25600.05	8.127	1.099	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	75.250	Sqm	**63.20**	4755.80	0.11		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.099	Cum	**1075.00**	1181.05			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	8.240	MT	**742.00**	6113.89			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**40365.80**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.10	Cum	**584.64**	642.31	64.23		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**64.23**		
		AOC FOR SLR BRIDGE (Ch.-5.005 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR SLR BRIDGE (Ch.-5.944 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR SLR BRIDGE (Ch.-6.750 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	220.000	Sqm	**11.80**	2596.97			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	20.250	Cum	**2492.58**	50474.75			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**53071.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-7.165 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR SLR BRIDGE (Ch.-7.405 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR SLR BRIDGE (Ch.-7.560 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR SLR BRIDGE (Ch.-8.030 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR FALL + CD WORK FOR DHAWA CANAL (Ch.-8.382 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1		**New Structure is Proposed at this location.**							
		AOC FOR DLR BRIDGE (Ch.-9.205 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR FALL (Ch.-9.240 Km)							
1		**New Structure is Proposed at this location.**							
		AOC FOR DLR BRIDGE (Ch.-9.350 Km)							
1		**State Highway crossing Rafiganj to Goh no need to repair.**							
		AOC FOR FOOT BRIDGE (Ch.-9.632 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR FALL (Ch.-11.125 Km)							
1		**New Structure is proposed at this location.**							
		AOC FOR CD WORK (Ch.-12.482 Km)							
1		**New Structure is proposed at this location.**							
		AOC FOR SLR BRIDGE CUM FALL (Ch.-12.689 Km)							
1		**New Structure is proposed at this location.**							
		AOC FOR CD WORK (Ch.-13.800 Km)							
1		**New Structure is proposed at this location.**							
		AOC FOR FOOT BRIDGE (Ch.-14.640 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR CD WORK (Ch.-14.865 Km)							
1		**New Structure is proposed at this location.**							
		AOC FOR SLR BRIDGE (Ch.-14.960 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	9.11	Cum	**680.10**	6194.35	1.05	2.91	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	50.380	Sqm	**340.20**	17139.28	5.441	0.736	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	50.380	Sqm	**63.20**	3184.02	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.650	Cum	**1075.00**	3923.87			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	6.566	MT	**742.00**	4871.80			
		Brick (15 km lead)	4554.00	No.	**3.18**	14481.72			
		TOTAL (In Rs.)				**49795.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.65	Cum	**584.64**	2134.00	213.40		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**213.40**		
		AOC FOR FALL (Ch.-15.000 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR SLR BRIDGE (Ch.-15.179 Km)							
1		**Structure is in good condition and does not requir any repair works.**							

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF ANGRA BRANCH CANAL

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR HR OF PALUA MINOR (Ch.-0.350Km)								
1		**A new structure is proposed at this location as the existing one is completely damaged.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-0.914 Km)								
1		**A new structure is proposed at this location only hume pipe is embade.**						
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-1.219Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	5.00	8.25	0.5	*20.63*	*Cum*
		TOTAL					***20.63***	***Cum***
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment after Crest	2	7.00	0.45	1.8	*11.34*	*Cum*
		Wing wall U/S	2	3.00	0.45	1.8	*4.86*	*Cum*
		Wing wall D/S	2	3.00	0.45	1.8	*4.86*	*Cum*
		TOTAL					***21.06***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment after Crest	4	7.00		1.8	*50.40*	Sqm
			4		0.45	1.8	*3.24*	Sqm
		Wing wall U/S	4	3.00		1.8	*21.60*	Sqm
			4		0.45	1.8	*3.24*	Sqm
		Wing wall D/S	4	3.00		1.8	*21.60*	Sqm
			4		0.45	1.8	*3.24*	Sqm
		D/S Floor	2	5.00		0.5	*5.00*	Sqm
			2		8.25	0.5	*8.25*	Sqm
		TOTAL					**116.57**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR DLR BRIDGE (Ch.-2.440 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.25	*31.50*	*Sqm*
		TOTAL					**31.50**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.25	*31.50*	*Sqm*
		TOTAL					**31.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-2.925 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1		**A new SLR Bridge is proposed at this location.**						
		QUANTITIES OF REPAIRING WORK FOR SUPER PASSAGE (Ch.-3.280 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Barrel Floor	1	95.00	8.50	0.45	*363.38*	*Cum*
		Barrel Side Wall	2	95.00	0.30	2.00	*114.00*	*Cum*
		Barrel Mid Wall	1	95.00	0.30	2.00	*57.00*	*Cum*
		Barrel Bridge Slab	1	95.00	2.00	0.30	*57.00*	*Cum*
		Barrel Bridge Approach Slab	4	5.00	2.00	0.15	*6.00*	*Cum*
		TOTAL					***597.38***	***Cum***
		Only Super Structure is dismantled .						
		QUANTITIES OF REPAIRING WORK FOR HR OF ASNI MINOR (Ch.-4.240 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	1	2.50	0.45	1.00	*1.13*	*Cum*
		Wing wall	2	2.50	0.45	1.00	*2.25*	*Cum*
		Well Portion	1	0.65		1.5	*0.97*	*Cum*
		Well abutment	2	3.00	0.45	1	*2.70*	*Cum*
		TOTAL					***7.04***	***Cum***
		A new HR is proposed at this location.						
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.870 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
		TOTAL					**150.00**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	4	3.00		1.65	*19.80*	*Sqm*
		TOTAL					**19.80**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	4	3.00		1.65	*19.80*	*Sqm*
		TOTAL					**19.80**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR CD WORKS (Ch.-6.100 Km)						
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	4	3.00		3.45	*41.40*	*Sqm*
		Abutment Side wall	4	7.00		3.45	*96.60*	*Sqm*
		Abutment	2	2.00		3.45	*13.80*	*Sqm*
		TOTAL					**151.80**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	4	3.00		3.45	*41.40*	*Sqm*
		Abutment Side wall	4	7.00		3.45	*96.60*	*Sqm*
		Abutment	2	2.00		3.45	*13.80*	*Sqm*
		TOTAL					**151.80**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-7.850 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	15	0.25	0.92	*6.90*	*Cum*
		TOTAL					**6.90**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	**2**	15.00		2.09	*62.70*	*Sqm*
		Wing wall	4	3.00		3.45	*41.40*	*Sqm*
		Abutment Side wall	4	7.00		3.45	*96.60*	*Sqm*
		Abutment	2	2.00		3.45	*13.80*	*Sqm*
		TOTAL					**214.50**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	**2**	15.00		2.09	*62.70*	*Sqm*
		Wing wall	4	3.00		3.45	*41.40*	*Sqm*
		Abutment Side wall	4	7.00		3.45	*96.60*	*Sqm*
		Abutment	2	2.00		3.45	*13.80*	*Sqm*
		TOTAL					**214.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.687 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
		TOTAL					**180.00**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	4	3.00		1.55	*18.60*	*Sqm*
		Side walls	2	10.00		1.35	*27.00*	*Sqm*
		TOTAL					**45.60**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	4	3.00		1.55	*18.60*	*Sqm*
		Side walls	2	10.00		1.35	*27.00*	*Sqm*
		TOTAL					**45.60**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORKS (Ch.-8.960 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
		TOTAL					**200.00**	**Cum**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	4	2.00		3.45	*27.60*	*Sqm*
		Abutment Side wall	4	5.50		3.45	*75.90*	*Sqm*
		Abutment	2	3.00		3.45	*20.70*	*Sqm*
		TOTAL					**124.20**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	4	2.00		3.45	*27.60*	*Sqm*
		Abutment Side wall	4	5.50		3.45	*75.90*	*Sqm*
		Abutment	2	3.00		3.45	*20.70*	*Sqm*
		TOTAL					**124.20**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR HR OF KAILASHPUR DY & HR OF BUDAUL SUB DY (Ch.-9.050Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		KAILASHPUR DY						
		Abutment (Side walls)	2	15.00	0.30	1.00	*9.00*	*Cum*
		Wing wall D/S	2	3.50	0.30	1.00	*2.10*	*Cum*
		Wing wall U/S	2	3.50	0.30	1.00	*2.10*	*Cum*
		Crest	1	2.80	0.45	0.80	*1.01*	*Cum*
		Floor	1	5.00	2.80	0.50	*7.00*	*Cum*
		Bridge Slab	1	3.50	3.00	0.30	*3.15*	*Cum*
		BUDHAUL SUB DY						
		Abutment (Side walls)	2	15.00	0.30	1.00	*9.00*	*Cum*
		Wing wall D/S	2	3.50	0.30	1.00	*2.10*	*Cum*
		Wing wall U/S	2	3.50	0.30	1.00	*2.10*	*Cum*
		Crest	1	2.80	0.45	0.80	*1.01*	*Cum*
		Floor	1	5.00	2.80	0.50	*7.00*	*Cum*
		TOTAL					***45.57***	***Cum***
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		CR wing wall	2	6.00		3.45	*41.40*	*Sqm*
		CR Abutment	2	14.00		3.45	*96.60*	*Sqm*
		TOTAL					**138.00**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		CR wing wall	2	6.00		2.45	*29.40*	*Sqm*
		CR Abutment	2	14.00		2.45	*68.60*	*Sqm*
		TOTAL					**98.00**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.784 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Abutment after Crest	1	8.80	0.45	2.5	*9.90*	*Cum*
		Wing wall D/S	2	3.00	0.45	2.5	*6.75*	*Cum*
		D/S Floor	1	5.00	6.20	0.5	*15.50*	*Cum*
		TOTAL					***32.15***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment after Crest	2	8.80		2.5	*44.00*	Sqm
			2		0.45	2.5	*2.25*	Sqm
		Wing wall D/S	4	3.00		2.5	*30.00*	Sqm
			4		0.45	2.5	*4.50*	Sqm
		D/S Floor	2	5.00		0.5	*5.00*	Sqm
			2		6.20	0.5	*6.20*	Sqm
		TOTAL					**91.95**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-11.170 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S & D/S	2	3.00		1.5	*9.00*	*Sqm*
		TOTAL					**9.00**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		CR wing wall	2	3.00		1.5	*9.00*	*Sqm*
		TOTAL					**9.00**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-11.735 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**230.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	2	6.50		1.8	*23.40*	*Sqm*
		Wing wall D/S	2	2.50		1.5	*7.50*	*Sqm*
		Abutment U/S (Side Walls)	2	7.00		2.1	*29.40*	*Sqm*
		Abutment D/S (Side Walls) after Crest	2	10.00		1.3	*26.00*	*Sqm*
		Bed Bar	2	3.00		1.5	*9.00*	*Sqm*
		TOTAL					**95.30**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	2	6.50		1.8	*23.40*	*Sqm*
		Wing wall D/S	2	2.50		1.5	*7.50*	*Sqm*
		Abutment U/S (Side Walls)	2	7.00		2.1	*29.40*	*Sqm*
		Abutment D/S (Side Walls) after Crest	2	10.00		1.3	*26.00*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Bed Bar	2	3.00		1.5	*9.00*	*Sqm*
		TOTAL					**95.30**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-12.750 Km)								
1		**New Structure is proposed here.**						
QUANTITIES OF REPAIRING WORK FOR HR OF PATHARA MINOR (Ch.-13.200 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	1	3.00	0.45	1.50	*2.03*	*Cum*
		Wing wall	2	3.00	0.45	1.50	*4.05*	*Cum*
		Well Portion	1	0.65		2.00	*1.29*	*Cum*
		Well abutment	2	3.00	0.45	1.50	*4.05*	*Cum*
		TOTAL					***11.42***	***Cum***
		A new HR is proposed at this location.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-14.021 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**240.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	6.20	0.3	*13.02*	*Cum*
		TOTAL					***13.02***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.3	*4.20*	Sqm
			2		6.20	0.3	*3.72*	Sqm
		TOTAL					**7.92**	**Sqm**
4	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	2	7.50		1.8	*27.00*	*Sqm*
		Wing wall D/S	2	2.50		1.5	*7.50*	*Sqm*
		Abutment U/S (Side Walls)	2	7.00		1.8	*25.20*	*Sqm*
		Abutment D/S (Side Walls) after Crest	2	12.00		1.3	*31.20*	*Sqm*
		TOTAL					**90.90**	***Sqm***
5	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	2	7.50		1.8	*27.00*	*Sqm*
		Wing wall D/S	2	2.50		1.5	*7.50*	*Sqm*
		Abutment U/S (Side Walls)	2	7.00		1.8	*25.20*	*Sqm*
		Abutment D/S (Side Walls) after Crest	2	12.00		1.3	*31.20*	*Sqm*
		TOTAL					**90.90**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-15.200 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			1				**190.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S & D/S	2	3.00		1.5	*9.00*	*Sqm*
		TOTAL					**9.00**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		wing wall U/S & D/S	2	3.00		1.5	*9.00*	*Sqm*
		TOTAL					**9.00**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR HR OF DABURA MINOR (Ch.-15.722 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**170.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	1	3.00	0.30	1.50	*1.35*	*Cum*
		Wing wall D/S	2	6.00	0.30	1.50	*5.40*	*Cum*
		Well Portion	1	0.65		1.50	*0.97*	*Cum*
		Well abutment	1	3.00	0.30	1.50	*1.35*	*Cum*
		TOTAL					***9.07***	***Cum***
		A new HR is proposed at this location.						
QUANTITIES OF REPAIRING WORK FOR FALL/HR OF SADOPUR MINOR (Ch.-16.002 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	1	3.00	0.30	1.50	*1.35*	*Cum*
		Wing wall D/S	2	6.00	0.30	1.50	*5.40*	*Cum*
		Well Portion	1	0.65		1.50	*0.97*	*Cum*
		Well abutment	1	3.00	0.30	1.50	*1.35*	*Cum*
		TOTAL					***9.07***	***Cum***
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	2	3.50		1.80	*12.60*	*Sqm*
		Wing wall D/S	2	2.00		1.50	*6.00*	*Sqm*
		Abutment U/S (Side walls)	2	3.00		1.80	*10.80*	*Sqm*
		Abutment D/S (Side walls)	2	8.00		1.30	*20.80*	*Sqm*
		Pier	1	5.50		2.40	*13.20*	*Sqm*
		Bridge parapet	2	7.50		2.25	*33.75*	*Sqm*
		TOTAL					**97.15**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	2	3.50		1.8	*12.60*	*Sqm*
		Wing wall D/S	2	2.00		1.5	*6.00*	*Sqm*
		Abutment U/S (Side walls)	2	3.00		1.8	*10.80*	*Sqm*
		Abutment D/S (Side walls)	2	8.00		1.3	*20.80*	*Sqm*
		Pier	1	5.50		2.4	*13.20*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Bridge parapet	2	7.50		2.25	*33.75*	*Sqm*
		TOTAL					**97.15**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-17.450 Km)								
1		**New Fall Is Proposed Here.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-17.600 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**190.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S & D/S	4	4.50		1.5	*27.00*	*Sqm*
		Parapet	2	6.00		2.09	*25.08*	*Sqm*
		Abutment	2	6.00		1.5	*18.00*	*Sqm*
		TOTAL					**70.08**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		wing wall U/S & D/S	4	4.50		1.5	*27.00*	*Sqm*
		Parapet	2	6.00		2.09	*25.08*	*Sqm*
		Abutment	2	6.00		1.5	*18.00*	*Sqm*
		TOTAL					**70.08**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-17.739 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Crest	1	6.00	0.50	1.114	*3.34*	*Cum*
		TOTAL					***3.34***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Crest	2	6.00		1.114	*13.37*	Sqm
			2		0.50	1.114	*1.11*	Sqm
		TOTAL					**14.48**	**Sqm**
4	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	2	5.00		1.50	*15.00*	*Sqm*
		Wing wall D/S	2	2.00		1.50	*6.00*	*Sqm*
		Abutment U/S (Side walls)	2	5.00		1.50	*15.00*	*Sqm*
		Abutment D/S (Side walls)	2	8.00		1.30	*20.80*	*Sqm*
		TOTAL					**56.80**	***Sqm***
5	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	2	5.00		1.5	*15.00*	*Sqm*
		Wing wall D/S	2	2.00		1.5	*6.00*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Abutment U/S (Side walls)	2	5.00		1.5	*15.00*	*Sqm*
		Abutment D/S (Side walls)	2	8.00		1.3	*20.80*	*Sqm*
		TOTAL					**56.80**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-18.670 Km)								
1		**DLR Bridge is newley Constructed requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-19.150 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**140.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall U/S	2	3.00	0.30	1.20	*2.16*	*Cum*
		Wing wall D/S	2	2.50	0.30	1.00	*1.50*	*Cum*
		Side walls	2	12.00	0.30	1.00	*24.00*	*Cum*
		Crest	1	5.60	0.45	1.00	*2.52*	*Cum*
		Floor	1	5.00	5.46	0.30	*8.19*	*Cum*
		TOTAL					***38.37***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-19.500 Km)								
1		**New Fall Is Proposed Here.**						
QUANTITIES OF REPAIRING WORK FOR RAILWAY BRIDGE (Ch.-19.665 Km)								
1	**Required No Need to repair it maintaned by Railway Department.**							
QUANTITIES OF REPAIRING WORK FOR HR OF DHARAMPUR SUB DY & HR OF PATOI DY +CR + SLR BRIDGE (Ch.-19.780Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		KAILASHPUR DY HR						
		Abutment (Side walls)	2	5.00	0.30	1.00	*3.00*	*Cum*
		Wing wall D/S	2	2.50	0.30	1.00	*1.50*	*Cum*
		Wing wall U/S	2	2.50	0.30	1.00	*1.50*	*Cum*
		Floor	1	5.00	3.50	0.50	*8.75*	*Cum*
		Bridge Slab	1	3.50	3.00	0.30	*3.15*	*Cum*
		BUDHAUL SUB DY HR						
		Abutment (Side walls)	2	5.00	0.30	1.00	*3.00*	*Cum*
		Wing wall D/S	2	3.50	0.30	1.00	*2.10*	*Cum*
		Wing wall U/S	2	3.50	0.30	1.00	*2.10*	*Cum*
		Floor	1	5.00	3.50	0.50	*8.75*	*Cum*
		TOTAL					***33.85***	***Cum***
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		CR wing wall	2	5.00		2.45	*24.50*	*Sqm*
		CR Abutment	2	14.00		2.45	*68.60*	*Sqm*
			1	5.00		2.00	*10.00*	*Sqm*
		TOTAL					**103.10**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		CR wing wall	2	5.00		2.45	*24.50*	*Sqm*
		CR Abutment	2	14.00		2.45	*68.60*	*Sqm*
			1	5.00		2.00	*10.00*	*Sqm*
		TOTAL					**103.10**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-20.574 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall U/S	2	3.00	0.30	1.20	*2.16*	*Cum*
		Wing wall D/S	2	2.00	0.30	0.80	*0.96*	*Cum*
		Side walls	2	10.00	0.30	0.80	*16.00*	*Cum*
		Crest	1	5.46	0.45	0.80	*1.97*	*Cum*
		Floor	1	4.50	5.46	0.30	*7.37*	*Cum*
		TOTAL					***28.46***	***Cum***
QUANTITIES OF REPAIRING WORK FOR HUME PIPE CULVERT(Ch.-20.850 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal**						
			1				**250.00**	**Sqm**
		Hume Pipe Culvert is newley Constructed requires only minimal repair work.						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-21.800 Km)								
1		**New SLR Bridge is Proposed here.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-22.500 Km)								
1		**New SLR Bridge is Proposed here there is no existing Bridge at site. Excavation Quantity taken in Canal earthwork**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-22.850 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**220.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead**						
		Abutment U/S	1	8.50	0.30	1.50	*3.83*	*Cum*
		Abutment D/S	1	8.50	0.30	1.50	*3.83*	*Cum*
		TOTAL					***7.65***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-23.400 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet	2	5.00		2.09	*20.90*	*Sqm*
		Abutment	2	5.00		1.5	*15.00*	*Sqm*
		TOTAL					**35.90**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet	2	5.00		2.09	*20.90*	*Sqm*
		Abutment	2	5.00		1.5	*15.00*	*Sqm*
		TOTAL					**35.90**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-23.700 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	4.00	3.50	0.458	*6.41*	*Cum*
		Crest	1	3.50	0.50	0.762	*1.33*	*Cum*
		TOTAL					***7.75***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	4.00		0.458	*3.66*	Sqm
			2		3.50	0.458	*3.21*	Sqm
		Crest	2	3.50		0.762	*5.33*	Sqm
			2		0.50	0.762	*0.76*	Sqm
		TOTAL					**12.97**	**Sqm**
4	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S	2	4.00		1.50	*12.00*	*Sqm*
		wing wall D/S	2	3.00		1.30	*7.80*	*Sqm*
		Abutment (Side walls) U/S	2	7.50		1.50	*22.50*	*Sqm*
		Abutment (Side walls) D/S	2	12.00		1.30	*31.20*	*Sqm*
		TOTAL					**73.50**	***Sqm***
5	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		wing wall U/S	2	4.00		1.50	*12.00*	*Sqm*
		wing wall D/S	2	3.00		1.30	*7.80*	*Sqm*
		Abutment (Side walls) U/S	2	7.50		1.50	*22.50*	*Sqm*
		Abutment (Side walls) D/S	2	12.00		1.30	*31.20*	*Sqm*
		TOTAL					**73.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-24.250 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Vertical Post	34	1.00		0.8	*27.20*	*Sqm*
		Parapet Hand Rail	96	1.00		0.4	*38.40*	*Sqm*
		Base	2	17.00		0.7	*23.80*	*Sqm*
		TOTAL					**65.60**	***Sqm***
3	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Approach Slab	2	3.00	5.00	0.2	*6.00*	*Cum*
		TOTAL					***6.00***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Approach Slab	2	3.00		0.2	*1.20*	Sqm
			2		5.00	0.2	*2.00*	Sqm
		TOTAL					**3.20**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-24.660 Km)								
1		**New SLR Bridge is Proposed here there is no existing Bridge at site. Excavation Quantity taken in Canal earthwork**						
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-24.900 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S barrel for Canal	4	3.00		1.55	*18.60*	*Sqm*
		Abutment Side walls for Canal	2	18.00		1.55	*55.80*	*Sqm*
		Wing wall U/S & D/S barrel for Drain	4	20.00		2.15	*172.00*	*Sqm*
		Abutment for Bridge	2	8.00		1.8	*28.80*	*Sqm*
		Parapet Wall for Bridge	2	7.00		2.09	*29.26*	*Sqm*
		TOTAL					**304.46**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S barrel for Canal	4	3.00		1.55	*18.60*	*Sqm*
		Abutment Side walls for Canal	2	18.00		1.55	*55.80*	*Sqm*
		Wing wall U/S & D/S barrel for Drain	4	20.00		2.15	*172.00*	*Sqm*
		Abutment for Bridge	2	8.00		1.8	*28.80*	*Sqm*
		Parapet Wall for Bridge	2	7.00		2.09	*29.26*	*Sqm*
		TOTAL					**304.46**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Barrel Side walls	1	6.00	0.30	1.20	*2.16*	*Cum*
		Wing wll D/S	1	3.00	0.30	1.00	*0.90*	*Cum*
		TOTAL					***3.06***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Barrel Side walls	2	6.00		1.2	*14.40*	Sqm
			2		0.30	1.2	*0.72*	Sqm
		Wing wll D/S	2	3.00		1.00	*6.00*	Sqm
			2		0.30	1.00	*0.60*	Sqm
		TOTAL					**21.72**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-25.350 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1		**New Structure is Proposed at this location**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-25.790 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.15	*30.10*	*Sqm*
		Abutment	2	5.50		1.5	*16.50*	*Sqm*
		TOTAL					**46.60**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.15	*30.10*	*Sqm*
		Abutment	2	5.50		1.5	*16.50*	*Sqm*
		Parapet Vertical Post	10	1.00		0.8	*8.00*	*Sqm*
		Parapet Hand Rail	16	1.00		0.8	*12.80*	*Sqm*
		Base	2	8.00		0.7	*11.20*	*Sqm*
		TOTAL					**78.60**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-26.213 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	4.00	3.50	0.40	*5.60*	*Cum*
		Crest	1	3.70	0.45	1.00	*1.67*	*Cum*
		TOTAL					***7.27***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	4.00		0.40	*3.20*	Sqm
			2		3.50	0.40	*2.80*	Sqm
		Crest	2	3.70		1.00	*7.40*	Sqm
			2		0.45	1.00	*0.90*	Sqm
		TOTAL					**14.30**	**Sqm**
4	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S	2	3.00		1.50	*9.00*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*
		Abutment (Side walls) U/S	2	8.00		1.50	*24.00*	*Sqm*
		Abutment (Side walls) D/S	2	12.00		1.30	*31.20*	*Sqm*
		TOTAL					**70.70**	***Sqm***
5	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		wing wall U/S	2	3.00		1.50	*9.00*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Abutment (Side walls) U/S	2	8.00		1.50	*24.00*	*Sqm*
		Abutment (Side walls) D/S	2	12.00		1.30	*31.20*	*Sqm*
		TOTAL					**70.70**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-26.650Km)								
1	**New Structure is Proposed at this location**							
QUANTITIES OF REPAIRING WORK FOR FALL/HR OF MALHAD SUB DY (Ch.-26.975 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Fall Abutment	2	12.00		2.3	*55.20*	*Sqm*
		Parapet Wall	2	4.50		2.09	*18.81*	*Sqm*
		TOTAL					**74.01**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.50		2.09	*18.81*	*Sqm*
		Fall Abutment	2	12.00		2.3	*55.20*	*Sqm*
		TOTAL					**74.01**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing Wall U/S & D/S	4	3.00	0.30	1.2	*4.32*	*Cum*
		TOTAL					***4.32***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall U/S & D/S	8	3.00		1.2	*28.80*	Sqm
			8		0.30	1.2	*2.88*	Sqm
		TOTAL					**31.68**	**Sqm**
		New HR is Proposed at this location Existing HR is not Present there .						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-27.889 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**170.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S	2	3.00		1.30	*7.80*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*
		Abutment (Side walls) U/S	2	5.00		1.50	*15.00*	*Sqm*
		Abutment (Side walls) D/S	2	8.00		1.30	*20.80*	*Sqm*
		TOTAL					**50.10**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and**						
		wing wall U/S	2	3.00		1.30	*7.80*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Abutment (Side walls) U/S	2	5.00		1.50	*15.00*	*Sqm*
		Abutment (Side walls) D/S	2	8.00		1.30	*20.80*	*Sqm*
		TOTAL					**50.10**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-28.500 Km)								
1		**New Structure is Proposed at this location**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-29.030 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S & D/S	4	5.00		1.30	*26.00*	*Sqm*
		Abutment U/S & D/S	1	5.00		1.50	*7.50*	*Sqm*
		Parapet	2	5.00		1.50	*15.00*	*Sqm*
		TOTAL					**48.50**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		wing wall U/S & D/S	4	5.00		1.30	*26.00*	*Sqm*
		Abutment U/S & D/S	1	5.00		1.50	*7.50*	*Sqm*
		Parapet	2	5.00		1.50	*15.00*	*Sqm*
		TOTAL					**48.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-29.550 Km)								
1		**New Structure is Proposed at this location**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-30.090 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	2	5.00		2.14	*21.40*	*Sqm*
		Wing wall	4	4.00		1.50	*24.00*	*Sqm*
		Abutment	2	5.50		1.00	*11.00*	*Sqm*
		TOTAL					**56.40**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR HR OF RAMPUR MINOR (Ch.-31.530 Km)								
1		**New HR is Proposed at this location existing HR is not present there.**						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-31.852 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S	2	3.50		1.60	*11.20*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*
		Abutment (Side walls) U/S	2	6.00		1.50	*18.00*	*Sqm*
		Abutment (Side walls) D/S	2	10.00		1.30	*26.00*	*Sqm*
		TOTAL					**61.70**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		wing wall U/S	2	3.50		1.60	*11.20*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*
		Abutment (Side walls) U/S	2	6.00		1.50	*18.00*	*Sqm*
		Abutment (Side walls) D/S	2	10.00		1.30	*26.00*	*Sqm*
		TOTAL					**61.70**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-32.690 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-33.680 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	3.00	2.80	0.549	*4.61*	*Cum*
		D/S Wing wall	2	2.50	0.30	1.2	*1.80*	*Cum*
		TOTAL					***6.41***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	3.00		0.549	*3.29*	Sqm
			2		2.80	0.549	*3.07*	Sqm
		D/S Wing wall	4	2.50		1.2	*12.00*	Sqm
			4		0.30	1.2	*1.44*	Sqm
		TOTAL					**19.81**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR DLR BRIDGE (Ch.-34.380 Km)								
1		**Structure requires no repair work well maintained and also a SH DLR Bridge.**						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-34.500 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-36.430 Km)								
1		**Existing Canal is 35.334 km**						
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF PALUA MINOR								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-0.152 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	6	0.3	0.92	*3.31*	*Cum*
		TOTAL					**3.31**	**Cum**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	5.5.5	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	6.00		2.14	*25.68*	*Sqm*
		TOTAL					**25.68**	***Sqm***
4	5.5.10	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	6.00		2.14	*25.68*	*Sqm*
		TOTAL					**25.68**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.150 Km)								
1	5.8.9	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Abutment	1	5.00	0.45	1.5	*3.38*	*Cum*
		Well Portion	2	1.60	0.45	1.5	*2.16*	*Cum*
		TOTAL					***5.54***	***Cum***
		New Fall+ Culvert has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.768 Km)								
1	5.8.9	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Abutment	1	5.00	0.45	1.5	*3.38*	*Cum*
		Well Portion	2	1.60	0.45	1.5	*2.16*	*Cum*
		TOTAL					***5.54***	***Cum***
		New Fall+ Culvert has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-2.469 Km)								
1	5.1.3	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	5.4.6	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	8	0.3	0.92	*4.42*	*Cum*
		TOTAL					**4.42**	**Cum**
3	5.5.5	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	8.00		2.14	*34.24*	*Sqm*
		TOTAL					**34.24**	***Sqm***
4	5.5.10	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	8.00		2.14	*34.24*	*Sqm*
		TOTAL					**34.24**	***Sqm***
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF ASNI MINOR								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-0.155 Km)								
1		**New Structure is proposed.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-0.823 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	8	0.45	0.92	*3.31*	*Cum*
		TOTAL					**3.31**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	8.00		2.29	*18.32*	*Sqm*
		TOTAL					**18.32**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	8.00		2.29	*18.32*	*Sqm*
		TOTAL					**18.32**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.700 Km)								
1		**New Structure is proposed.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-1.951 Km)								
1		**New Structure is proposed.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-3.609 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	7.5	0.45	0.92	*6.21*	*Cum*
		TOTAL					**6.21**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	7.50		2.29	*34.35*	*Sqm*
		TOTAL					**34.35**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	7.50		2.29	*34.35*	*Sqm*
		TOTAL					**34.35**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.804 Km)								
1		**New Structure is proposed.**						
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF KAILASHPUR SUB DY.								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
QUANTITIES OF REPAIRING WORK FOR FALL /HR (Ch.-0.000 Km)								
1	**FALL is taken in HR and New HR for Sub Dy is Proposed Here.**							
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.305 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing Wall U/S	2	5.00	0.30	1.50	*4.50*	*Cum*
		Wing Wall D/S	2	2.50	0.30	1.20	*1.80*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		D/S Abutment	2	8.00	0.30	1.50	*7.20*	*Cum*
		Crest	1	1.60	2.40	1.52	*5.86*	*Cum*
		Floor	1	5.00	1.60	0.30	*2.40*	*Cum*
		TOTAL					***21.76***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-0.600 Km)								
1		**New Structure is proposed Here.**						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-0.800 Km)								
1		**New Structure is proposed.**						
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.160 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**250.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.10	*29.40*	*Sqm*
		Abutment	2	4.00		2.10	*16.80*	*Sqm*
		TOTAL					**46.20**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.10	*29.40*	*Sqm*
		Abutment	2	4.00		2.10	*16.80*	*Sqm*
		TOTAL					**46.20**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.575 Km)								
1		**New Structure is proposed Here.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.690 Km)								
1	**New Structure is proposed Here Existing Structure is Completely Damaged Excavation quantity is taken in Canal Eathwork**							
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.030 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4	0.45	0.92	*3.31*	*Cum*
		TOTAL					**3.31**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.00		2.29	*18.32*	*Sqm*
		Wing wall U/S & D/S	4	4.50		1.8	*32.40*	*Sqm*
		Abutment	2	5.50		1.8	*19.80*	*Sqm*
		TOTAL					**70.52**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.00		2.29	*18.32*	*Sqm*
		Wing wall U/S & D/S	4	4.50		1.8	*32.40*	*Sqm*
		Abutment	2	5.50		1.8	*19.80*	*Sqm*
		TOTAL					**70.52**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.250 Km)								
1		**New Structure is proposed Here.**						
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-2.650 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**230.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.10	*29.40*	*Sqm*
		Abutment	2	3.00		2.10	*12.60*	*Sqm*
		TOTAL					**42.00**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.10	*29.40*	*Sqm*
		Abutment	2	3.00		2.10	*12.60*	*Sqm*
		TOTAL					**42.00**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.840 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	7	0.3	0.92	*3.86*	*Cum*
		TOTAL					**3.86**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	7.00		2.14	*29.96*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.5	*18.00*	*Sqm*
		Abutment	2	5.00		1.5	*15.00*	*Sqm*
		TOTAL					**62.96**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	7.00		2.14	*29.96*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.5	*18.00*	*Sqm*
		Abutment	2	5.00		1.5	*15.00*	*Sqm*
		TOTAL					**62.96**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-3.110 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	5	0.3	0.92	*2.76*	*Cum*
		TOTAL					**2.76**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	5.00		2.29	*22.90*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.80	*25.20*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Abutment	2	4.50		1.80	*16.20*	*Sqm*
		TOTAL					**64.30**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	5.00		2.29	*22.90*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.80	*25.20*	*Sqm*
		Abutment	2	4.50		1.80	*16.20*	*Sqm*
		TOTAL					**64.30**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-3.770 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**240.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.10	*29.40*	*Sqm*
		Abutment	2	5.00		2.10	*21.00*	*Sqm*
		TOTAL					**50.40**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.10	*29.40*	*Sqm*
		Abutment	2	5.00		2.10	*21.00*	*Sqm*
		TOTAL					**50.40**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE/INLET (Ch.-4.210 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**220.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parpet wall	**2**	3.50		2.00	*14.00*	*Sqm*
		Wing wall U/S & D/S For Bridge	4	4.50		1.50	*27.00*	*Sqm*
		Abutment	2	3.50		1.50	*10.50*	*Sqm*
		Inlet abutment U/S	1	3.00		1.65	*4.95*	*Sqm*
		Inlet abutment D/S	1	2.00		2.30	*4.60*	*Sqm*
		TOTAL					**61.05**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parpet wall	**2**	3.50		2.00	*14.00*	*Sqm*
		Wing wall U/S & D/S For Bridge	4	4.50		1.50	*27.00*	*Sqm*
		Abutment	2	3.50		1.50	*10.50*	*Sqm*
		Inlet abutment U/S	1	3.00		1.65	*4.95*	*Sqm*
		Inlet abutment D/S	1	2.00		2.30	*4.60*	*Sqm*
		TOTAL					**61.05**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-4.820 Km)						
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Parapet Wall	2	3.5	0.3	0.92	*1.93*	*Cum*
		TOTAL					**1.93**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.50		2.29	*16.03*	*Sqm*
		Wing wall U/S & D/S	4	4.00		1.50	*24.00*	*Sqm*
		Abutment	2	3.50		1.50	*10.50*	*Sqm*
		TOTAL					**50.53**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.50		2.29	*16.03*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.50	*21.00*	*Sqm*
		Abutment	2	4.50		1.50	*13.50*	*Sqm*
		TOTAL					**50.53**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE(Ch.-5.250 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parpet wall	2	6.00		2.14	*25.68*	*Sqm*
		Abutment	2	3.50		1.50	*10.50*	*Sqm*
		TOTAL					**36.18**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parpet wall	2	6.00		2.14	*25.68*	*Sqm*
		Abutment	2	3.50		1.50	*10.50*	*Sqm*
		TOTAL					**36.18**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-5.400 Km)								
1		**New Structure is proposed Here.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-5.670 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.50		2.29	*16.03*	*Sqm*
		Wing wall	4	3.00		2.29	*27.48*	*Sqm*
		Abutment	2	5.50		1.50	*16.50*	*Sqm*
		TOTAL					**60.01**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.50		2.29	*16.03*	*Sqm*
		Wing wall	4	3.00		2.29	*27.48*	*Sqm*
		Abutment	2	5.50		1.50	*16.50*	*Sqm*
		TOTAL					**60.01**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (0.610 M) (Ch.-6.000 Km)								
1		**New Structure is proposed.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-6.850 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1		New Structure is proposed.						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-7.160 Km)								
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
		Parapet Wall	2	2.5	0.3	0.92	*1.38*	*Cum*
		TOTAL					**1.38**	**Cum**
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall	2	2.50		2.29	*11.45*	*Sqm*
		Wing wall	4	8.50		1.50	*51.00*	*Sqm*
		Abutment	2	5.50		1.50	*16.50*	*Sqm*
		TOTAL					**78.95**	***Sqm***
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Parapet Wall	2	2.50		2.29	*11.45*	*Sqm*
		Wing wall	4	8.50		1.50	*51.00*	*Sqm*
		Abutment	2	5.50		1.50	*16.50*	*Sqm*
		TOTAL					**78.95**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.175 Km)								
1		New Structure is proposed existing is completley damaged.						
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF BUDHAUL SUB DY.								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.000 Km)								
1		New Structure is proposed.						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-0.500 Km)								
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
		Parapet Wall	2	2	0.45	0.92	*1.66*	*Cum*
		TOTAL					**1.66**	**Cum**
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall	2	2.00		2.29	*9.16*	*Sqm*
		TOTAL					**9.16**	***Sqm***
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Parapet Wall	2	2.00		2.29	*9.16*	*Sqm*
		TOTAL					**9.16**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.525 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				**130.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	5.00	6.20	0.153	*4.74*	*Cum*
		TOTAL					***4.74***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.950 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.050 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	4.00	2.85	0.40	*4.56*	*Cum*
		Crest	1	2.85	0.45	1.00	*1.28*	*Cum*
		TOTAL					***5.84***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	4.00		0.40	*3.20*	Sqm
			2		2.85	0.40	*2.28*	Sqm
		Crest	2	2.85		1.00	*5.70*	Sqm
			2		0.45	1.00	*0.90*	Sqm
		TOTAL					**12.08**	**Sqm**
4	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		wing wall U/S	2	3.00		1.50	*9.00*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*
		Abutment (Side walls) U/S	2	8.00		1.50	*24.00*	*Sqm*
		Abutment (Side walls) D/S	2	12.00		1.30	*31.20*	*Sqm*
		TOTAL					**70.70**	***Sqm***
5	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		wing wall U/S	2	3.00		1.50	*9.00*	*Sqm*
		wing wall D/S	2	2.50		1.30	*6.50*	*Sqm*
		Abutment (Side walls) U/S	2	8.00		1.50	*24.00*	*Sqm*
		Abutment (Side walls) D/S	2	12.00		1.30	*31.20*	*Sqm*
		TOTAL					**70.70**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.050 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**80.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Wing Wall U/S	2	5.00	0.30	1.50	*4.50*	*Cum*
		Wing Wall D/S	2	2.50	0.30	1.20	*1.80*	*Cum*
		D/S Abutment	2	8.00	0.30	1.50	*7.20*	*Cum*
		Crest	1	1.60	2.40	1.52	*5.86*	*Cum*
		Floor	1	5.00	1.60	0.30	*2.40*	*Cum*
		TOTAL					***21.76***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-2.470 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2	0.3	0.92	*1.10*	*Cum*
		TOTAL					**1.10**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	2.00		2.14	*8.56*	*Sqm*
		TOTAL					**8.56**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	2.00		2.14	*8.56*	*Sqm*
		TOTAL					**8.56**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-2.850 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	5	0.3	0.92	*2.76*	*Cum*
		TOTAL					**2.76**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	5.00		2.14	*21.40*	*Sqm*
		TOTAL					**21.40**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	5.00		2.14	*21.40*	*Sqm*
		TOTAL					**21.40**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-3.250 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		U/S & D/S Wing wall	2	3.50		3.3	*23.10*	*Sqm*
		U/S & D/S Anutment	2	3.50		3.3	*23.10*	*Sqm*
		TOTAL					**46.20**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		U/S & D/S Wing wall	2	3.50		3.3	*23.10*	*Sqm*
		U/S & D/S Anutment	2	3.50		3.3	*23.10*	*Sqm*
		TOTAL					**46.20**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.500 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**250.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing Wall U/S	2	3.50	0.30	1.50	*3.15*	*Cum*
		Wing Wall D/S	2	3.00	0.30	1.20	*2.16*	*Cum*
		D/S Abutment	2	8.00	0.30	1.50	*7.20*	*Cum*
		Crest	1	2.20	0.45	1.22	*1.21*	*Cum*
		Floor	1	5.00	2.20	0.30	*3.30*	*Cum*
		TOTAL					***17.02***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-3.790 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**170.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	5.5	0.3	0.92	*3.04*	*Cum*
		TOTAL					**3.04**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	5.50		2.14	*23.54*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.8	*25.20*	*Sqm*
		Abutment U/S & D/S	2	4.50		1.5	*13.50*	*Sqm*
		TOTAL					**62.24**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	5.50		2.14	*23.54*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.8	*25.20*	*Sqm*
		Abutment U/S & D/S	2	4.50		1.5	*13.50*	*Sqm*
		TOTAL					**62.24**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.800 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.500Km)								
1		**New Structure is Proposed at this location**						
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-4.600 Km)								
1		**New Structure is Proposed at this location**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.850 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**250.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing Wall U/S	2	3.50	0.30	1.80	*3.78*	*Cum*
		Wing Wall D/S	2	3.00	0.30	1.50	*2.70*	*Cum*
		D/S Abutment	2	14.00	0.30	1.50	*12.60*	*Cum*
		Crest	1	2.10	0.45	1.52	*1.44*	*Cum*
		Floor	1	5.00	2.10	0.45	*4.73*	*Cum*
		TOTAL					***25.25***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.060 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	5.00	6.20	0.464	*14.38*	*Cum*
		TOTAL					***14.38***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	5.00		0.464	*4.64*	Sqm
			2		6.20	0.464	*5.75*	Sqm
		TOTAL					**10.39**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-5.700 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**170.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.5	0.3	0.92	*1.93*	*Cum*
		TOTAL					**1.93**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.50		2.14	*14.98*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.50	*21.00*	*Sqm*
		Abutment U/S & D/S	2	4.50		1.20	*10.80*	*Sqm*
		TOTAL					**46.78**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.50		2.14	*14.98*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.50	*21.00*	*Sqm*
		Abutment U/S & D/S	2	4.50		1.20	*10.80*	*Sqm*
		TOTAL					**46.78**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.910 Km)								
1		**New Structure is proposed.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-6.370 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1		Structure requires no repair work.						
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.620 Km)						
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		D/S Abutment	2	17.00	0.60	1.5	*30.60*	*Cum*
		U/S Portion	2	4.00	0.60	1.5	*7.20*	*Cum*
		TOTAL					***37.80***	***Cum***
		New Structure is proposed at this location.						
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-7.650 Km)						
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				**150.00**	**Sqm**
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall	2	5.00		2.14	*21.40*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.50	*21.00*	*Sqm*
		Abutment U/S & D/S	2	4.50		1.20	*10.80*	*Sqm*
		TOTAL					**53.20**	***Sqm***
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Parapet Wall	2	5.00		2.14	*21.40*	*Sqm*
		Wing wall U/S & D/S	4	3.50		1.50	*21.00*	*Sqm*
		Abutment U/S & D/S	2	4.50		1.20	*10.80*	*Sqm*
		TOTAL					**53.20**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-7.920 Km)						
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				**100.00**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-7.960 Km)						
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
		Parapet Wall	2	5.35	0.45	0.92	*4.43*	*Cum*
		TOTAL					**4.43**	**Cum**
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall	2	5.35		2.29	*24.50*	*Sqm*
		TOTAL					**24.50**	***Sqm***
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Parapet Wall	2	5.35		2.29	*24.50*	*Sqm*
		TOTAL					**24.50**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.100 Km)						
1		New Structure is proposed at this location.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-8.250 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**230.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.29	*32.06*	*Sqm*
		TOTAL					**32.06**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S	4	3.50		2.29	*32.06*	*Sqm*
		TOTAL					**32.06**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.425 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Abutment	1	7.00	0.45	1.5	*4.73*	*Cum*
		Well Portion	2	2.98	0.45	1.5	*4.03*	*Cum*
		TOTAL					***8.75***	***Cum***
		New Fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL+BRIDGE (Ch.-8.850 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	5.00	6.20	0.20	*6.20*	*Cum*
		Slab For Bridge	1	4.50	5.50	0.35	*8.66*	*Cum*
		TOTAL					***14.86***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Slab For Bridge	2	4.50		0.35	*3.15*	Sqm
			2		5.50	0.35	*3.85*	Sqm
		TOTAL					**7.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-9.190 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	5.4	0.45	0.92	*4.47*	*Cum*
		TOTAL					**4.47**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	5.40		2.29	*24.73*	*Sqm*
		TOTAL					**24.73**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	5.40		2.29	*24.73*	*Sqm*
		TOTAL					**24.73**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.200 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Abutment	2	5.00	0.45	1.5	*6.75*	*Cum*
		Well Portion	2	1.60	0.45	1.5	*2.16*	*Cum*
		TOTAL					***8.91***	***Cum***
		New Fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.800 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S FLOOR	2	5.00	3.50	0.152	*5.32*	*Cum*
		TOTAL					***5.32***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-10.175 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**170.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	5.00		2.29	*22.90*	*Sqm*
		TOTAL					**22.90**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	5.00		2.29	*22.90*	*Sqm*
		TOTAL					**22.90**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-11.450 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.50		2.29	*16.03*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.80	*21.60*	*Sqm*
		TOTAL					**37.63**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.50		2.29	*16.03*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.80	*21.60*	*Sqm*
		TOTAL					**37.63**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-11.500 Km)								
1		**New Fall Is proposed at this Location**						
QUANTITIES OF REPAIRING WORK FOR RAILWAY BRIDGE (Ch.-12.250 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1		To be Constructed by Railway Dept						
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-12.300 Km)						
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				180.00	Sqm
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall	2	5.00		2.19	*21.90*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.80	*21.60*	*Sqm*
		TOTAL					43.50	***Sqm***
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Parapet Wall	2	5.00		2.19	*21.90*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.80	*21.60*	*Sqm*
		TOTAL					43.50	***Sqm***
		DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF PATOI SUB DY.						
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE(Ch.-0.460 Km)						
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		Abutment	2	5.50	0.45	1.5	*7.43*	*Cum*
		Slab	1	7.00	5.50	0.35	*13.48*	*Cum*
		TOTAL					***20.90***	***Cum***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.475 Km)						
1		New Structure is Proposed at this Location						
		QUANTITIES OF REPAIRING WORK FOR CD WORK(Ch.-1.554 Km)						
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				180.00	Sqm
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Abutment	2	10.00		2.15	*43.00*	*Sqm*
		Wing wall U/S & D/S	4	12.00		2.15	*103.20*	*Sqm*
		TOTAL					146.20	***Sqm***
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Abutment	2	10.00		2.15	*43.00*	*Sqm*
		Wing wall U/S & D/S	4	12.00		2.15	*103.20*	*Sqm*
		TOTAL					146.20	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE(Ch.-2.045 Km)						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	11.00	0.45	0.92	*9.11*	*Cum*
		TOTAL					**9.11**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	11.00		2.29	*50.38*	*Sqm*
		TOTAL					**50.38**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	11.00		2.29	*50.38*	*Sqm*
		TOTAL					**50.38**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR HR OF ANTI MINOR (Ch.-2.469 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Gate Abutment	2	2.20	0.45	2.5	*4.95*	*Cum*
		Floor	1	5.00	1.50	0.35	*2.63*	*Cum*
		TOTAL					***7.58***	***Cum***
QUANTITIES OF REPAIRING WORK FOR DLR BRIDGE(Ch.-3.078 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**220.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	8.00		2.15	*34.40*	*Sqm*
		Parapet wall	2	6.00		2.14	*25.68*	*Sqm*
		Wing wall U/S & D/S	4	2.50		2.15	*21.50*	*Sqm*
		TOTAL					**81.58**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	8.00		2.15	*34.40*	*Sqm*
		Parapet wall	2	6		2.14	*25.68*	*Sqm*
		Wing wall U/S & D/S	4	2.50		2.15	*21.50*	*Sqm*
		TOTAL					**81.58**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.725 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S FLOOR	2	5.00	3.50	0.153	*5.36*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					***5.36***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE + FALL (Ch.-4.510 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Fall Abutment	2	5.50	0.45	1.2	*5.94*	*Cum*
		Fall Side walls	2	8.00	0.30	1.2	*5.76*	*Cum*
		Wing walls U/S & D/S	4	2.50	0.30	1	*3.00*	*Cum*
		Crest	1	4.00	0.45	0.914	*1.65*	*Cum*
		Floor	1	5.00	1.50	0.35	*2.63*	*Cum*
		Parapet of Bridge	2	5.00	0.30	0.92	*2.76*	*Cum*
		Slab	1	5.50	5.00	0.3	*8.25*	*Cum*
		TOTAL					***29.98***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-4.816 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**230.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	5.50		2.15	*23.65*	*Sqm*
		Wing wall U/S & D/S	4	6.00		2.15	*51.60*	*Sqm*
		TOTAL					**75.25**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	5.50		2.15	*23.65*	*Sqm*
		Wing wall U/S & D/S	4	6.00		2.15	*51.60*	*Sqm*
		TOTAL					**75.25**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-5.005 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-5.944 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-6.750 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**220.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutmnet	2	5.50	0.45	1.8	*8.91*	*Cum*
		Wing walls U/S & D/S	4	3.50	0.45	1.8	*11.34*	*Cum*
		TOTAL					***20.25***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-7.165 Km)								
1		**New Structure is Proposed at this location.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-7.405 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-7.560 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-8.030 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR FALL+ CD WORK FOR DHAWA CANAL (Ch.-8.382 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR DLR BRIDGE (Ch.-9.205 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.240 Km)								
1		**New Structure is Proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR DLR BRIDGE (Ch.-9.350 Km)								
1		**State Highway crossing Rafiganj to Goh no need to repair.**						
QUANTITIES OF REPAIRING WORK FOR FOOT BRIDGE (Ch.-9.632 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-11.125 Km)								
1		**New Structure is proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR CD WORK (12.482 Km)								
1		**New Structure is proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE CUM FALL (Ch.-12.689 Km)								
1		**New Structure is proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR CD WORK (13.800 Km)								
1		**New Structure is proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR FOOT BRIDGE (Ch.-14.640 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CD WORK (14.865 Km)								
1		**New Structure is proposed at this location.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-14.960 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	11.00	0.45	0.92	*9.11*	*Cum*
		TOTAL					**9.11**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	11.00		2.29	*50.38*	*Sqm*
		Abutment	3	0.00		2.29	*0.00*	*Sqm*
		TOTAL					**50.38**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	11.00		2.29	*50.38*	*Sqm*
		Abutment	3	0.00		2.29	*0.00*	*Sqm*
		TOTAL					**50.38**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-15.000 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-15.179 Km)								
1		**Structure requires no repair work.**						

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR BRICK SECTION

Sr. No.	STRUCTURE	Amount in Rs.
1	Brick Section	₹ 3,51,03,778.87
	Sub-total	₹ 3,51,03,778.87
	Seigniorage charges	₹ 76,533.40
		₹ 351.80

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF BRICK WORK OF CANAL

S.No.	Name of Canal	Reaches (m)	Length (m)	Area (m2)	Quantity (m3)	Unit	Rates (As per Bihar SOR 2025)	Amount	Cement (MT)	Coarse Sand (Cum)
1	Angra Branch Canal	34747-36450	1703.000	0.640	1089.920	Cum	**5021.30**	₹ 54,72,815.30	125.56	348.77
2	Palua Minor	762-2625	1863.000	0.520	968.760	Cum	**5021.30**	₹ 48,64,434.59	111.60	310.00
3	Budhaul Sub Dy	11750-13300	1550	0.520	806.000	Cum	**5021.30**	₹ 40,47,167.80	92.85	257.92
4	Pathra Minor	3292-4084	792.000	0.520	411.840	Cum	**5021.30**	₹ 20,67,972.19	47.44	131.79
5	Dabur Minor	2042-3550	1508.000	0.540	814.320	Cum	**5021.30**	₹ 40,88,945.02	93.81	260.58
6	Sadopur Minor	1700-2450	750.000	0.502	376.500	Cum	**5021.30**	₹ 18,90,519.45	43.37	120.48
7	Patoi Dy	14850-15422	572	0.500	286.000	Cum	**5021.30**	₹ 14,36,091.80	32.95	91.52
8	Malhad Sub Dy	8050-9350	1300	0.520	676.000	Cum	**5021.30**	₹ 33,94,398.80	77.88	216.32
9	Rampur Minor-2	3500-3800	300.000	0.536	160.800	Cum	**5021.30**	₹ 8,07,425.04	18.52	51.46
10	Anti Minor	6600-7160	560.000	0.520	291.200	Cum	**5021.30**	₹ 14,62,202.56	33.55	93.18
11	Gulab Bigha Minor	183-2130	1947.000	0.552	1074.744	Cum	**5021.30**	₹ 53,96,612.05	123.81	343.92
12	Maruka Minor	2650-3960	1310	0.560	733.600	Cum	**5021.30**	₹ 36,83,625.68	84.51	234.75
13	Rampur Minor	2438-3100	662	0.550	364.100	Cum	**5021.30**	₹ 18,28,255.33	41.94	116.51
	Total				***8053.78***			***₹ 2,05,41,334.89***	***471.26***	***1309.07***
6	**Carriage of materials**									
	Coarse Sand (60 Km lead)				1309.069	Cum	**1075.00**	₹ 14,07,248.96		
	Cement (30 km lead)				471.265	MT	**742.00**	₹ 3,49,678.46		
	Brick (15 km lead)				4026892	No.	**3.18**	₹ 1,28,05,516.56		
	Carriage of materials Total (In Rs.)							**₹ 1,45,62,443.98**		
	SUB TOTAL (In Rs.)							**₹ 3,51,03,778.87**		
	Seigniorage @10%			**Rate**		**Amount in Rs.**	**10%**			
	Coarse Sand	1309.07	Cum	**584.64**		765333.98	76533.40			
	Total						**₹ 76,533.40**			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR OUTLET

Sr. No.	Qty	STRUCTURE			Amount in Rs.
1	1 No.	Outlet			₹ 1,27,744.47
	Total Outlets in Angra Branch Canal		172	nos.	₹ 2,19,72,048.42
				Sub-Total	₹ 2,19,72,048.42
				Seigniorage charges	₹ 1,89,229.77
				Total (in Rs. Lakhs)	**₹ 221.61**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.8355
	Total 1+2+3= ***(B)*** =	Rs.	93698.339
4	Labour charge 30%(B) =	Rs.	28109.5017
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.5005
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80068
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75085
	Total = B+4+5+6+7 = ***C***	Rs.	155373.8927
8	Other incidental charge , **3 % = of C**	Rs.	4661.216782
	Total C+8 = D	Rs.	**160035.1095**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 172 nos. outlet, Total Seigniorage charges					**189229.77**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	**PL MARCH 2025**
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					
		Unit: per Cum					

		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13

		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	

	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	

	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					

	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	

	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	

		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**

12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**

13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					

	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	

						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9

		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					

		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**

17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					

		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	

					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**

22	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
23	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	

		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
24	**5.6.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.4	**900/ 1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**

		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.5	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	

					Say, Rs	**₹ 2,047.70**	**Per M**
25	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
26	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	

		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
27	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
28	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	

		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.52	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2023 & PL JUNE 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67
11	**WRD SOR 2025**	**M-066**	Elastomeric Bearing	**Cucm**	0.67

Gaya Division – Mishrichak Minor
(Total Cost – Rs. 1.28 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (MISHRICHAK MINOR)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charge	Amount (Rs.) including Seigniorage Charges	Page No.
1	Earthwork						
	MISHRICHAK MINOR	1	Job	5143944.05	0.00	₹ 51,43,944.05	8
2	HR						
	MISHRICHAK MINOR	1	No.	2621655.52	19736.72	₹ 26,41,392.24	15
3	Falls						
	MISHRICHAK MINOR						
	1.220 m Fall at Ch. 1.264 Km	1	No.	512361.58	4253.96	₹ 5,16,615.54	23
	1.220 m Fall at Ch. 1.400 Km	1	No.	511761.89	4251.08	₹ 5,16,012.97	24
	0.914 m Fall at Ch. 1.584 Km	1	No.	435109.34	3598.00	₹ 4,38,707.34	25
4	*Pipe Culvert*						
	At 0.64 Km	1	No.	479186.55	4155.93	₹ 4,83,342.48	37
5	*CD Work*						
	At 0.735 Km	1	No.	1465420.784	12324.48	₹ 14,77,745.27	43
	At 1.645 Km	1	No.	1045809.659	8879.50	₹ 10,54,689.16	44
6	Outlets						
	MISHRICHAK MINOR	4	No.	127744.47	1100.17	₹ 5,15,378.56	54
7	Kilometer Stone	2	No.	3853.40	0.00	₹ 7,706.80	85
	TOTAL (In Rs.)					**12795534.40**	
	TOTAL (In Lacs)					**127.96**	

	Carriage of Materials Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P

Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_1)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR EARTHWORK OF MISHRICHAK MINOR

Sr. No.	Particulars	Amount in Rs.	Reference
1	**Cost of Earthwork for Mishrichak minor**	₹ 51,43,944.05	AOC Earthwork

DETAIL QUANTITIES OF EARTHWORK
MISHRICHAK MINOR (0.000 TO 1.695.69 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		11.691	0	0	3.771	0	0.000
100	100	12.834	12.263	1226.250	2.501	3.136	313.600
200	100	11.619	12.227	1222.650	2.571	2.536	253.600
300	100	14.014	12.817	1281.650	3.563	3.067	306.700
400	100	14.365	14.190	1418.950	2.505	3.034	303.400
500	100	14.671	14.518	1451.800	2.766	2.636	263.550
600	100	11.630	13.151	1315.050	1.193	1.980	197.950
700	100	7.958	9.794	979.400	2.263	1.728	172.800
800	100	5.542	6.750	675.000	1.690	1.977	197.650
900	100	3.824	4.683	468.300	1.634	1.662	166.200
1000	100	2.665	3.245	324.450	3.328	2.481	248.100
1100	100	1.948	2.307	230.650	0.944	2.136	213.600
1200	100	0.936	1.442	144.200	2.644	1.794	179.400
1300	100	1.545	1.241	124.050	2.033	2.339	233.850
1400	100	1.424	1.485	148.450	2.642	2.338	233.750
1500	100	1.212	1.318	131.800	1.806	2.224	222.400
1600	100	1.456	1.334	133.400	2.593	2.200	219.950
1695.69	95.69	0.024	0.740	70.811	9.370	5.982	572.370
Total				**11346.861**			**4298.870**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**11346.861**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**4298.870**
NET QUANTITY OF EARTHWORK							**7047.99**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
MISHRICHAK MINOR (0.000 TO 1.650 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.025	25	1.820	45.50	Sqm
0.025 - 1.650	1625	1.380	2242.50	Sqm
	TOTAL		**2288.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.025	25	1.820	0.15	6.83	Cum
0.025 - 1.650	1625	1.380	0.15	336.38	Cum
	TOTAL			**343.20**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR MISHRICHAK MINOR						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	2288.00	Sqm	**11.80**	27008.44416
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	11346.86	Cum	**156.50**	1775783.684
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	4538.74	Cum	**17.22**	78145.89306
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	7047.99	Cum	**165.12**	1163735.78
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	2114.40	Cum	**174.89**	369786.94
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	1762.00	Cum	**217.92**	383974.54
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3171.60	Cum	**319.14**	1012183.11
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			343.20	Cum	**196.10**	67301.52
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	4298.87	Cum	**61.88**	266024.14
TOTAL COST OF EARTHWORK (in Rs.)						**5143944.05**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**51.439**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND DETAILS OF QUANTITIES FOR EARTH WORK FOR MISHRICHAK MINOR				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***2288.00***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation)** **Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	11346.861	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	4538.74424	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	7047.991	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	2114.40	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1762.00	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3171.60	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	343.20	Cum

7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	4298.87	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR HEAD REGULATOR OF MISHRICHAK MINOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	0.00	Head Regulator	₹ 26,21,655.52
		Sub-Total	₹ 26,21,655.52
		Seigniorage charges	₹ 19,736.72
		Total (in Rs. Lakhs)	**₹ 26.41**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF MISHRICHAK MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	0.700	0.500	**1.20**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.730	0.200	**1.93**
	(h) is head of water above sill of gate in m	1.730	0.3	**2.030**
	Weight of lift gate excluding embedded parts	**0.42**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.42	1.0
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.0	312.43
	Weight of screw hoist with all accessories	**0.31**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		2.030	400	812
	Columns with bracings/Anchors/Stiffeners	**0.812**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		2.03	400	812
	Beams with cross beams/stiffeners	**0.812**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.624	10%	0.1624
	Railing/ Chequered plate/Ladder etc	**0.1624**		**T**
Total Weight of One Gate		**2.52**		**T**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST HR FOR MISHRICHAK MINOR OFFTAKING FROM RD-105+700 KM (L.) AT NORTH KOEL RMC								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	240.365	Cum	**156.50**	37617.10			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	22.79	Cum	**6381.70**	145434.76	7.38	10.26	20.51
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	148.70	Cum	**6914.20**	1028165.49	61.34	63.94	127.88
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	13.40	Cum	**8151.40**	109234.18	7.60	5.23	10.59
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.64	MT	**73574.90**	268170.86			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.52	MT	**160035.11**	402551.72			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	395.43	Sqm	**578.60**	228795.37			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.18	Sqm	**680.10**	4883.66			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.08	Cum	**694.61**	750.18			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.08	Cum	**1237.00**	1335.96			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.07	Cum	**1377.70**	90.93			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.07	Cum	**516.50**	34.09			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.08	Sqm	**63.20**	321.27			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully	49.46	Cum	**149.30**	7384.09			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	79.424	Cum	**1075.00**	85380.75			
	Coarse Aggregates (100 Km lead)	159.048	Cum	**1398.00**	222348.98			
	Cement (30 km lead)	76.322	MT	**742.00**	56631.00			
	Boulder (60 Km lead)	1.08	Cum	**1159.00**	1251.72			
	Steel (30 Km lead)	6.16	MT	**742.00**	4570.92			
	TOTAL (In Rs.)				**2621655.52**			
	TOTAL (In Rs.)				**₹ 26,21,655.52**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	79.42	Cum	**584.64**	46434.42	4643.44		
	Coarse Aggregate	159.05	Cum	**944.26**	150182.58	15018.26		
	Boulders	1.08	Cum	**694.61**	750.18	75.02		
	Total					19736.72		
	For 1 nos. HR, Total Seigniorage charges					**19736.72**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF HR FOR MISHRICHAK MINOR OFFTAKING FROM RD-105+700 KM (L.) AT NORTH KOEL RMC							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*3.22*	*2.01*	*3.922*	*50.796*	*Cum*
	Section B-B	*2*	*5.25*	*2.01*	*3.422*	*72.329*	*Cum*
	Section C-C	*2*	*0.50*	*2.01*	*3.422*	*6.888*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.21*	*2.01*	*3.922*	*25.367*	*Cum*
	Left Bank Sec a to d	1	4.77	3.67	2.672	*46.843*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.69*	*1.30*	*2.200*	*3.935*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.35*	*1.88*	*2.200*	*19.458*	*Cum*
	Floor						
	U/S key	*1*	*1.8165*	*1.4085*	*1.150*	*2.942*	*Cum*
	Floor	*1*	*3.513*	*1.4085*	*0.650*	*3.216*	*Cum*
		1	*0.575*	*0.700*	*0.300*	*0.121*	*Cum*
		1	*1.716*	*0.700*	*0.800*	*0.961*	*Cum*
		1	*0.603*	*0.700*	*0.600*	*0.422*	*Cum*
		1	*1.05*	*0.70*	*0.350*	*0.737*	*Cum*
		1	*0.60*	*0.70*	*0.600*	*0.422*	*Cum*
		1	*3.079*	*0.700*	*1.100*	*2.155*	*Cum*
		1	*0.923*	*0.700*	*0.200*	*0.129*	*Cum*
		1	*0.138*	*0.700*	*0.200*	*0.019*	*Cum*
		1	*1.984*	*0.700*	*0.700*	*0.972*	*Cum*
		1	*0.862*	*0.700*	*1.200*	*0.724*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*0.100*	*0.600*	*0.132*	*Cum*
	Toe Wall Base D/S Portion	*1*	*0.700*	*0.850*	*1.200*	*0.714*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.000*	*0.900*	*0.600*	*1.080*	*Cum*
						240.36	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.629*	*2.774*	*0.150*	*0.26*	*Cum*
		1	*2.630*	*1.408*	*0.150*	*0.56*	*Cum*
		1	*2.384*	*0.700*	*0.150*	*0.25*	*Cum*
		1	*1.006*	*0.700*	*0.150*	*0.11*	*Cum*
		1	*3.260*	*0.700*	*0.150*	*0.34*	*Cum*
		1	*1.097*	*0.700*	*0.150*	*0.12*	*Cum*
		1	*0.653*	*0.700*	*0.150*	*0.07*	*Cum*
		1	*1.173*	*0.700*	*0.150*	*0.12*	*Cum*
		1	*0.692*	*0.700*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*3.217*	*2.013*	*0.300*	*3.89*	*Cum*
	Section B-B	*2*	*5.250*	*2.013*	*0.300*	*6.34*	*Cum*
	Section C-C	*2*	*0.500*	*2.013*	*0.300*	*0.60*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.213*	*2.013*	*0.300*	*1.94*	*Cum*
	Left Bank Sec a to d	*1*	*4.773*	*3.673*	*0.150*	*2.63*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.688*	*1.300*	*0.300*	*0.54*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.351*	*1.881*	*0.300*	*2.65*	*Cum*
	Toe Wall Base D/S Portion	*1*	*0.700*	*0.850*	*0.300*	*0.18*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*0.700*	*0.450*	*0.900*	*0.28*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*1.000*	*0.150*	*0.33*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*2*	*2.200*	*0.300*	*0.900*	*1.19*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*3*	*0.600*	*0.600*	*0.300*	*0.32*	*Cum*
	TOTAL					**22.79**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*3.22*	*0.82*	*0.50*	*2.64*	*Cum*
		2	*3.22*	*1.22*	*1.32*	*10.35*	*Cum*
		2	*3.22*	*1.61*	*1.80*	*18.68*	*Cum*
	Section B-B	*2*	*5.25*	*1.22*	*1.32*	*16.89*	*Cum*
		2	*5.25*	*1.61*	*1.80*	*30.49*	*Cum*
	Section C-C	*2*	*0.50*	*1.22*	*1.32*	*1.61*	*Cum*
		2	*0.50*	*1.61*	*1.80*	*2.90*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.21*	*0.45*	*0.50*	*0.72*	*Cum*
		1	*3.21*	*1.03*	*1.32*	*4.38*	*Cum*
		1	*3.21*	*1.61*	*1.80*	*9.33*	*Cum*
	Left Bank						
	Section a-a	*1*		3.512	*0.50*	*1.76*	*Sqm*
		1		*3.36*	*0.20*	*0.67*	*Sqm*
		1		*1.85*	*1.82*	*3.37*	*Sqm*
						5.79	***Sqm***
	Section b-b	*1*		*3.51*	*0.50*	*1.76*	*Sqm*
		1		*3.02*	*0.20*	*0.60*	*Sqm*
		1		*1.75*	*1.82*	*3.19*	*Sqm*
						5.55	***Sqm***
	Section c-c	*1*		*3.51*	*0.50*	*1.76*	*Sqm*
		1		*2.34*	*0.20*	*0.47*	*Sqm*
		1		*1.41*	*1.82*	*2.57*	*Sqm*
						4.80	***Sqm***
	Section d-d	*1*		*3.51*	*0.50*	*1.76*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.82*	*0.87*	*Sqm*
						2.73	***Sqm***
	Bottom Key	*1*	*4.77*	*1.82*	*0.70*	*6.07*	*Cum*
	Top Stem Area	*1*	*4.77*	*4.72*		*22.51*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.69*	*0.90*	*0.90*	*1.11*	*Cum*
		2	*0.69*	*0.68*	*0.50*	*0.46*	*Cum*
		2	*0.69*	*0.45*	*0.50*	*0.31*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.35*	*1.48*	*0.90*	*6.27*	*Cum*
		2	*2.35*	*1.24*	*0.50*	*2.91*	*Cum*
		2	*2.35*	*0.64*	*0.50*	*1.51*	*Cum*
	TOTAL					**139.13**	**Cum**
	Floor						
	U/S key	*1*	*1.82*	*1.41*	*1.00*	*2.56*	*Cum*
	Floor	*1*	*3.51*	*1.41*	*0.50*	*2.47*	*Cum*
		1	*0.58*	*0.70*	*0.15*	*0.06*	*Cum*
		1	*1.72*	*0.70*	*0.65*	*0.78*	*Cum*
		1	*0.60*	*0.70*	*0.45*	*0.19*	*Cum*
		1	*1.05*	*0.70*	*0.20*	*0.15*	*Cum*
		1	*0.60*	*0.70*	*0.45*	*0.19*	*Cum*
		1	*3.08*	*0.70*	*0.65*	*1.40*	*Cum*
		1	*0.92*	*0.70*	*0.20*	*0.13*	*Cum*
		1	*0.14*	*0.70*		*0.10*	*Cum*
		1	*0.20*	*0.70*		*0.14*	*Cum*
		1	*1.98*	*0.70*	*0.55*	*0.76*	*Cum*
	D/S key	*1*	*0.86*	*0.70*	*1.05*	*0.63*	*Cum*
	TOTAL					**148.70**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.26*	*1.41*	*0.20*	*0.92*	*Cum*
		1	*0.21*	*0.70*	*0.20*	*0.03*	*Cum*
		1	*1.87*	*0.70*	*0.20*	*0.26*	*Cum*
		1	*1.00*	*0.70*	*0.20*	*0.14*	*Cum*
		1	*3.08*	*0.70*	*0.20*	*0.43*	*Cum*
		1	*0.95*	*0.70*	*0.20*	*0.13*	*Cum*
		1	*1.98*	*0.70*	*0.20*	*0.28*	*Cum*
	Top Slab	*1*	*5.25*	*1.50*	*0.33*	*2.57*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*1.50*	*0.08*	*0.48*	*Cum*
	Karis	*1*	*1.70*	*0.45*	*0.20*	*0.15*	*Cum*
	Dirt wall	*2*	*5.75*	*0.82*	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*2.34*	*0.45*	*0.18*	*0.36*	*Cum*
		2	*2.34*	*0.35*	*0.25*	*0.41*	*Cum*
		2	*2.34*	*0.22*	*0.55*	*0.56*	*Cum*
	TOTAL					**13.40**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*1.800*	*26*		*1.578*	*73.857*	*Kg*
a2	*10*	*5.550*	*7*		*0.616*	*23.949*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*1.800*	*19*		*0.616*	*21.083*	*Kg*
a5	*10*	*5.550*	*7*		*0.616*	*23.949*	*Kg*
b1	*12*	*1.700*	*8*		*0.888*	*12.073*	*Kg*
b2	*12*	*1.700*	*8*		*0.888*	*12.073*	*Kg*
b3	*10*	*1.700*	*8*		*0.616*	*8.384*	*Kg*
b4	*10*	*1.720*	*12*		*0.616*	*12.724*	*Kg*
b5	*12*	*1.500*	*12*		*0.888*	*15.979*	*Kg*
b6	*12*	*1.500*	*12*		*0.888*	*15.979*	*Kg*
b7	*12*	*1.700*	*12*		*0.888*	*18.109*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.521*	*50*		*0.888*	*111.895*	*Kg*
x2	*16*	*1.344*	*50*		*1.578*	*106.051*	*Kg*
x3	*10*	*3.000*	*24*		*0.616*	*44.385*	*Kg*
	Floor R/F						
	U/S Key						
	12	*8.691*	*3*		*0.888*	*23.145*	*Kg*
	12	*1.400*	*34*		*0.888*	*42.255*	*Kg*
	floor raft						
	12	*4.965*	*3*		*0.888*	*13.222*	*Kg*
	12	*9.638*	*6*		*0.888*	*51.334*	*Kg*
	12	*1.400*	*85*		*0.888*	*105.637*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*139.13*	*0.25%*	*0.35*	*7850*	*2730.52*	*Kg*
	TOTAL Weight of steel (in kg)					3644.87	Kg
	TOTAL Weight of Steel (in Tonne)					**3.64**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.52		**2.52**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Abutment						
	Section A-A	*4*	*3.22*		*0.50*	*6.43*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*3.22*		*1.32*	*17.01*	*Sqm*
		4		*1.22*	*1.32*	*6.43*	*Sqm*
		4	*3.22*		*1.80*	*23.16*	*Sqm*
		4		*1.61*	*1.80*	*11.61*	*Sqm*
	Section B-B	*4*	*5.25*		*1.32*	*27.76*	*Sqm*
		4		*1.22*	*1.32*	*6.43*	*Sqm*
		4	*5.25*		*1.80*	*37.80*	*Sqm*
		4		*1.61*	*1.80*	*11.61*	*Sqm*
	Section C-C	*4*	*0.50*		*1.32*	*2.64*	*Sqm*
		4		*1.22*	*1.32*	*6.43*	*Sqm*
		4	*0.50*		*1.80*	*3.60*	*Sqm*
		4		*1.61*	*1.80*	*11.61*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*3.21*		*0.50*	*3.21*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*3.21*		*1.32*	*8.50*	*Sqm*
		2		*1.03*	*1.32*	*2.73*	*Sqm*
		2	*3.21*		*1.80*	*11.57*	*Sqm*
		2		*1.61*	*1.80*	*5.81*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*4.77*		*0.70*	*6.68*	*Sqm*
		2		*1.82*	*0.70*	*2.54*	*Sqm*
	Section a-a	*2*	*1.59*		*0.50*	*1.59*	*Sqm*
		2		*3.51*	*0.50*	*3.51*	*Sqm*
		2	*1.59*		*0.20*	*0.64*	*Sqm*
		2		*3.36*	*0.20*	*1.35*	*Sqm*
		2	*1.59*		*1.82*	*5.80*	*Sqm*
		2		*1.85*	*1.82*	*6.73*	*Sqm*
	Section b-b	*2*	*1.59*		*0.50*	*1.59*	*Sqm*
		2		*3.51*	*0.50*	*3.51*	*Sqm*
		2	*1.59*		*0.20*	*0.64*	*Sqm*
		2		*3.02*	*0.20*	*1.21*	*Sqm*
		2	*1.59*		*1.82*	*5.80*	*Sqm*
		2		*1.75*	*1.82*	*6.38*	*Sqm*
	Section c-c	*2*	*1.59*		*0.50*	*1.59*	*Sqm*
		2		*3.51*	*0.50*	*3.51*	*Sqm*
		2	*1.59*		*0.20*	*0.64*	*Sqm*
		2		*2.34*	*0.20*	*0.94*	*Sqm*
		2	*1.59*		*1.82*	*5.80*	*Sqm*
		2		*1.41*	*1.82*	*5.14*	*Sqm*
	Section d-d	*2*	*1.59*		*0.50*	*1.59*	*Sqm*
		2		*3.51*	*0.50*	*3.51*	*Sqm*
		2	*1.59*		*0.20*	*0.64*	*Sqm*
		2		*0.48*	*0.20*	*0.19*	*Sqm*
		2	*1.59*		*1.82*	*5.80*	*Sqm*
		2		*0.48*	*1.82*	*1.75*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.69*		*0.90*	*2.48*	*Sqm*
		4		*0.90*	*0.90*	*3.24*	*Sqm*
		4	*0.69*		*0.50*	*1.38*	*Sqm*
		4		*0.68*	*0.50*	*1.35*	*Sqm*
		4	*0.69*		*0.50*	*1.38*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*2.35*		*0.90*	*8.46*	*Sqm*
		4		*1.48*	*0.90*	*5.33*	*Sqm*
		4	*2.35*		*0.50*	*4.70*	*Sqm*
		4		*1.24*	*0.50*	*2.47*	*Sqm*
		4	*2.35*		*0.50*	*4.70*	*Sqm*
		4		*0.64*	*0.50*	*1.28*	*Sqm*
	Floor						
	U/S key	*2*	*1.82*		*1.00*	*3.63*	*Sqm*
		2		*1.41*	*1.00*	*2.82*	*Sqm*
	Floor	*2*	*3.51*		*0.50*	*3.51*	*Sqm*
		2		*1.41*	*0.50*	*1.41*	*Sqm*
		2	*0.58*		*0.15*	*0.17*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.70*	*0.15*	*0.21*	*Sqm*
		2	*1.72*		*0.65*	*2.23*	*Sqm*
		2		*0.70*	*0.65*	*0.91*	*Sqm*
		2	*0.60*			*1.21*	*Sqm*
		2		*0.70*		*1.40*	*Sqm*
		2	*3.08*		*0.65*	*4.00*	*Sqm*
		2		*0.70*	*0.65*	*0.91*	*Sqm*
		2	*0.92*		*0.20*	*0.37*	*Sqm*
		2		*0.70*	*0.20*	*0.28*	*Sqm*
		2	*0.14*			*0.28*	*Sqm*
		2		*0.70*		*1.40*	*Sqm*
		2	*0.2042*		*0*	*0.00*	*Sqm*
		2		*0.7*	*0.00*	*0.00*	*Sqm*
		2	*1.98*		*0.55*	*2.18*	*Sqm*
		2		*0.70*	*0.55*	*0.77*	*Sqm*
	D/S key	*2*	*0.86*		*1.05*	*1.81*	*Sqm*
		2		*0.70*	*1.05*	*1.47*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*0.70*		*0.30*	*0.42*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*0.70*		*0.90*	*1.26*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*1.50*	*0.33*	*0.98*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*2.34*		*0.18*	*1.64*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*2.34*		*0.25*	*2.34*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*2.34*		*0.55*	*5.15*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**395.43**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*1.63*		*7.18*	*Sqm*
	TOTAL					**7.18**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*2.00*	*0.90*	*0.60*	*1.08*	***Cum***
	TOTAL					**1.08**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*0.10*	*0.15*	*0.03*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*0.10*	*0.15*	*0.03*	*Cum*
	TOTAL					**0.07**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.73*	*0.48*		*2.62*	*Sqm*
	On Abutment Top	*2*	*6.90*	*0.45*		*2.46*	*Sqm*
	TOTAL					**5.08**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	2	*3.22*	*1.84*		*11.806*	*Cum*
	Section B-B	2	*5.25*	*2.17*		*22.785*	*Cum*
	Section C-C	2	*0.50*	*1.75*		*1.754*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.21*	*2.13*		*6.857*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.69*	*0.72*		*0.987*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.35*	*1.12*		*5.270*	*Cum*
	TOTAL					**49.46**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR FALL OF MISHRICHAK MINOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	1.264	1.220 M Fall	₹ 5,12,361.58
2	1.400	1.220 M Fall	₹ 5,11,761.89
3	1.584	0.914 M Fall	₹ 4,35,109.34
		Sub-Total	₹ 14,59,232.81
		Seigniorage charges	₹ 12,103.04
		Total (in Rs. Lakhs)	**₹ 14.71**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR MISHRICHAK MINOR								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
AOC OF SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.1.264 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	52.389	Cum	**195.20**	10226.39			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well as reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	6.67	Cum	**6381.70**	42569.75	2.16	3.00	6.00
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	32.57	Cum	**6914.20**	225182.50	13.43	14.00	28.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.49	Cum	**8151.40**	4024.67	0.28	0.19	0.39
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.77	MT	**73574.90**	56430.42			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	131.81	Sqm	**578.60**	76264.89			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.34	Sqm	**680.10**	3633.77			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.61	Sqm	**63.20**	544.46			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	15.80	Cum	**149.30**	2358.20			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.199	Cum	**1075.00**	18488.52			
	Coarse Aggregates (100 Km lead)	34.402	Cum	**1398.00**	48094.24			
	Cement (30 km lead)	15.876	MT	**742.00**	11779.68			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	320.00	No.	**3.18**	1017.60			
	Steel (30 Km lead)	0.77	MT	**742.00**	569.10			
	TOTAL (In Rs.)				**512361.58**			
	TOTAL (In Rs.)				**512361.58**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.20	Cum	**584.64**	10055.00	1005.50		
	Coarse Aggregate	34.40	Cum	**944.26**	32484.60	3248.46		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					4253.96		
	For 1 nos. fall, Total Seigniorage charges					**4253.96**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.1.400 km							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	50.846	Cum	**195.20**	9925.18			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	6.64	Cum	**6381.70**	42404.47	2.15	2.99	5.98
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	32.57	Cum	**6914.20**	225182.50	13.43	14.00	28.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.49	Cum	**8151.40**	4024.67	0.28	0.19	0.39
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.77	MT	**73574.90**	56430.42			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	131.81	Sqm	**578.60**	76264.89			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.34	Sqm	**680.10**	3633.77			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.61	Sqm	**63.20**	544.46			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	15.25	Cum	**149.30**	2276.34			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.187	Cum	**1075.00**	18475.99			
	Coarse Aggregates (100 Km lead)	34.379	Cum	**1398.00**	48061.66			
	Cement (30 km lead)	15.867	MT	**742.00**	11773.45			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	320.00	No.	**3.18**	1017.60			
	Steel (30 Km lead)	0.77	MT	**742.00**	569.10			
	TOTAL (In Rs.)				**511761.89**			
	TOTAL (In Rs.)				**511761.89**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.19	Cum	**584.64**	10048.19	1004.82		
	Coarse Aggregate	34.38	Cum	**944.26**	32462.59	3246.26		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					4251.08		
	For 1 nos. fall, Total Seigniorage charges					**4251.08**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.584 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	40.247	Cum	**195.20**	7856.24			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	6.28	Cum	**6381.70**	40076.46	2.03	2.83	5.65
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	26.81	Cum	**6914.20**	185390.12	11.06	11.53	23.06
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.49	Cum	**8151.40**	3987.99	0.28	0.19	0.39
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.63	MT	**73574.90**	46458.51			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	114.62	Sqm	**578.60**	66321.80			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.34	Sqm	**680.10**	3633.77			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.61	Sqm	**63.20**	544.46			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.98	Cum	**149.30**	1938.44			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	14.546	Cum	**1075.00**	15637.30			
	Coarse Aggregates (100 Km lead)	29.098	Cum	**1398.00**	40678.38			
	Cement (30 km lead)	13.372	MT	**742.00**	9922.34			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	320.00	No.	**3.18**	1017.60			
	Steel (30 Km lead)	0.63	MT	**742.00**	468.53			
	TOTAL (In Rs.)				**435109.34**			
	TOTAL (In Rs.)				**435109.34**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	14.55	Cum	**584.64**	8504.37	850.44		
	Coarse Aggregate	29.10	Cum	**944.26**	27475.65	2747.57		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					3598.00		
	For 1 nos. fall, Total Seigniorage charges					**3598.00**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR MISHRICHAK MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.1.264 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.20*	*1.812*	*1.824*	*7.902*	*Cum*
	Section 2-2	*2*	*2.75*	*1.080*	*1.824*	*10.827*	*Cum*
	Section 3-3	*2*	*1.95*	*0.960*	*1.624*	*6.086*	*Cum*
	Section 5-5	*2*	*2.07*	*1.962*	*1.824*	*14.801*	*Cum*
	Section 6-6	*2*	*0.87*	*0.960*	*1.624*	*2.697*	*Cum*
	U/S Key Floor	*1*	*0.68*	*0.600*	*1.200*	*0.486*	*Cum*
	U/S Floor	*1*	*2.50*	*0.600*	*2.170*	*3.255*	*Cum*
	D/S Floor	*1*	*2.75*	*0.600*	*0.850*	*1.403*	*Cum*
		1	*3.65*	*0.600*	*0.650*	*1.422*	*Cum*
	D/S Key Floor	*1*	*0.76*	*0.600*	*1.400*	*0.641*	*Cum*
	Toe Wall D/S Portion	*1*	*4.25*	*0.750*	*0.900*	*2.869*	*Cum*
						52.39	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*1.01*	*0.600*	*0.150*	*0.09*	*Cum*
		1	*0.18*	*0.600*	*0.150*	*0.02*	*Cum*
		1	*0.14*	*0.600*	*0.150*	*0.01*	*Cum*
		1	*4.15*	*0.600*	*0.150*	*0.37*	*Cum*
		1	*0.42*	*0.600*	*0.150*	*0.04*	*Cum*
		1	*0.61*	*0.600*	*0.150*	*0.06*	*Cum*
		1	*1.40*	*0.600*	*0.150*	*0.13*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.20*	*1.812*	*0.150*	*0.65*	*Cum*
	Section 2-2	*2*	*2.75*	*1.080*	*0.150*	*0.89*	*Cum*
	Section 3-3	*2*	*1.95*	*0.960*	*0.150*	*0.56*	*Cum*
	Section 5-5	*2*	*2.07*	*1.962*	*0.150*	*1.22*	*Cum*
	Section 6-6	*2*	*0.87*	*0.960*	*0.150*	*0.25*	*Cum*
	Toe Wall D/S Portion	*1*	*4.25*	*0.750*	*0.300*	*0.96*	*Cum*
	Toe Wall D/S Portion	*1*	*3.95*	*0.450*	*0.600*	*1.07*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.600*	*0.300*	*0.27*	*Cum*
	TOTAL					**6.67**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.05*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.05*	*0.981*	*1.770*	*3.63*	*Cum*
		2	*1.05*	*1.662*	*0.600*	*2.09*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.615*	*0.550*	*1.86*	*Cum*
		2	*2.75*	*0.930*	*0.600*	*3.07*	*Cum*
	Section 3-3	*2*	*1.70*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.70*	*0.555*	*0.350*	*0.66*	*Cum*
		2	*1.70*	*0.810*	*0.500*	*1.37*	*Cum*
	Section 5-5	*2*	*2.02*	*0.450*	*0.450*	*0.82*	*Cum*
		2	*2.02*	*0.981*	*1.770*	*7.03*	*Cum*
		2	*2.02*	*1.662*	*0.500*	*3.36*	*Cum*
	Section 6-6	*2*	*1.35*	*0.450*	*0.450*	*0.54*	*Cum*
		2	*1.35*	*0.555*	*0.350*	*0.52*	*Cum*
		2	*1.35*	*0.810*	*0.500*	*1.09*	*Cum*
	Floor	*1*	*0.68*	*0.600*	*1.050*	*0.43*	*Cum*
		1	*1.24*	*0.600*	*0.500*	*0.37*	*Cum*
		1	*0.10*	*0.600*	*0.550*	*0.03*	*Cum*
		1	*3.92*	*0.600*	*0.600*	*1.41*	*Cum*
		1	*0.20*	*0.600*	*0.400*	*0.05*	*Cum*
		1	*0.26*	*0.600*	*0.300*	*0.05*	*Cum*
		1	*2.05*	*0.600*	*0.500*	*0.62*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.76*	*0.600*	*1.250*	*0.57*	*Cum*
	Crest	*1*	*0.93*	*0.600*	*1.395*	*0.78*	*Cum*
	TOTAL					**32.57**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*0.600*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.57*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.57*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.49**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**32.57**	**0.00**	**0.098**	**7850.0**	**766.98**	**Kg**
	Total Weight in Metric Tonne					**0.77**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.05*		*0.450*	*1.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.05*		*1.770*	*7.40*	*Sqm*
		4		*0.981*	*1.770*	*6.95*	*Sqm*
		4	*1.05*		*0.600*	*2.51*	*Sqm*
		4		*1.662*	*0.600*	*3.99*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.550*	*6.05*	*Sqm*
		4		*0.615*	*0.550*	*1.35*	*Sqm*
		4	*2.75*		*0.600*	*6.60*	*Sqm*
		4		*0.930*	*0.600*	*2.23*	*Sqm*
	Section 3-3	*4*	*1.70*		*0.450*	*3.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.70*		*0.350*	*2.38*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.70*		*0.500*	*3.39*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Section 5-5	*4*	*2.02*		*0.450*	*3.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.02*		*1.770*	*14.33*	*Sqm*
		4		*0.981*	*1.770*	*6.95*	*Sqm*
		4	*2.02*		*0.500*	*4.05*	*Sqm*
		4		*1.662*	*0.500*	*3.32*	*Sqm*
	Section 6-6	*4*	*1.35*		*0.450*	*2.42*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.35*		*0.350*	*1.88*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.35*		*0.500*	*2.69*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Floor	*2*	*0.68*		*1.050*	*1.42*	*Sqm*
		2		*0.600*	*1.050*	*1.26*	*Sqm*
		2	*1.24*		*0.500*	*1.24*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*3.92*		*0.600*	*4.70*	*Sqm*
		2		*0.600*	*0.600*	*0.72*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.600*	*0.400*	*0.48*	*Sqm*
		2	*0.26*		*0.300*	*0.15*	*Sqm*
		2		*0.600*	*0.300*	*0.36*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*
		2		*0.600*	*1.250*	*1.50*	*Sqm*
	Crest	*2*	*0.93*		*1.395*	*2.60*	*Sqm*
		2		*0.600*	*1.395*	*1.67*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*4.25*		*0.300*	*2.55*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.95*		*0.600*	*4.74*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*2*	*1.50*		*0.300*	*0.90*	*Sqm*
		2		*0.600*	*0.300*	*0.36*	*Sqm*
	TOTAL					**131.81**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.781*		*5.34*	*Sqm*
	TOTAL					**5.34**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.57*	*0.450*		*4.31*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.57*	*0.450*		*4.31*	*Sqm*
	TOTAL					**8.61**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.998		4.00	**Cum**
	Abutment						
	Section 1-1	2	*1.20*	*0.670*		*1.601*	*Cum*
	Section 2-2	2	*2.75*	*0.613*		*3.368*	*Cum*
	Section 3-3	2	*1.95*	*0.446*		*1.742*	*Cum*
	Section 5-5	2	*2.07*	*0.670*		*2.769*	*Cum*
	Section 6-6	2	*0.87*	*0.446*		*0.772*	*Cum*
	Toe wall	2	*4.25*	*0.150*	*0.600*	*1.275*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**15.80**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.1.400 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.20*	*1.812*	*1.772*	*7.677*	*Cum*
	Section 2-2	*2*	*2.75*	*1.080*	*1.772*	*10.518*	*Cum*
	Section 3-3	*2*	*1.95*	*0.960*	*1.572*	*5.892*	*Cum*
	Section 5-5	*2*	*2.02*	*1.962*	*1.772*	*14.074*	*Cum*
	Section 6-6	*2*	*0.87*	*0.960*	*1.572*	*2.611*	*Cum*
	U/S Key Floor	*1*	*0.68*	*0.600*	*1.200*	*0.486*	*Cum*
	U/S Floor	*1*	*2.50*	*0.600*	*2.170*	*3.255*	*Cum*
	D/S Floor	*1*	*2.75*	*0.600*	*0.850*	*1.403*	*Cum*
		1	*3.65*	*0.600*	*0.650*	*1.422*	*Cum*
	D/S Key Floor	*1*	*0.76*	*0.600*	*1.400*	*0.641*	*Cum*
	Toe Wall D/S Portion	*1*	*4.25*	*0.750*	*0.900*	*2.869*	*Cum*
						50.85	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*1.01*	*0.600*	*0.150*	*0.09*	*Cum*
		1	*0.18*	*0.600*	*0.150*	*0.02*	*Cum*
		1	*0.14*	*0.600*	*0.150*	*0.01*	*Cum*
		1	*4.15*	*0.600*	*0.150*	*0.37*	*Cum*
		1	*0.42*	*0.600*	*0.150*	*0.04*	*Cum*
		1	*0.61*	*0.600*	*0.150*	*0.06*	*Cum*
		1	*1.40*	*0.600*	*0.150*	*0.13*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.20*	*1.812*	*0.150*	*0.65*	*Cum*
	Section 2-2	*2*	*2.75*	*1.080*	*0.150*	*0.89*	*Cum*
	Section 3-3	*2*	*1.95*	*0.960*	*0.150*	*0.56*	*Cum*
	Section 5-5	*2*	*2.02*	*1.962*	*0.150*	*1.19*	*Cum*
	Section 6-6	*2*	*0.87*	*0.960*	*0.150*	*0.25*	*Cum*
	Toe Wall D/S Portion	*1*	*4.25*	*0.750*	*0.300*	*0.96*	*Cum*
	Toe Wall D/S Portion	*1*	*3.95*	*0.450*	*0.600*	*1.07*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.600*	*0.300*	*0.27*	*Cum*
	TOTAL					**6.64**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.05*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.05*	*0.981*	*1.770*	*3.63*	*Cum*
		2	*1.05*	*1.662*	*0.600*	*2.09*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.615*	*0.550*	*1.86*	*Cum*
		2	*2.75*	*0.930*	*0.600*	*3.07*	*Cum*
	Section 3-3	*2*	*1.70*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.70*	*0.555*	*0.350*	*0.66*	*Cum*
		2	*1.70*	*0.810*	*0.500*	*1.37*	*Cum*
	Section 5-5	*2*	*2.02*	*0.450*	*0.450*	*0.82*	*Cum*
		2	*2.02*	*0.981*	*1.770*	*7.03*	*Cum*
		2	*2.02*	*1.662*	*0.500*	*3.36*	*Cum*
	Section 6-6	*2*	*1.35*	*0.450*	*0.450*	*0.54*	*Cum*
		2	*1.35*	*0.555*	*0.350*	*0.52*	*Cum*
		2	*1.35*	*0.810*	*0.500*	*1.09*	*Cum*
	Floor	*1*	*0.68*	*0.600*	*1.050*	*0.43*	*Cum*
		1	*1.24*	*0.600*	*0.500*	*0.37*	*Cum*
		1	*0.10*	*0.600*	*0.550*	*0.03*	*Cum*
		1	*3.92*	*0.600*	*0.600*	*1.41*	*Cum*
		1	*0.20*	*0.600*	*0.400*	*0.05*	*Cum*
		1	*0.26*	*0.600*	*0.300*	*0.05*	*Cum*
		1	*2.05*	*0.600*	*0.500*	*0.62*	*Cum*
		1	*0.76*	*0.600*	*1.250*	*0.57*	*Cum*
	Crest	*1*	*0.93*	*0.600*	*1.395*	*0.78*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**32.57**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*0.600*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.57*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.57*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.49**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**32.57**	**0.00**	**0.098**	**7850.0**	**766.98**	**Kg**
	Total Weight in Metric Tonne					**0.77**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.05*		*0.450*	*1.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.05*		*1.770*	*7.40*	*Sqm*
		4		*0.981*	*1.770*	*6.95*	*Sqm*
		4	*1.05*		*0.600*	*2.51*	*Sqm*
		4		*1.662*	*0.600*	*3.99*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.550*	*6.05*	*Sqm*
		4		*0.615*	*0.550*	*1.35*	*Sqm*
		4	*2.75*		*0.600*	*6.60*	*Sqm*
		4		*0.930*	*0.600*	*2.23*	*Sqm*
	Section 3-3	*4*	*1.70*		*0.450*	*3.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.70*		*0.350*	*2.38*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.70*		*0.500*	*3.39*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Section 5-5	*4*	*2.02*		*0.450*	*3.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.02*		*1.770*	*14.33*	*Sqm*
		4		*0.981*	*1.770*	*6.95*	*Sqm*
		4	*2.02*		*0.500*	*4.05*	*Sqm*
		4		*1.662*	*0.500*	*3.32*	*Sqm*
	Section 6-6	*4*	*1.35*		*0.450*	*2.42*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.35*		*0.350*	*1.88*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.35*		*0.500*	*2.69*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Floor	*2*	*0.68*		*1.050*	*1.42*	*Sqm*
		2		*0.600*	*1.050*	*1.26*	*Sqm*
		2	*1.24*		*0.500*	*1.24*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*3.92*		*0.600*	*4.70*	*Sqm*
		2		*0.600*	*0.600*	*0.72*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.600*	*0.400*	*0.48*	*Sqm*
		2	*0.26*		*0.300*	*0.15*	*Sqm*
		2		*0.600*	*0.300*	*0.36*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*
		2		*0.600*	*1.250*	*1.50*	*Sqm*
	Crest	*2*	*0.93*		*1.395*	*2.60*	*Sqm*
		2		*0.600*	*1.395*	*1.67*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.25*		*0.300*	*2.55*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.95*		*0.600*	*4.74*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*2*	*1.50*		*0.300*	*0.90*	*Sqm*
		2		*0.600*	*0.300*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**131.81**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.781*		*5.34*	*Sqm*
	TOTAL					**5.34**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.57*	*0.450*		*4.31*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.57*	*0.450*		*4.31*	*Sqm*
	TOTAL					**8.61**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.998		4.00	**Cum**
	Abutment						
	Section 1-1	2	*1.20*	*0.622*		*1.486*	*Cum*
	Section 2-2	2	*2.75*	*0.580*		*3.188*	*Cum*
	Section 3-3	2	*1.95*	*0.446*		*1.742*	*Cum*
	Section 5-5	2	*2.02*	*0.622*		*2.516*	*Cum*
	Section 6-6	2	*0.87*	*0.446*		*0.772*	*Cum*
	Toe wall	2	*4.25*	*0.150*	*0.600*	*1.275*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**15.25**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.584 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.08*	*1.628*	*1.512*	*5.324*	*Cum*
	Section 2-2	*2*	*2.50*	*1.080*	*1.512*	*8.158*	*Cum*
	Section 3-3	*2*	*1.95*	*0.960*	*1.312*	*4.917*	*Cum*
	Section 5-5	*2*	*2.11*	*1.778*	*1.512*	*11.323*	*Cum*
	Section 6-6	*2*	*0.87*	*0.960*	*1.312*	*2.179*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	U/S Floor	*1*	*2.25*	*0.600*	*1.764*	*2.381*	*Cum*
	D/S Floor	*1*	*2.50*	*0.600*	*0.850*	*1.275*	*Cum*
		1	*3.03*	*0.600*	*0.650*	*1.182*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	Toe Wall D/S Portion	*1*	*4.25*	*0.750*	*0.900*	*2.869*	*Cum*
						40.25	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*4.13*	*0.600*	*0.150*	*0.37*	*Cum*
		1	*0.28*	*0.600*	*0.150*	*0.03*	*Cum*
		1	*0.89*	*0.600*	*0.150*	*0.08*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.08*	*1.628*	*0.150*	*0.53*	*Cum*
	Section 2-2	*2*	*2.50*	*1.080*	*0.150*	*0.81*	*Cum*
	Section 3-3	*2*	*1.95*	*0.960*	*0.150*	*0.56*	*Cum*
	Section 5-5	*2*	*2.11*	*1.778*	*0.150*	*1.12*	*Cum*
	Section 6-6	*2*	*0.87*	*0.960*	*0.150*	*0.25*	*Cum*
	Toe Wall D/S Portion	*1*	*4.25*	*0.750*	*0.300*	*0.96*	*Cum*
	Toe Wall D/S Portion	*1*	*3.95*	*0.450*	*0.600*	*1.07*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.600*	*0.300*	*0.27*	*Cum*
	TOTAL					**6.28**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.93*	*0.450*	*0.450*	*0.38*	*Cum*
		2	*0.93*	*0.889*	*1.464*	*2.42*	*Cum*
		2	*0.93*	*1.478*	*0.500*	*1.38*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.615*	*0.550*	*1.69*	*Cum*
		2	*2.50*	*0.930*	*0.500*	*2.32*	*Cum*
	Section 3-3	*2*	*1.70*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.70*	*0.555*	*0.350*	*0.66*	*Cum*
		2	*1.70*	*0.810*	*0.500*	*1.37*	*Cum*
	Section 5-5	*2*	*2.06*	*0.450*	*0.450*	*0.84*	*Cum*
		2	*2.06*	*0.889*	*1.464*	*5.37*	*Cum*
		2	*2.06*	*1.478*	*0.500*	*3.05*	*Cum*
	Section 6-6	*2*	*1.35*	*0.450*	*0.450*	*0.54*	*Cum*
		2	*1.35*	*0.555*	*0.350*	*0.52*	*Cum*
		2	*1.35*	*0.810*	*0.500*	*1.09*	*Cum*
	Floor	*1*	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
		1	*4.75*	*0.600*	*0.500*	*1.43*	*Cum*
		1	*0.20*	*0.600*	*0.400*	*0.05*	*Cum*
		1	*0.31*	*0.600*	*0.300*	*0.06*	*Cum*
		1	*2.05*	*0.600*	*0.500*	*0.62*	*Cum*
		1	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
	Crest	*1*	*0.83*	*0.600*	*1.089*	*0.54*	*Cum*
	For Resting Brick Edge Below Bed	*1*	*0.60*	*1.500*	*0.300*	*0.27*	*Cum*
	TOTAL					**26.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*0.600*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.57*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.57*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.49**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**26.81**	**0.00**	**0.080**	**7850.0**	**631.45**	**Kg**
	Total Weight in Metric Tonne					**0.63**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.93*		*0.450*	*1.68*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.93*		*1.464*	*5.45*	*Sqm*
		4		*0.889*	*1.464*	*5.21*	*Sqm*
		4	*0.93*		*0.500*	*1.86*	*Sqm*
		4		*1.478*	*0.500*	*2.96*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.550*	*5.50*	*Sqm*
		4		*0.615*	*0.550*	*1.35*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.930*	*0.500*	*1.86*	*Sqm*
	Section 3-3	*4*	*1.70*		*0.450*	*3.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.70*		*0.350*	*2.38*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.70*		*0.500*	*3.39*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Section 5-5	*4*	*2.06*		*0.450*	*3.71*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.06*		*1.464*	*12.08*	*Sqm*
		4		*0.889*	*1.464*	*5.21*	*Sqm*
		4	*2.06*		*0.500*	*4.12*	*Sqm*
		4		*1.478*	*0.500*	*2.96*	*Sqm*
	Section 6-6	*4*	*1.35*		*0.450*	*2.42*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.35*		*0.350*	*1.88*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.35*		*0.500*	*2.69*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.600*	*0.400*	*0.48*	*Sqm*
		2	*0.31*		*0.300*	*0.18*	*Sqm*
		2		*0.600*	*0.300*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
	Crest	*2*	*0.83*		*1.089*	*1.81*	*Sqm*
		2		*0.600*	*1.089*	*1.31*	*Sqm*
	For Resting Brick Edge Below Bed	*2*	0.60		*0.300*	*0.36*	*Sqm*
		2		*1.500*	*0.300*	*0.90*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.25*		*0.300*	*2.55*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.95*		*0.600*	*4.74*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*2*	*1.50*		*0.300*	*0.90*	*Sqm*
		2		*0.600*	*0.300*	*0.36*	*Sqm*
	TOTAL					**114.62**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.781*		*5.34*	*Sqm*
	TOTAL					**5.34**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.57*	*0.450*		*4.31*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.57*	*0.450*		*4.31*	*Sqm*
	TOTAL					**8.61**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.746		2.75	**Cum**
	Abutment						
	Section 1-1	2	*1.08*	*0.556*		*1.203*	*Cum*
	Section 2-2	2	*2.50*	*0.527*		*2.634*	*Cum*
	Section 3-3	2	*1.95*	*0.446*		*1.742*	*Cum*
	Section 5-5	2	*2.11*	*0.556*		*2.342*	*Cum*
	Section 6-6	2	*0.87*	*0.446*		*0.772*	*Cum*
	Toe wall	2	*4.25*	*0.150*	*0.600*	*1.275*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**12.98**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR PIPE CULVERT OF MISHRICHAK MINOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	0.640	Pipe Culvert	₹ 4,79,186.55
		Sub-Total	₹ 4,79,186.55
		Seigniorage charges	₹ 4,155.93
		Total (in Rs. Lakhs)	**₹ 4.83**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.640 OF MISHRICHAK MINOR									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.1.8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	51.376	Cum	**156.50**	8040.33			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.74	Cum	**6381.70**	87687.81	4.45	6.18	12.37
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.192	Cum	**6914.20**	160353.85	9.57	9.97	19.95
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	105.345	Sqm	**578.60**	60952.73			
6	5.3.22	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.46	MT	**73574.90**	33487.04			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.80	Cum	**694.61**	1250.30			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.80	Cum	**1237.00**	2226.60			
9	RCD M-151	Providing 600 mm dia RCC NP4 heavy duty pipe	7.50	Rm	**2532.61**	18994.58			
10	5.6.2.2	Labour for laying, fitting and fixing 600 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	7.50	Rm	**711.27**	5334.49			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	28.20	Cum	**149.30**	4210.95			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.50	Cum	**5021.30**	7531.95	0.17	0.48	
14	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.500	Sqm	**340.20**	2891.70	0.441	0.124	
15	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.500	Sqm	**63.20**	221.20	0.005		
		Coarse Sand (60 Km lead)	16.760	Cum	**1075.00**	18016.86			
		Coarse Aggregates (100 Km lead)	32.312	Cum	**1398.00**	45171.54			
		Cement (30 km lead)	14.637	MT	**742.00**	10860.88			
		Steel (30 km lead)	0.455	MT	**742.00**	337.72			
		Boulder (60 km lead)	1.800	Cum	**1159.00**	2086.20			
		Hume Pipe (30 Km Lead)	7.500	Rm	**919.00**	6892.50			
		Brick (15 km lead)	750.00	No.	**3.18**	2385.00			
TOTAL (In Rs.)						**479186.55**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	16.76	Cum	**584.64**	9798.49	979.85		
		Coarse Aggregate	32.31	Cum	**944.26**	30510.50	3051.05		
		Boulder (60 km lead)	1.80	Cum	**694.61**	1250.30	125.03		
		Total					**4155.93**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.640 OF MISHRICHAK MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*120.00*			**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*0.60*	*0.85*	*1.20*	*0.61*	*Cum*
	D/S Toe Wall	*1*	*0.60*	*0.85*	*1.20*	*0.61*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.57*	*1.00*	*1.20*	*1.36*	*Cum*
		2	*2.47*	*1.75*	*1.20*	*10.37*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.47*	*1.01*	*2.01*	*9.98*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*1.20*	*1.32*	*Cum*
		2	*2.93*	*1.74*	*1.20*	*12.24*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.93*	*1.01*	*2.01*	*11.85*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*0.60*	*0.45*	*0.55*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*0.60*	*0.45*	*0.69*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**51.38**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*0.60*	*0.85*	*0.30*	*0.15*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.60*	*0.45*	*0.90*	*0.24*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.60*	*0.85*	*0.30*	*0.15*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.60*	*0.45*	*0.90*	*0.24*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*0.60*	*0.45*	*0.55*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*0.60*	*0.45*	*0.69*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.57*	*1.00*	*0.30*	*0.34*	*Cum*
		2	*2.47*	*1.75*	*0.30*	*2.59*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*0.30*	*0.33*	*Cum*
		2	*2.93*	*1.74*	*0.30*	*3.06*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.35*	*3.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	TOTAL					**13.74**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.57*	*0.60*	*0.90*	*0.61*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.57*	*0.45*	*0.35*	*0.18*	*Cum*
		2	*0.57*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.47*	*1.35*	*0.90*	*6.00*	*Cum*
		2	*2.47*	*1.13*	*0.35*	*1.96*	*Cum*
		2	*2.47*	*0.73*	*0.50*	*1.80*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.55*	*0.60*	*0.90*	*0.60*	*Cum*
		2	*0.55*	*0.45*	*0.35*	*0.17*	*Cum*
		2	*0.55*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*2.93*	*1.34*	*0.90*	*7.07*	*Cum*
		2	*2.93*	*1.15*	*0.35*	*2.36*	*Cum*
		2	*2.93*	*0.73*	*0.50*	*2.13*	*Cum*
	Collar Joint	*2*	*1.27*	*0.30*	*1.53*	*1.17*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.19*		*-1.19*	*Cum*
	TOTAL					**23.19**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*0.60*		*0.90*	*1.08*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.60*		*0.90*	*1.08*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*0.60*	*0.45*	*0.54*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.60*	*0.45*	*0.54*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.57*		*0.30*	*0.68*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.47*		*0.30*	*2.96*	*Sqm*
		4		*1.75*	*0.30*	*2.10*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.55*		*0.30*	*0.66*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.93*		*0.30*	*3.52*	*Sqm*
		4		*1.74*	*0.30*	*2.09*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.57*		*0.90*	*2.04*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.57*		*0.35*	*0.79*	*Sqm*
		4		*0.45*	*0.35*	*0.63*	*Sqm*
		4	*0.57*		*0.50*	*1.13*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.47*		*0.90*	*8.89*	*Sqm*
		4		*1.35*	*0.90*	*4.86*	*Sqm*
		4	*2.47*		*0.35*	*3.46*	*Sqm*
		4		*1.13*	*0.35*	*1.59*	*Sqm*
		4	*2.47*		*0.50*	*4.94*	*Sqm*
		4		*0.73*	*0.50*	*1.46*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.55*		*0.90*	*1.98*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.55*		*0.35*	*0.77*	*Sqm*
		4		*0.45*	*0.35*	*0.63*	*Sqm*
		4	*0.55*		*0.50*	*1.10*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section E-E & Section G-G	*4*	*2.93*		*0.90*	*10.56*	*Sqm*
		4		*1.34*	*0.90*	*4.82*	*Sqm*
		4	*2.93*		*0.35*	*4.11*	*Sqm*
		4		*1.15*	*0.35*	*1.61*	*Sqm*
		4	*2.93*		*0.50*	*5.87*	*Sqm*
		4		*0.73*	*0.50*	*1.45*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.37*	*0.35*	*0.96*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	TOTAL					**105.35**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*23.19*	*0.25%*	*0.06*	*7850*	*455.14*	*Kg*
	TOTAL Weight of steel (in kg)					455.14	Kg
	TOTAL Weight of Steel (in Tonne)					**0.46**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**1.80**	**Cum**
8	Providing 600 mm dia RCC NP4 heavy duty pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.47*	*1.01*	*2.01*	*9.98*	*Cum*
	D/S Transitions Walls	*2*	*2.93*	*1.01*	*2.01*	*11.85*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**28.20**	**Cum**
11	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	2.5	0.5	0.6	*1.50*	*Cum*
	TOTAL					**1.50**	**Cum**
12	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Parapet	2	2.5		1.7	**8.50**	*Sqm*
	TOTAL					**8.50**	***Sqm***
13	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2	2.5		0.7	**3.50**	*Sqm*
	TOTAL					**3.50**	***Sqm***

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR CD WORK

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	0.735	CD Work	₹ 14,65,420.78
2	1.645	CD Work	₹ 10,45,809.66
		Sub-Total	₹ 25,11,230.44
		Seigniorage charges	₹ 21,203.98
		Total (in Rs. Lakhs)	**₹ 25.32**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF MISHRICHAK MR.									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
Cross Drainage at Ch. 0.735 KM									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	171.24	Cum	**149.30**	25566.11			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	38.27	Cum	**6381.70**	244202.02	12.40	17.22	34.44
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	75.84	Cum	**6914.20**	524405.86	31.29	32.61	65.23
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	349.19	Sqm	**578.60**	202040.43			
5	**RCD M-151**	Providing 600 mm dia RCC NP4 heavy duty pipe	15.00	RM	**2532.61**	37989.15			
6	**5.6.2.2**	Labour for laying, fitting and fixing 600 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	15.00	RM	**711.27**	10668.98			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.49	MT	**73574.90**	109512.82			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	320.51	Cum	**195.20**	62564.03			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	49.83	Cum	**1075.00**	53570.41			
		Coarse Aggregates (100 Km lead)	99.67	Cum	**1398.00**	139332.90			
		Cement (30 km lead)	43.68	MT	**742.00**	32413.63			
		Steel (30 Km lead)	1.49	MT	**742.00**	1104.43			
		Hume Pipe (60 Km)	15.00	RM	**1470.00**	22050.00			
TOTAL (In Rs.)						**₹ 14,65,420.78**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	49.83	Cum	**584.64**	29134.33	2913.43		
		Coarse Aggregate	99.67	Cum	**944.26**	94110.50	9411.05		
		Total					**12324.48**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 1.645 Km									
1	**WRD 5.1.31**	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	83.97	Cum	**149.30**	12536.95			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	33.50	Cum	**6381.70**	213794.06	10.85	15.08	30.15
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	48.44	Cum	**6914.20**	334903.72	19.98	20.83	41.66
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	270.64	Sqm	**578.60**	156593.98			
5	**RCD M-151**	Providing 600 mm dia RCC NP4 heavy duty pipe	12.50	RM	**2532.61**	31657.63			
6	**5.6.2.2**	Labour for laying, fitting and fixing 600 MM NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	12.50	RM	**711.27**	8890.82			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.95	MT	**73574.90**	69938.67			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	187.25	Cum	**195.20**	36551.94			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	35.90	Cum	**1075.00**	38596.21			
		Coarse Aggregates (100 Km lead)	71.81	Cum	**1398.00**	100386.04			
		Cement (30 km lead)	30.83	MT	**742.00**	22879.32			
		Steel (30 Km lead)	0.95	MT	**742.00**	705.33			
		Hume Pipe (60 Km)	12.50	RM	**1470.00**	18375.00			
TOTAL (In Rs.)						**₹ 10,45,809.66**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	35.90	Cum	**584.64**	20990.59	2099.06		
		Coarse Aggregate	71.81	Cum	**944.26**	67804.38	6780.44		
		Total					**8879.50**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF MISHRICHAK MR.							
Cross Drainage at Ch. 0.735 KM							
S. No.	**Item of Works**	**No.**		**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*8.91*	*0.48*		*4.27*	*Cum*
		1	*6.04*	*4.18*		*25.26*	*Cum*
	Middle Portion	*1*	*3.66*	*30.65*		*112.18*	*Cum*
	Right Portion	*1*	*8.91*	*0.48*		*4.27*	*Cum*
		1	*6.04*	*4.18*		*25.26*	*Cum*
	TOTAL					**171.24**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*8.91*	*0.92*	*0.30*	*2.46*	*Cum*
		1	*5.12*	*4.12*	*0.30*	*6.33*	*Cum*
	300 mm Thick Right Abutment	*1*	*8.91*	*0.92*	*0.30*	*2.46*	*Cum*
		1	*5.12*	*4.12*	*0.30*	*6.33*	*Cum*
	Below Pipe Section	*1*	*15.00*	*1.37*	*0.30*	*6.17*	*Cum*
		1	*15.00*	*0.61*		*9.19*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*3.86*	*2.50*	*0.20*	*3.86*	*Cum*
	Pipe Section	*5*	*0.30*	*1.27*	*1.14*	*2.17*	*Cum*
	Deduct Area of Pipe	*5*	*0.30*	*0.47*		*-0.70*	*Cum*
	TOTAL					**38.27**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*8.61*	*0.30*	*0.30*	*1.55*	*Cum*
		2	*8.61*	*0.46*	*1.07*	*8.48*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*1.87*	*0.30*	*0.50*	*0.56*	*Cum*
		2	*1.87*	*0.88*	*3.89*	*12.87*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.14*	*0.30*	*0.40*	*0.99*	*Cum*
		2	*4.14*	*0.67*	*2.48*	*13.83*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*8.61*	*0.30*	*0.30*	*1.55*	*Cum*
		2	*8.61*	*0.46*	*1.07*	*8.48*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*1.87*	*0.30*	*0.50*	*0.56*	*Cum*
		2	*1.87*	*0.88*	*3.89*	*12.87*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.14*	*0.67*	*2.48*	*13.83*	*Cum*
		2	*4.14*	*0.30*	*0.40*	*0.99*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.79*	*0.465*		*-0.74*	*Cum*
	TOTAL					**75.84**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
	300 mm Thick Left Abutment	2	*8.91*		*0.30*	5.34	*Sqm*
		2		*0.92*	*0.30*	0.55	*Sqm*
		2	5.12		0.30	3.07	*Sqm*
		2		4.12	0.30	2.47	*Sqm*
	300 mm Thick Right Abutment	2	*8.91*		*0.30*	5.34	*Sqm*
		2		*0.92*	*0.30*	0.55	*Sqm*
		2	5.12		0.30	3.07	*Sqm*
		2		4.12	0.30	2.47	*Sqm*
	200 mm Thick Left and Right Portion Well	4	3.86		0.20	3.09	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	10	0.30		1.14	3.42	*Sqm*
		10		1.27	1.14	14.48	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*8.61*		*0.30*	10.33	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*8.61*		*1.07*	36.83	*Sqm*
		4		0.46	1.07	1.97	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	1.87		0.50	3.74	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	1.87		3.89	29.13	*Sqm*
		4		0.88	3.89	13.77	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.14		0.40	6.63	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.14		2.48	41.15	*Sqm*
		4		0.67	2.48	6.67	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	1.87		3.89	29.13	*Sqm*
		4		0.88	3.89	13.77	*Sqm*
		4	1.87		0.50	3.74	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	8.61		1.07	36.83	*Sqm*
		4		0.46	1.07	1.97	*Sqm*
		4	8.61		0.30	10.33	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.14		2.48	41.15	*Sqm*
		4		0.67	2.48	6.67	*Sqm*
		4	4.14		0.40	6.63	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
	TOTAL					**349.19**	***Sqm***
5	Providing 600 mm dia RCC NP4 heavy duty pipe						
	600 mm dia pipe	*6*	*2.50*			*15.00*	*RM*
	TOTAL					**15.00**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*75.84*	*0.0025*	*0.190*	*7850.00*	*1488.453*	*Kg*
	TOTAL					*1488.453*	*Kg*
	TOTAL					**1.49**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*8.91*	*0.92*	*4.50*	*36.91*	*Cum*
		1	*5.12*	*4.12*	*4.50*	*94.90*	*Cum*
	Middle Portion	*1*	*1.37*	*41.53*		*56.90*	*Cum*
	Right Portion	*1*	*8.91*	*0.92*	*4.50*	*36.91*	*Cum*
		1	*5.12*	*4.12*	*4.50*	*94.90*	*Cum*
	TOTAL					**320.51**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Cross Drainage at Ch. 1.645 Km						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*8.91*	*0.48*		*4.27*	*Cum*
		1	*6.04*	*1.25*		*7.55*	*Cum*
	Middle Portion	*1*	*3.66*	*16.48*		*60.32*	*Cum*
	Right Portion	*1*	*8.91*	*0.48*		*4.27*	*Cum*
		1	*6.04*	*1.25*		*7.55*	*Cum*
	TOTAL					**83.97**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*8.91*	*0.92*	*0.30*	*2.46*	*Cum*
		1	*5.12*	*3.50*	*0.30*	*5.37*	*Cum*
	300 mm Thick Right Abutment	*1*	*8.91*	*0.92*	*0.30*	*2.46*	*Cum*
		1	*5.12*	*3.50*	*0.30*	*5.37*	*Cum*
	Below Pipe Section	*1*	*12.50*	*1.37*	*0.30*	*5.14*	*Cum*
		1	*12.50*	*0.61*		*7.66*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*3.86*	*2.50*	*0.20*	*3.86*	*Cum*
	Pipe Section	*4*	*0.30*	*1.27*	*1.14*	*1.74*	*Cum*
	Deduct Area of Pipe	*4*	*0.30*	*0.47*		*-0.56*	*Cum*
	TOTAL					**33.50**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*8.61*	*0.30*	*0.30*	*1.55*	*Cum*
		2	*8.61*	*0.46*	*1.07*	*8.48*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*1.87*	*0.30*	*0.50*	*0.56*	*Cum*
		2	*1.87*	*0.65*	*2.32*	*5.62*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*3.95*	*0.30*	*0.40*	*0.95*	*Cum*
		2	*3.95*	*0.55*	*1.70*	*7.42*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*8.61*	*0.30*	*0.30*	*1.55*	*Cum*
		2	*8.61*	*0.46*	*1.07*	*8.48*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*1.87*	*0.30*	*0.50*	*0.56*	*Cum*
		2	*1.87*	*0.65*	*2.32*	*5.62*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*3.95*	*0.55*	*1.70*	*7.42*	*Cum*
		2	*3.95*	*0.30*	*0.40*	*0.95*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.79*	*0.465*		*-0.74*	*Cum*
	TOTAL					**48.44**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	300 mm Thick Left Abutment	2	*8.91*		*0.30*	5.34	*Sqm*
		2		*0.92*	*0.30*	0.55	*Sqm*
		2	5.12		0.30	3.07	*Sqm*
		2		3.50	0.30	2.10	*Sqm*
	300 mm Thick Right Abutment	2	*8.91*		*0.30*	5.34	*Sqm*
		2		*0.92*	*0.30*	0.55	*Sqm*
		2	5.12		0.30	3.07	*Sqm*
		2		3.50	0.30	2.10	*Sqm*
	200 mm Thick Left and Right Portion Well	4	3.86		0.20	3.09	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	8	0.30		1.14	2.74	*Sqm*
		8		1.27	1.14	11.58	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*8.61*		*0.30*	10.33	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
		4	*8.61*		*1.07*	36.83	*Sqm*
		4		0.46	1.07	1.97	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	1.87		0.50	3.74	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	1.87		2.32	17.35	*Sqm*
		4		0.65	2.32	6.01	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	3.95		0.40	6.32	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	3.95		1.70	26.79	*Sqm*
		4		0.55	1.70	3.76	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	1.87		2.32	17.35	*Sqm*
		4		0.65	2.32	6.01	*Sqm*
		4	1.87		0.50	3.74	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	8.61		1.07	36.83	*Sqm*
		4		0.46	1.07	1.97	*Sqm*
		4	8.61		0.30	10.33	*Sqm*
		4		0.30	0.30	0.36	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	3.95		1.70	26.79	*Sqm*
		4		0.55	1.70	3.76	*Sqm*
		4	3.95		0.40	6.32	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
	TOTAL					**270.64**	***Sqm***
5	Providing 600 mm dia RCC NP4 heavy duty pipe						
	600 mm dia pipe	*5*	*2.50*			*12.50*	*RM*
	TOTAL					**12.50**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*48.44*	*0.0025*	*0.121*	*7850.00*	*950.578*	*Kg*
	TOTAL					*950.578*	*Kg*
	TOTAL					**0.95**	**M.T.**
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Left Portion	*1*	*8.91*	*0.92*	*2.92*	*23.95*	*Cum*
		1	*5.12*	*3.50*	*2.92*	*52.28*	*Cum*
	Middle Portion	*1*	*1.37*	*25.40*		*34.80*	*Cum*
	Right Portion	*1*	*8.91*	*0.92*	*2.92*	*23.95*	*Cum*
		1	*5.12*	*3.50*	*2.92*	*52.28*	*Cum*
	TOTAL					**187.25**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR OUTLET

Sr. No.	Qty	STRUCTURE			Amount in Rs.
1	1 No.	Outlet			₹ 1,27,744.47
	Total Outlets in Mishrichak minor		4	nos.	₹ 5,10,977.87
				Sub-Total	₹ 5,10,977.87
				Seigniorage charges	₹ 4,400.69
				Total (in Rs. Lakhs)	**₹ 5.15**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials(As per Bihar SOR 2023)**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 4 nos. outlet, Total Seigniorage charges					**4400.69**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	WRD SOR 2023 & PL JUNE 2024
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes CoI =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	Sl-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	Sl-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
22	**5.6.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.4	**900/ 1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.6.2.5	**Labour Charges for Laying of 1200 mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
23	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
24	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
25	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
26	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	WRD SOR 2023 & PL JUNE 2024	WRD 5.1.3	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	Sqm	11.80
2	WRD SOR 2023 & PL JUNE 2024	WRD 5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	Cum	156.50
3	WRD SOR 2023 & PL JUNE 2024	WRD 5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	Cum	149.30
4	WRD SOR 2023 & PL JUNE 2024	5.1.21	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	Cum	196.10
5	WRD SOR 2023 & PL JUNE 2024	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.	Cum	17.22
6	WRD SOR 2023 & PL JUNE 2024	5.1.25	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	Cum	165.12
7	WRD SOR 2023 & PL JUNE 2024	WRD 5.1.39	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	Cum	61.88

8	**WRD SOR 2023 & PL JUNE 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2023 & PL JUNE 2024**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Gaya Division – Konchi Sub Dy.
(Total Cost – Rs. 10.93 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (KONCHI DY.)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charge	Amount (Rs.) including Seigniorage Charges	Page No.
1	Earthwork						
	KONCHI DY.	1	Job	59220139.43	0.00	₹ 5,92,20,139.43	13
2	HR						
	Mahimapur Sub Dy	1	No.	2872584.98	19689.46	₹ 28,92,274.44	24
	Deokuli Minor	1	No.	2607334.35	19956.55	₹ 26,27,290.90	26
	Thakur Bigha Minor	1	No.	1971298.33	14112.51	₹ 19,85,410.84	28
	Dadhpa Sub Dy	1	No.	1845050.14	12664.13	₹ 18,57,714.27	30
	Iguni Minor (Pipe HR)	1	No.	375195.29	3139.24	₹ 3,78,334.53	31
	Konchi Minor (Pipe HR)	1	No.	418355.17	3535.67	₹ 4,21,890.84	32
	Guraru Sub Dy	1	No.	2215402.99	15229.51	₹ 22,30,632.50	34
3	Falls						
	KONCHI DY.						
	1.828 m Fall at Ch. 3.213 Km	1	No.	2072514.67	18005.69	₹ 20,90,520.36	73
	0.457 m Fall at Ch. 7.075 Km	1	No.	1424568.20	12866.56	₹ 14,37,434.76	75
	1.828 m Fall at Ch. 13.777 Km	1	No.	2525418.28	22472.09	₹ 25,47,890.38	77
	0.610 m Fall at Ch. 16.700 Km	1	No.	772472.00	6803.60	₹ 7,79,275.60	79
	1.524 m Fall at Ch. 17.600 Km	1	No.	1615714.88	13729.37	₹ 16,29,444.25	81
	0.610 m Fall at Ch. 18.200 Km	1	No.	521769.51	4508.08	₹ 5,26,277.59	83
	1.220 m Fall at Ch. 18.895 Km	1	No.	400156.02	3238.24	₹ 4,03,394.26	85
4	*Slab Bridge*						
	At Km 1.150	1	No.	2209415.68	12169.24	₹ 22,21,584.93	109
	At Km 1.471	1	No.	2208610.58	12169.24	₹ 22,20,779.82	111
5	*Cross Drainage*						
	At Km 7.326	1	No.	1434363.80	11394.56	₹ 14,45,758.36	119
	At Km 9.906	1	No.	1706519.96	13942.69	₹ 17,20,462.66	120
	At Km 10.430	1	No.	2197361.11	18159.58	₹ 22,15,520.69	121
6	*Brick Section*	1	No.	7533632.89	20018.07	₹ 75,53,650.96	131
7	*Repair of Structures*						
	KONCHI DY.	1	No.	1487849.073	4687.95	₹ 14,92,537.03	132
8	Outlets						
	KONCHI DY.	73	No.	127744.47	1100.17	₹ 94,05,658.77	162
9	Kilometer Stone	20	No.	3853.40		₹ 77,068.00	194
	TOTAL (In Rs.)					**109380946.17**	
	TOTAL (In Lacs)					**1093.81**	

	Carriage of Materials Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_1)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	0.011	0.015		
9	Cement Punning	1.00	0.0015			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR EARTHWORK OF MISHRICHAK MINOR

Sr. No.	Particulars	Amount in Rs.	Reference
1	**Cost of Earthwork for Konchi Distributary**	₹ 5,92,20,139.43	AOC Earthwork

DETAIL QUANTITIES OF EARTHWORK

KONCHI DY (0.000 TO 13.800 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainage	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		23.369	0	0	7.311	0	0.000
100	100	17.585	20.477	2047.700	12.239	9.775	977.500
200	100	22.875	20.230	2023.000	3.247	7.743	774.300
300	100	10.204	16.540	1653.950	4.496	3.872	387.150
400	100	22.382	16.293	1629.300	14.650	9.573	957.300
500	100	9.430	15.906	1590.600	3.066	8.858	885.800
600	100	10.387	9.909	990.850	4.560	3.813	381.300
700	100	9.937	10.162	1016.200	2.450	3.505	350.500
800	100	13.718	11.828	1182.750	10.896	6.673	667.300
900	100	6.128	9.923	992.300	2.575	6.736	673.550
1000	100	5.049	5.589	558.850	3.219	2.897	289.700
1100	100	5.212	5.131	513.050	2.831	3.025	302.500
1200	100	5.925	5.569	556.850	6.231	4.531	453.100
1300	100	2.849	4.387	438.700	7.793	7.012	701.200
1400	100	2.617	2.733	273.300	6.081	6.937	693.700
1500	100	2.896	2.757	275.650	6.832	6.457	645.650
1600	100	3.433	3.165	316.450	8.338	7.585	758.500
1700	100	1.929	2.681	268.100	5.925	7.132	713.150
1800	100	2.677	2.303	230.300	4.718	5.322	532.150
1900	100	2.773	2.725	272.500	4.881	4.800	479.950
2000	100	2.382	2.578	257.750	4.677	4.779	477.900
2100	100	1.362	1.872	187.200	6.156	5.417	541.650
2200	100	0.000	0.681	68.100	16.644	11.400	1140.000
2300	100	0.000	0.000	0.000	11.684	14.164	1416.400
2400	100	0.000	0.000	0.000	11.410	11.547	1154.700
2500	100	0.000	0.000	0.000	15.763	13.587	1358.650
2600	100	0.000	0.000	0.000	24.285	20.024	2002.400
2700	100	0.087	0.044	4.350	13.344	18.815	1881.450
2800	100	1.209	0.648	64.800	9.186	11.265	1126.500
2900	100	1.333	1.271	127.100	8.075	8.631	863.050
3000	100	3.114	2.224	222.350	10.226	9.151	915.050
3100	100	0.000	1.557	155.700	11.207	10.717	1071.650
3200	100	0.000	0.000	0.000	14.667	12.937	1293.700
3300	100	13.034	6.517	651.700	2.663	8.665	866.500
3400	100	3.008	8.021	802.100	3.542	3.103	310.250
3500	100	2.755	2.882	288.150	3.611	3.577	357.650
3600	100	2.252	2.504	250.350	3.895	3.753	375.300
3700	100	1.461	1.857	185.650	4.565	4.230	423.000
3800	100	1.099	1.280	128.000	4.910	4.738	473.750
3900	100	0.283	0.691	69.100	6.171	5.541	554.050
4000	100	13.135	6.709	670.900	2.330	4.251	425.050
4100	100	0.692	6.914	691.350	6.042	4.186	418.600
4200	100	1.281	0.987	98.650	4.449	5.246	524.550

		Earthwork in Cutting			Earthwork in filling		
Chainage	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	1.735	1.508	150.800	5.321	4.885	488.500
4400	100	2.128	1.932	193.150	4.866	5.094	509.350
4500	100	1.927	2.028	202.750	4.930	4.898	489.800
4600	100	2.539	2.233	223.300	4.014	4.472	447.200
4700	100	2.906	2.723	272.250	3.720	3.867	386.700
4800	100	2.112	2.509	250.900	5.094	4.407	440.700
4900	100	0.130	1.121	112.100	7.113	6.104	610.350
5000	100	0.000	0.065	6.500	10.413	8.763	876.300
5100	100	3.613	1.807	180.650	10.545	10.479	1047.900
5200	100	1.535	2.574	257.400	6.753	8.649	864.900
5300	100	2.665	2.100	210.000	5.756	6.255	625.450
5400	100	4.642	3.654	365.350	8.642	7.199	719.900
5500	100	3.116	3.879	387.900	9.255	8.949	894.850
5600	100	2.722	2.919	291.900	19.332	14.294	1429.350
5700	100	0.000	1.361	136.100	17.339	18.336	1833.550
5800	100	0.186	0.093	9.300	14.556	15.948	1594.750
5900	100	0.314	0.250	25.000	14.177	14.367	1436.650
6000	100	2.014	1.164	116.400	8.644	11.411	1141.050
6100	100	4.042	3.028	302.800	10.599	9.622	962.150
6200	100	3.081	3.562	356.150	8.086	9.343	934.250
6300	100	3.754	3.418	341.750	8.176	8.131	813.100
6400	100	2.797	3.276	327.550	8.592	8.384	838.400
6500	100	2.453	2.625	262.500	11.485	10.039	1003.850
6600	100	1.954	2.204	220.350	5.472	8.479	847.850
6700	100	0.976	1.465	146.500	6.845	6.159	615.850
6800	100	0.799	0.888	88.750	9.627	8.236	823.600
6900	100	0.602	0.701	70.050	8.634	9.131	913.050
7000	100	0.422	0.512	51.200	8.040	8.337	833.700
7100	100	1.884	1.153	115.300	6.933	7.487	748.650
7200	100	1.330	1.607	160.700	6.461	6.697	669.700
7300	100	1.015	1.173	117.250	9.217	7.839	783.900
7400	100	0.833	0.924	92.400	12.395	10.806	1080.600
7500	100	0.800	0.817	81.650	11.683	12.039	1203.900
7600	100	0.704	0.752	75.200	11.180	11.432	1143.150
7700	100	0.635	0.670	66.950	11.740	11.460	1146.000
7800	100	0.549	0.592	59.200	12.399	12.070	1206.950
7900	100	4.525	2.537	253.700	7.548	9.974	997.350
8000	100	4.069	4.297	429.700	7.441	7.495	749.450
8100	100	3.341	3.705	370.500	8.608	8.025	802.450
8200	100	3.002	3.172	317.150	9.581	9.095	909.450
8300	100	2.062	2.532	253.200	8.951	9.266	926.600
8400	100	0.645	1.354	135.350	0.000	4.476	447.550
8500	100	4.478	2.562	256.150	0.000	0.000	0.000
8600	100	0.212	2.345	234.500	8.735	4.368	436.750
8700	100	0.184	0.198	19.800	7.481	8.108	810.800

		Earthwork in Cutting			Earthwork in filling		
Chainage	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8800	100	0.037	0.111	11.050	8.709	8.095	809.500
8900	100	0.225	0.131	13.100	8.769	8.739	873.900
9000	100	0.778	0.502	50.150	7.346	8.058	805.750
9100	100	1.553	1.166	116.550	4.738	6.042	604.200
9200	100	0.532	1.043	104.250	20.073	12.406	1240.550
9300	100	0.695	0.614	61.350	18.227	19.150	1915.000
9400	100	1.220	0.958	95.750	15.906	17.067	1706.650
9500	100	2.489	1.855	185.450	11.079	13.493	1349.250
9600	100	2.542	2.516	251.550	12.289	11.684	1168.400
9700	100	2.786	2.664	266.400	6.482	9.386	938.550
9800	100	2.401	2.594	259.350	6.506	6.494	649.400
9900	100	0.857	1.629	162.900	5.161	5.834	583.350
10000	100	2.872	1.865	186.450	6.977	6.069	606.900
10100	100	5.259	4.066	406.550	6.340	6.659	665.850
10200	100	6.267	5.763	576.300	6.042	6.191	619.100
10300	100	7.000	6.634	663.350	5.503	5.773	577.250
10400	100	7.979	7.490	748.950	2.770	4.137	413.650
10500	100	8.600	8.290	828.950	3.422	3.096	309.600
10600	100	9.171	8.886	888.550	8.299	5.861	586.050
10700	100	6.575	7.873	787.300	6.963	7.631	763.100
10800	100	5.508	6.042	604.150	6.829	6.896	689.600
10900	100	3.070	4.289	428.900	8.348	7.589	758.850
11000	100	1.671	2.371	237.050	11.373	9.861	986.050
11100	100	0.645	1.158	115.800	9.083	10.228	1022.800
11200	100	2.034	1.340	133.950	9.827	9.455	945.500
11300	100	3.003	2.519	251.850	4.458	7.143	714.250
11400	100	5.924	4.464	446.350	5.753	5.106	510.550
11500	100	9.007	7.466	746.550	5.861	5.807	580.700
11600	100	12.421	10.714	1071.400	4.827	5.344	534.400
11700	100	6.410	9.416	941.550	9.389	7.108	710.800
11800	100	12.852	9.631	963.100	7.616	8.503	850.250
11900	100	0.793	6.823	682.250	5.868	6.742	674.200
12000	100	1.402	1.098	109.750	3.573	4.721	472.050
12100	100	2.957	2.180	217.950	3.400	3.487	348.650
12200	100	2.569	2.763	276.300	4.434	3.917	391.700
12300	100	2.188	2.379	237.850	7.946	6.190	619.000
12400	100	4.484	3.336	333.600	3.124	5.535	553.500
12500	100	6.450	5.467	546.700	2.756	2.940	294.000
12600	100	5.971	6.211	621.050	5.608	4.182	418.200
12700	100	1.471	3.721	372.100	5.781	5.695	569.450
12800	100	0.352	0.912	91.150	5.609	5.695	569.500
12900	100	0.000	0.176	17.600	16.736	11.173	1117.250
13000	100	0.000	0.000	0.000	11.097	13.917	1391.650
13100	100	0.000	0.000	0.000	9.157	10.127	1012.700
13200	100	0.145	0.073	7.250	8.368	8.763	876.250

		Earthwork in Cutting			Earthwork in filling		
Chainage	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
13300	100	1.374	0.760	75.950	6.849	7.609	760.850
13400	100	1.879	1.627	162.650	7.405	7.127	712.700
13500	100	4.581	3.230	323.000	2.811	5.108	510.800
13600	100	0.046	2.314	231.350	12.966	7.889	788.850
13700	100	0.000	0.023	2.300	17.869	15.418	1541.750
13800	100	6.351	3.176	317.550	5.797	11.833	1183.300
13900	100	3.140	4.746	474.550	5.697	5.747	574.700
14000	100	0.659	1.900	189.950	8.862	7.280	727.950
14100	100	4.765	2.712	271.200	5.492	7.177	717.700
14200	100	0.000	2.383	238.250	14.501	9.997	999.650
14300	100	0.000	0.000	0.000	13.908	14.205	1420.450
14400	100	0.000	0.000	0.000	8.275	11.092	1109.150
14500	100	0.000	0.000	0.000	11.088	9.682	968.150
14600	100	0.890	0.445	44.500	8.275	9.682	968.150
14700	100	0.888	0.889	88.900	7.097	7.686	768.600
14800	100	0.878	0.883	88.300	6.501	6.799	679.900
14900	100	0.881	0.880	87.950	5.875	6.188	618.800
15000	100	0.874	0.878	87.750	5.830	5.853	585.250
15100	100	1.015	0.945	94.450	6.107	5.969	596.850
15200	100	1.191	1.103	110.300	6.118	6.113	611.250
15300	100	1.376	1.284	128.350	6.644	6.381	638.100
15400	100	1.514	1.445	144.500	5.636	6.140	614.000
15500	100	1.707	1.611	161.050	5.356	5.496	549.600
15600	100	1.694	1.701	170.050	4.275	4.816	481.550
15700	100	1.682	1.688	168.800	4.436	4.356	435.550
15800	100	1.411	1.547	154.650	7.005	5.721	572.050
15900	100	1.368	1.390	138.950	6.313	6.659	665.900
16000	100	1.033	1.201	120.050	7.130	6.722	672.150
16100	100	0.412	0.723	72.250	7.399	7.265	726.450
16200	100	0.604	0.508	50.800	6.725	7.062	706.200
16300	100	1.166	0.885	88.500	7.006	6.866	686.550
16400	100	0.000	0.583	58.300	8.070	7.538	753.800
16500	100	0.000	0.000	0.000	6.951	7.511	751.050
16600	100	0.127	0.064	6.350	6.415	6.683	668.300
16700	100	1.755	0.941	94.100	6.982	6.699	669.850
16800	100	0.154	0.955	95.450	4.733	5.858	585.750
16900	100	4.181	2.168	216.750	7.746	6.240	623.950
17000	100	2.819	3.500	350.000	7.869	7.808	780.750
17100	100	0.203	1.511	151.100	4.369	6.119	611.900
17200	100	0.204	0.204	20.350	5.085	4.727	472.700
17300	100	0.214	0.209	20.900	4.887	4.986	498.600
17400	100	0.218	0.216	21.600	4.346	4.617	461.650
17500	100	0.188	0.203	20.300	5.709	5.028	502.750
17600	100	8.489	4.339	433.850	5.913	5.811	581.100
17700	100	1.015	4.752	475.200	3.817	4.865	486.500

		Earthwork in Cutting			Earthwork in filling		
Chainage	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
17800	100	0.571	0.793	79.300	3.177	3.497	349.700
17900	100	0.135	0.353	35.300	3.943	3.560	356.000
18000	100	0.034	0.085	8.450	3.188	3.566	356.550
18100	100	0.000	0.017	1.700	5.942	4.565	456.500
18200	100	4.873	2.437	243.650	4.649	5.296	529.550
18300	100	0.558	2.716	271.550	8.186	6.418	641.750
18400	100	0.715	0.637	63.650	4.435	6.311	631.050
18500	100	0.349	0.532	53.200	5.987	5.211	521.100
18600	100	0.088	0.219	21.850	5.117	5.552	555.200
18700	100	1.037	0.563	56.250	0.000	2.559	255.850
18800	100	0.207	0.622	62.200	8.694	4.347	434.700
Total				**53618.400**			**142009.750**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**53618.400**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**142009.750**
NET QUANTITY OF EARTHWORK							**88391.35**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
KONCHI DY. (0.000 TO 18.900 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.180	180	9.32	1677.60	Sqm
0.180 - 3.600	3420	8.300	28386.00	Sqm
3.600 - 6.350	2750	7.80	21450.00	Sqm
6.350 - 6.500	150	7.26	1089.00	Sqm
6.500 - 9.800	3300	6.83	22539.00	Sqm
9.800 - 11.300	1500	6.49	9735.00	Sqm
11.300 - 13.100	1800	5.97	10746.00	Sqm
13.100 - 14.250	1150	5.68	6532.00	Sqm
14.250 -15.600	1350	5.39	7276.50	Sqm
15.600 - 16.700	1100	5.01	5511.00	Sqm
16.700 - 17.750	1050	2.47	2593.50	Sqm
17.750 - 18.200	450	2.14	963.00	Sqm
18.200 - 18.550	350	1.74	609.00	Sqm
18.550 - 18.800	250	1.44	360.00	Sqm
18.800 - 18.900	100	1.25	125.00	Sqm
	TOTAL		**119592.60**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.180	180	9.32	0.15	251.64	Cum
0.180 - 3.600	3420	8.300	0.15	4257.90	Cum
3.600 - 6.350	2750	7.80	0.15	3217.50	Cum
6.350 - 6.500	150	7.26	0.15	163.35	Cum
6.500 - 9.800	3300	6.83	0.15	3380.85	Cum
9.800 - 11.300	1500	6.49	0.15	1460.25	Cum
11.300 - 13.100	1800	5.97	0.15	1611.90	Cum
13.100 - 14.250	1150	5.68	0.15	979.80	Cum
14.250 -15.600	1350	5.39	0.15	1091.48	Cum
15.600 - 16.700	1100	5.01	0.15	826.65	Cum
16.700 - 17.750	1050	2.47	0.15	389.03	Cum
17.750 - 18.200	450	2.14	0.15	144.45	Cum
18.200 - 18.550	350	1.74	0.15	91.35	Cum
18.550 - 18.800	250	1.44	0.15	54.00	Cum
18.800 - 18.900	100	1.25	0.15	18.75	Cum
	TOTAL			**17938.89**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR KONCHI DY.						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	119592.60	Sqm	**11.80**	1411717.683
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	53618.40	Cum	**156.50**	8391279.6
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	21447.36	Cum	**17.22**	369270.2237
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	88391.35	Cum	**165.12**	14594822.65
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	26517.41	Cum	**174.89**	4637628.96
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	22097.84	Cum	**217.92**	4815560.75
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	39776.11	Cum	**319.14**	12694146.95
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			17938.89	Cum	**196.10**	3517816.33

7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	142009.75	Cum	**61.88**	8787896.29
TOTAL COST OF EARTHWORK (in Rs.)						**59220139.43**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**592.201**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR KONCHI DY.				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	*119592.60*	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	53618.400	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	21447.36	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	88391.350	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	26517.41	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	22097.84	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	39776.11	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	17938.89	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	142009.75	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR HEAD REGULATOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	0.180	*Mahimapur Sub Dy*	₹ 28,72,584.98
2	6.350	*Deokuli Minor*	₹ 26,07,334.35
3	6.350	*Thakur Bigha Minor*	₹ 19,71,298.33
4	11.300	*Dadhpa Sub Dy*	₹ 18,45,050.14
5	15.125	*Iguni Minor (Pipe HR)*	₹ 3,75,195.29
6	16.460	*Konchi Minor (Pipe HR)*	₹ 4,18,355.17
7	16.700	*Guraru Sub Dy*	₹ 22,15,402.99
		Sub-Total	₹ 1,23,05,221.26
		Seigniorage charges	₹ 88,327.07
		Total (in Rs. Lakhs)	**₹ 123.94**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF MAHIMAPUR SUB DY.				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	3.200	0.500	**3.70**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.490	0.200	**1.69**
	(h) is head of water above sill of gate in m	1.490	0.3	**1.790**
	Weight of lift gate excluding embedded parts	**1.55**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	1.55	3.9
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	3.9	1162.15
	Weight of screw hoist with all accessories	**1.16**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.790	400	716
	Columns with bracings/Anchors/Stiffeners	**0.716**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.79	400	716
	Beams with cross beams/stiffeners	**0.716**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.432	10%	0.1432
	Railing/ Chequered plate/Ladder etc	**0.1432**		**T**
Total Weight of One Gate		**4.29**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF DEOKULI MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.400	0.500	**1.90**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.200	0.200	**1.40**
	(h) is head of water above sill of gate in m	1.200	0.3	**1.500**
	Weight of lift gate excluding embedded parts	**0.51**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.51	1.3
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.3	379.58
	Weight of screw hoist with all accessories	**0.38**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.500	400	600
	Columns with bracings/Anchors/Stiffeners	**0.6**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.5	400	600
	Beams with cross beams/stiffeners	**0.6**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.2	10%	0.12
	Railing/ Chequered plate/Ladder etc	**0.12**		**T**
Total Weight of One Gate		**2.21**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF THAKUR BIGHA MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.800	0.500	**2.30**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.250	0.200	**1.45**
	(h) is head of water above sill of gate in m	1.250	0.3	**1.550**
	Weight of lift gate excluding embedded parts	**0.68**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.68	1.7
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.7	510.61
	Weight of screw hoist with all accessories	**0.51**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.550	400	620
	Columns with bracings/Anchors/Stiffeners	**0.62**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.55	400	620
	Beams with cross beams/stiffeners	**0.62**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.24	10%	0.124
	Railing/ Chequered plate/Ladder etc	**0.124**		**T**
Total Weight of One Gate		**2.56**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF DADHPA SUB DY.				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.000	0.500	**2.50**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.190	0.200	**1.39**
	(h) is head of water above sill of gate in m	1.190	0.3	**1.490**
	Weight of lift gate excluding embedded parts	**0.72**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.72	1.8
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2	540.04
	Weight of screw hoist with all accessories	**0.54**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.490	400	596
	Columns with bracings/Anchors/Stiffeners	**0.596**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.49	400	596
	Beams with cross beams/stiffeners	**0.596**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.192	10%	0.1192
	Railing/ Chequered plate/Ladder etc	**0.1192**		**T**
Total Weight of One Gate		**2.57**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF GURARU SUB DY				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.000	0.500	**2.50**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.480	0.200	**1.68**
	(h) is head of water above sill of gate in m	1.480	0.3	**1.780**
	Weight of lift gate excluding embedded parts	**0.92**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.92	2.3
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2	687.95
	Weight of screw hoist with all accessories	**0.69**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.780	400	712
	Columns with bracings/Anchors/Stiffeners	**0.712**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.78	400	712
	Beams with cross beams/stiffeners	**0.712**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.424	10%	0.1424
	Railing/ Chequered plate/Ladder etc	**0.1424**		**T**
Total Weight of One Gate		**3.17**		**T**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST HR FOR MAHIMPUR SUB DY. OFFTAKING FROM RD-0+180 KM (RT.) AT KONCHI DISTRIBUTARY								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	221.943	Cum	**156.50**	34734.01			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	27.62	Cum	**6381.70**	176270.60	8.95	12.43	24.86
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	127.72	Cum	**6914.20**	883088.08	52.68	54.92	109.84
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	24.08	Cum	**8151.40**	196324.36	13.66	9.39	19.03
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.58	MT	**73574.90**	263388.88			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	4.29	MT	**160035.11**	686052.50			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	369.20	Sqm	**578.60**	213618.12			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.75	Sqm	**680.10**	7989.81			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	7.02	Cum	**694.61**	4876.16			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	7.02	Cum	**1237.00**	8683.74			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	2.11	Cum	**1377.70**	2909.70			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.11	Cum	**516.50**	1090.85			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.56	Sqm	**63.20**	287.88			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully	42.66	Cum	**149.30**	6369.15			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	76.743	Cum	**1075.00**	82498.31			
	Coarse Aggregates (100 Km lead)	155.838	Cum	**1398.00**	217861.64			
	Cement (30 km lead)	75.290	MT	**742.00**	55865.34			
	Boulder (60 Km lead)	7.02	Cum	**1159.00**	8136.18			
	Steel (30 Km lead)	7.87	MT	**742.00**	5837.14			
	TOTAL (In Rs.)				**2872584.98**			
	TOTAL (In Rs.)				**2872584.98**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	76.74	Cum	**584.64**	44866.80	4486.68		
	Coarse Aggregate	155.84	Cum	**944.26**	147151.67	14715.17		
	Boulders	7.02	Cum	**694.61**	4876.16	487.62		
	Total					19689.46		
	For 1 nos. HR, Total Seigniorage charges					**19689.46**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR DEOKULI MINOR OFFTAKING FROM RD-6+350 KM (RT.) AT KONCHI DISTRIBUTARY								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	229.304	Cum	**156.50**	35886.10			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	22.22	Cum	**6381.70**	141823.12	7.20	10.00	20.00
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	147.10	Cum	**6914.20**	1017111.68	60.68	63.26	126.51
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	16.45	Cum	**8151.40**	134073.85	9.33	6.41	12.99
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.55	MT	**73574.90**	261453.29			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.21	MT	**160035.11**	352987.94			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	375.39	Sqm	**578.60**	217202.01			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.37	Sqm	**680.10**	6370.90			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	2.16	Cum	**694.61**	1500.36			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.16	Cum	**1237.00**	2671.92			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.92	Cum	**1377.70**	1272.99			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.92	Cum	**516.50**	477.25			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.35	Sqm	**63.20**	211.48			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	8.00	No.	**5588.70**	44709.60			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	67.43	Cum	**149.30**	10066.96			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	79.670	Cum	**1075.00**	85645.55			
	Coarse Aggregates (100 Km lead)	160.429	Cum	**1398.00**	224279.79			
	Cement (30 km lead)	77.207	MT	**742.00**	57287.66			
	Boulder (60 Km lead)	2.16	Cum	**1159.00**	2503.44			
	Steel (30 Km lead)	5.76	MT	**742.00**	4273.37			
	TOTAL (In Rs.)				**2607334.35**			
	TOTAL (In Rs.)				**2607334.35**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	79.67	Cum	**584.64**	46578.43	4657.84		
	Coarse Aggregate	160.43	Cum	**944.26**	151486.72	15148.67		
	Boulders	2.16	Cum	**694.61**	1500.36	150.04		
	Total					19956.55		
	For 1 nos. HR, Total Seigniorage charges					**19956.55**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR THAKUR BIGHA MINOR OFFTAKING FROM RD-6+500 KM (RT.) AT KONCHI DISTRIBUTARY								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	147.292	Cum	**156.50**	23051.24			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.03	Cum	**6381.70**	121442.93	6.17	8.56	17.13
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	87.56	Cum	**6914.20**	605415.78	36.12	37.65	75.30
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	18.59	Cum	**8151.40**	151524.14	10.54	7.25	14.69
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.43	MT	**73574.90**	179117.42			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.56	MT	**160035.11**	408959.02			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	287.08	Sqm	**578.60**	166106.83			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.76	Sqm	**680.10**	6640.22			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	10.94	Cum	**694.61**	7601.81			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	10.94	Cum	**1237.00**	13537.73			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.19	Cum	**1377.70**	1636.71			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.19	Cum	**516.50**	613.60			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.49	Sqm	**63.20**	220.29			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	28.56	Cum	**149.30**	4264.45			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	53.464	Cum	**1075.00**	57474.20			
	Coarse Aggregates (100 Km lead)	108.303	Cum	**1398.00**	151407.07			
	Cement (30 km lead)	52.824	MT	**742.00**	39195.77			
	Boulder (60 Km lead)	10.94	Cum	**1159.00**	12684.10			
	Steel (30 Km lead)	4.99	MT	**742.00**	3702.52			
	TOTAL (In Rs.)				**1971298.33**			
	TOTAL (In Rs.)				**1971298.33**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	53.46	Cum	**584.64**	31257.41	3125.74		
	Coarse Aggregate	108.30	Cum	**944.26**	102265.84	10226.58		
	Boulders	10.94	Cum	**694.61**	7601.81	760.18		
	Total					14112.51		
	For 1 nos. HR, Total Seigniorage charges					**14112.51**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR DADHPA SUB DY. OFFTAKING FROM RD-11+300 KM AT KONCHI DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	135.024	Cum	**156.50**	21131.25			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.69	Cum	**6381.70**	125669.29	6.38	8.86	17.72
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	77.05	Cum	**6914.20**	532708.56	31.78	33.13	66.26
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	19.42	Cum	**8151.40**	158334.10	11.01	7.58	15.35
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.27	MT	**73574.90**	166733.50			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.57	MT	**160035.11**	411497.67			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	265.52	Sqm	**578.60**	153629.64			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.29	Sqm	**680.10**	6317.04			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.78	Cum	**694.61**	2625.63			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.78	Cum	**1237.00**	4675.86			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.32	Cum	**1377.70**	1818.56			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.32	Cum	**516.50**	681.78			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.31	Sqm	**63.20**	209.36			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	25.91	Cum	**149.30**	3868.33			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	49.566	Cum	**1075.00**	53283.97			
	Coarse Aggregates (100 Km lead)	100.647	Cum	**1398.00**	140704.79			
	Cement (30 km lead)	49.175	MT	**742.00**	36487.89			
	Boulder (60 Km lead)	3.78	Cum	**1159.00**	4381.02			
	Steel (30 Km lead)	4.84	MT	**742.00**	3589.40			
	TOTAL (In Rs.)				**1845050.14**			
	TOTAL (In Rs.)				**1845050.14**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	49.57	Cum	**584.64**	28978.55	2897.85		
	Coarse Aggregate	100.65	Cum	**944.26**	95037.13	9503.71		
	Boulders	3.78	Cum	**694.61**	2625.63	262.56		
	Total					12664.13		
	For 1 nos. HR, Total Seigniorage charges					**12664.13**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR PIPE HR OF IGUNI MR OFFTAKING FROM RD- 15+150 KM KONCHI DY.								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	30.337	Cum	**195.20**	5921.74			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.62	Cum	**6381.70**	61397.29	3.12	4.33	8.66
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	19.45	Cum	**6914.20**	134487.08	8.02	8.36	16.73
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	73.97	Sqm	**578.60**	42800.13			
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.38	MT	**73574.90**	28085.23			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.07	MT	**160035.11**	11574.24			
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**2532.61**	18994.58			
8	Labour for laying 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**711.27**	5334.49			
9	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)	1.03	Cum	**339.90**	351.17			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	10.84	Sqm	**149.30**	1618.06			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	12.693	Cum	**1075.00**	13645.24			
	Coarse Aggregates (100 Km lead)	25.386	Cum	**1398.00**	35490.31			
	Cement (30 km lead)	11.141	MT	**742.00**	8266.35			
	Steel (30 Km lead)	0.45	MT	**742.00**	336.90			
	Hume Pipe (30 km Lead)	7.50	RM	**919.00**	6892.50			
TOTAL (In Rs.)					**375195.29**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	12.69	Cum	**584.64**	7420.98	742.10		
	Coarse Aggregate	25.39	Cum	**944.26**	23971.44	2397.14		
	Total					3139.24		
	For 1 nos. HR, Total Seigniorage charges					**3139.24**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR PIPE HR OF KONCHI MR OFFTAKING FROM RD- 16+460 KM KONCHI DY.								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	33.075	Cum	**195.20**	6456.25			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.89	Cum	**6381.70**	63146.46	3.21	4.45	8.91
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	22.89	Cum	**6914.20**	158277.78	9.44	9.84	19.69
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	81.83	Sqm	**578.60**	47346.52			
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.45	MT	**73574.90**	33053.49			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.07	MT	**160035.11**	11574.24			
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**2532.61**	18994.58			
8	Labour for laying 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**711.27**	5334.49			
9	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)	1.03	Cum	**339.90**	351.17			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.16	Cum	**149.30**	1814.90			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	14.296	Cum	**1075.00**	15368.36			
	Coarse Aggregates (100 Km lead)	28.592	Cum	**1398.00**	39972.03			
	Cement (30 km lead)	12.649	MT	**742.00**	9385.40			
	Steel (30 Km lead)	0.52	MT	**742.00**	387.01			
	Hume Pipe (30 km Lead)	7.50	RM	**919.00**	6892.50			
	TOTAL (In Rs.)				**418355.17**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	14.30	Cum	**584.64**	8358.10	835.81		
	Coarse Aggregate	28.59	Cum	**944.26**	26998.56	2699.86		
	Total					3535.67		
	For 1 nos. HR, Total Seigniorage charges					**3535.67**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR GURARU SUB DY OFFTAKING FROM RD-16+700 KM AT KONCHI DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	168.340	Cum	**156.50**	26345.25			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	21.83	Cum	**6381.70**	139296.67	7.07	9.82	19.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	98.86	Cum	**6914.20**	683524.00	40.78	42.51	85.02
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	19.51	Cum	**8151.40**	159009.41	11.06	7.61	15.41
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.67	MT	**73574.90**	196333.92			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.17	MT	**160035.11**	507569.51			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	308.54	Sqm	**578.60**	178523.81			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.40	Sqm	**680.10**	7074.13			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.78	Cum	**694.61**	2625.63			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.78	Cum	**1237.00**	4675.86			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.32	Cum	**1377.70**	1818.56			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.32	Cum	**516.50**	681.78			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.40	Sqm	**63.20**	215.00			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	29.73	Cum	**149.30**	4438.08			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	59.939	Cum	**1075.00**	64434.49			
	Coarse Aggregates (100 Km lead)	121.393	Cum	**1398.00**	169707.67			
	Cement (30 km lead)	58.912	MT	**742.00**	43712.34			
	Boulder (60 Km lead)	3.78	Cum	**1159.00**	4381.02			
	Steel (30 Km lead)	5.84	MT	**742.00**	4333.36			
	TOTAL (In Rs.)				**2215402.99**			
	TOTAL (In Rs.)				**2215402.99**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	59.94	Cum	**584.64**	35042.77	3504.28		
	Coarse Aggregate	121.39	Cum	**944.26**	114626.73	11462.67		
	Boulders	3.78	Cum	**694.61**	2625.63	262.56		
	Total					15229.51		
	For 1 nos. HR, Total Seigniorage charges					**15229.51**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF HR FOR MAHIMAPUR SUB DY. OFFTAKING FROM RD-0+180 KM (AT KONCHI DISTRIBUTARY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*2.21*	*1.73*	*2.991*	*22.836*	*Cum*
	Section B-B	*2*	*5.25*	*2.05*	*2.588*	*55.788*	*Cum*
	Section C-C	*2*	*0.50*	*1.87*	*2.588*	*4.847*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.13*	*1.45*	*3.141*	*18.727*	*Cum*
	Left Bank Sec a to d	1	3.99	3.13	2.341	*29.258*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.53*	*1.10*	*2.966*	*3.432*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.89*	*2.20*	*2.966*	*37.811*	*Cum*
	Floor						
	U/S key	*1*	*1.568*	*3.8605*	*0.850*	*5.145*	*Cum*
	Floor	*1*	*4.371*	*3.8605*	*0.650*	*10.968*	*Cum*
		1	*0.418*	*3.200*	*0.450*	*0.602*	*Cum*
		1	*0.718*	*3.200*	*0.350*	*0.804*	*Cum*
		1	*0.368*	*3.200*	*0.350*	*1.178*	*Cum*
		1	*3.079*	*3.200*	*1.000*	*9.853*	*Cum*
		1	*0.9*	*3.200*	*0.200*	*0.576*	*Cum*
		1	*0.135*	*3.200*	*0.200*	*0.086*	*Cum*
		1	*1.93*	*3.200*	*0.650*	*4.014*	*Cum*
		1	*0.725*	*3.200*	*0.650*	*1.508*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*3.200*	*0.600*	*4.224*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.200*	*0.850*	*1.200*	*3.264*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*2.600*	*7.020*	*Cum*
						221.94	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*5.326*	*0.150*	*0.50*	*Cum*
		1	*2.059*	*3.852*	*0.150*	*1.19*	*Cum*
		1	*1.774*	*3.200*	*0.150*	*0.85*	*Cum*
		1	*0.782*	*3.200*	*0.150*	*0.38*	*Cum*
		1	*3.246*	*3.200*	*0.150*	*1.56*	*Cum*
		1	*1.106*	*3.200*	*0.150*	*0.53*	*Cum*
		1	*0.724*	*3.200*	*0.150*	*0.35*	*Cum*
		1	*0.559*	*3.200*	*0.150*	*0.27*	*Cum*
		1	*0.692*	*3.200*	*0.150*	*0.33*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*2.213*	*1.725*	*0.300*	*2.29*	*Cum*
	Section B-B	*2*	*5.250*	*2.053*	*0.300*	*6.47*	*Cum*
	Section C-C	*2*	*0.500*	*1.873*	*0.300*	*0.56*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.126*	*1.445*	*0.300*	*1.79*	*Cum*
	Left Bank Sec a to d	*1*	*3.993*	*3.130*	*0.150*	*1.87*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.526*	*1.100*	*0.300*	*0.35*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.894*	*2.203*	*0.300*	*3.82*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.200*	*0.850*	*0.300*	*0.82*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*3.200*	*0.450*	*0.900*	*1.30*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*14*	*0.600*	*0.600*	*0.300*	*1.51*	*Cum*
	TOTAL					**27.62**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*2.21*	*0.82*	*0.50*	*1.81*	*Cum*
		2	*2.21*	*1.07*	*0.84*	*3.99*	*Cum*
		2	*2.21*	*1.33*	*1.35*	*7.92*	*Cum*
	Section B-B	*2*	*5.25*	*1.24*	*1.39*	*18.02*	*Cum*
		2	*5.25*	*1.65*	*0.90*	*15.62*	*Cum*
	Section C-C	*2*	*0.50*	*1.15*	*1.09*	*1.25*	*Cum*
		2	*0.50*	*1.47*	*1.20*	*1.77*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.13*	*0.45*	*0.50*	*0.93*	*Cum*
		1	*4.13*	*0.75*	*0.99*	*3.06*	*Cum*
		1	*4.13*	*1.05*	*1.35*	*5.82*	*Cum*
	Left Bank						
	Section a-a	*1*		3.016	*0.50*	*1.51*	*Sqm*
		1		*2.87*	*0.20*	*0.57*	*Sqm*
		1		*1.60*	*1.49*	*2.38*	*Sqm*
						4.46	***Sqm***
	Section b-b	*1*		*3.02*	*0.50*	*1.51*	*Sqm*
		1		*2.54*	*0.20*	*0.51*	*Sqm*
		1		*1.51*	*1.49*	*2.25*	*Sqm*
						4.27	***Sqm***
	Section c-c	*1*		*3.02*	*0.50*	*1.51*	*Sqm*
		1		*1.86*	*0.20*	*0.37*	*Sqm*
		1		*1.17*	*1.49*	*1.74*	*Sqm*
						3.62	***Sqm***
	Section d-d	*1*		*3.02*	*0.50*	*1.51*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.49*	*0.72*	*Sqm*
						2.32	***Sqm***
	Bottom Key	*1*	*3.99*	*1.57*	*0.70*	*4.38*	*Cum*
	Top Stem Area	*1*	*3.99*	*3.67*		*14.65*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.53*	*0.70*	*0.90*	*0.66*	*Cum*
		2	*0.53*	*0.53*	*1.27*	*0.70*	*Cum*
		2	*0.53*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.89*	*1.80*	*0.90*	*9.39*	*Cum*
		2	*2.89*	*1.37*	*1.27*	*10.07*	*Cum*
		2	*2.89*	*0.76*	*0.50*	*2.19*	*Cum*
	TOTAL					**102.41**	**Cum**
	Floor						
	U/S key	*1*	*1.57*	*3.86*	*0.70*	*4.24*	*Cum*
	Floor	*1*	*4.37*	*3.86*	*0.50*	*8.44*	*Cum*
		1	*0.42*	*3.20*	*0.30*	*0.40*	*Cum*
		1	*0.72*	*3.20*	*0.20*	*0.46*	*Cum*
		1	*0.37*	*3.20*	*0.35*	*0.41*	*Cum*
		1	*3.08*	*3.20*	*0.55*	*5.42*	*Cum*
		1	*0.90*	*3.20*	*0.20*	*0.58*	*Cum*
		1	*0.14*	*3.20*		*0.43*	*Cum*
		1	*0.61*	*3.20*	*0.35*	*0.69*	*Cum*
		1	*1.93*	*3.20*	*0.50*	*3.09*	*Cum*
	D/S key	*1*	*0.73*	*3.20*	*0.50*	*1.16*	*Cum*
	TOTAL					**127.72**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*2.72*	*3.86*	*0.20*	*2.10*	*Cum*
		1	*0.21*	*3.20*	*0.28*	*0.19*	*Cum*
		1	*1.00*	*3.20*	*0.35*	*1.12*	*Cum*
		1	*0.84*	*3.20*	*0.20*	*0.54*	*Cum*
		1	*3.08*	*3.20*	*0.20*	*1.97*	*Cum*
		1	*0.95*	*3.20*	*0.20*	*0.61*	*Cum*
		1	*1.93*	*3.20*	*0.20*	*1.24*	*Cum*
	Top Slab	*1*	*5.25*	*3.20*	*0.38*	*6.33*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.20*	*0.08*	*1.02*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*4.04*	*0.45*	*0.18*	*0.63*	*Cum*
		2	*4.04*	*0.35*	*0.25*	*0.71*	*Cum*
		2	*4.04*	*0.22*	*0.55*	*0.97*	*Cum*
	TOTAL					**24.08**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*4.420*	*37*		*1.578*	*258.089*	*Kg*
a2	*10*	*5.630*	*20*		*0.616*	*69.413*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*4.380*	*21*		*0.616*	*56.702*	*Kg*
a5	*10*	*5.550*	*16*		*0.616*	*54.742*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.521*	*50*		*0.888*	*111.895*	*Kg*
x2	*16*	*1.344*	*50*		*1.578*	*106.051*	*Kg*
x3	*10*	*3.000*	*24*		*0.616*	*44.385*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.795*	*13*		*0.888*	*89.955*	*Kg*
	12	*3.894*	*30*		*0.888*	*103.701*	*Kg*
	floor raft						
	12	*3.394*	*13*		*0.888*	*39.167*	*Kg*
	12	*8.598*	*26*		*0.888*	*198.444*	*Kg*
	12	*3.894*	*75*		*0.888*	*259.254*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*102.41*	*0.25%*	*0.26*	*7850*	*2009.81*	*Kg*
	TOTAL Weight of steel (in kg)					3579.87	Kg
	TOTAL Weight of Steel (in Tonne)					**3.58**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		4.29		**4.29**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*2.21*		*0.50*	*4.43*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*2.21*		*0.84*	*7.44*	*Sqm*
		4		*1.07*	*0.84*	*3.61*	*Sqm*
		4	*2.21*		*1.35*	*11.95*	*Sqm*
		4		*1.33*	*1.35*	*7.16*	*Sqm*
	Section B-B	*4*	*5.25*		*1.39*	*29.15*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.24	1.39	6.87	Sqm
		4	5.25		0.90	18.90	Sqm
		4		1.65	0.90	5.95	Sqm
	Section C-C	4	0.50		1.09	2.18	Sqm
		4		1.15	1.09	4.99	Sqm
		4	0.50		1.20	2.40	Sqm
		4		1.47	1.20	7.07	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	4.13		0.50	4.13	Sqm
		2		0.45	0.50	0.45	Sqm
		2	4.13		0.99	8.18	Sqm
		2		0.75	0.99	1.48	Sqm
		2	4.13		1.35	11.14	Sqm
		2		1.05	1.35	2.82	Sqm
	Left Bank						
	Bottom Key	2	3.99		0.70	5.59	Sqm
		2		1.57	0.70	2.20	Sqm
	Section a-a	2	1.33		0.50	1.33	Sqm
		2		3.02	0.50	3.02	Sqm
		2	1.33		0.20	0.53	Sqm
		2		2.87	0.20	1.15	Sqm
		2	1.33		1.49	3.97	Sqm
		2		1.60	1.49	4.77	Sqm
	Section b-b	2	1.33		0.50	1.33	Sqm
		2		3.02	0.50	3.02	Sqm
		2	1.33		0.20	0.53	Sqm
		2		2.54	0.20	1.02	Sqm
		2	1.33		1.49	3.97	Sqm
		2		1.51	1.49	4.50	Sqm
	Section c-c	2	1.33		0.50	1.33	Sqm
		2		3.02	0.50	3.02	Sqm
		2	1.33		0.20	0.53	Sqm
		2		1.86	0.20	0.74	Sqm
		2	1.33		1.49	3.97	Sqm
		2		1.17	1.49	3.49	Sqm
	Section d-d	2	1.33		0.50	1.33	Sqm
		2		3.02	0.50	3.02	Sqm
		2	1.33		0.20	0.53	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.33		1.49	3.97	Sqm
		2		0.48	1.49	1.43	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.53		0.90	1.89	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.53		1.27	2.66	Sqm
		4		0.53	1.27	2.66	Sqm
		4	0.53		0.50	1.05	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.89		0.90	10.42	Sqm
		4		1.80	0.90	6.49	Sqm
		4	2.89		1.27	14.66	Sqm
		4		1.37	1.27	6.96	Sqm
		4	2.89		0.50	5.79	Sqm
		4		0.76	0.50	1.52	Sqm
	Floor						
	U/S key	2	1.57		0.70	2.20	Sqm
		2		3.86	0.70	5.40	Sqm
	Floor	2	4.37		0.50	4.37	Sqm
		2		3.86	0.50	3.86	Sqm
		2	0.42		0.30	0.25	Sqm
		2		3.20	0.30	1.92	Sqm
		2	0.72		0.20	0.29	Sqm
		2		3.20	0.20	1.28	Sqm
		2	0.37			0.74	Sqm
		2		3.20		6.40	Sqm
		2	3.08		0.55	3.39	Sqm
		2		3.20	0.55	3.52	Sqm
		2	0.90		0.20	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*3.20*	*0.20*	*1.28*	*Sqm*
		2	*0.14*			*0.27*	*Sqm*
		2		*3.20*		*6.40*	*Sqm*
		2	*0.614*		*0.35*	*0.43*	*Sqm*
		2		*3.2*	*0.35*	*2.24*	*Sqm*
		2	*1.93*		*0.50*	*1.93*	*Sqm*
		2		*3.20*	*0.50*	*3.20*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*3.20*	*0.50*	*3.20*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*3.20*		*0.30*	*1.92*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*3.20*		*0.90*	*5.76*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*3.20*	*0.38*	*2.41*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*4.04*		*0.18*	*2.83*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*4.04*		*0.25*	*4.04*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*4.04*		*0.55*	*8.89*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**369.20**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.67*		*11.75*	*Sqm*
	TOTAL					**11.75**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*2.60*	*7.02*	***Cum***
	TOTAL					**7.02**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*3.20*	*0.15*	*1.06*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*3.20*	*0.15*	*1.06*	*Cum*
	TOTAL					**2.11**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.45*	*0.48*		*2.35*	*Sqm*
	On Abutment Top	*2*	*4.99*	*0.45*		*2.20*	*Sqm*
	TOTAL					**4.56**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*2.21*	*1.07*		*4.736*	*Cum*
	Section B-B	*2*	*5.25*	*2.05*		*21.483*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section C-C	2	*0.50*	*1.72*		*1.717*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*4.13*	*1.14*		*4.704*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.53*	*0.93*		*0.977*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.89*	*1.56*		*9.043*	*Cum*
	TOTAL					**42.66**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR DEOKULI MINOR OFFTAKING FROM RD-6+350 KM (RT.) AT KONCHI DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.70*	*1.64*	*2.700*	*15.055*	*Cum*
	Section B-B	*2*	*5.25*	*2.75*	*3.639*	*105.076*	*Cum*
	Section C-C	*2*	*0.50*	*2.57*	*3.749*	*9.635*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.56*	*1.27*	*2.700*	*12.202*	*Cum*
	Left Bank Sec a to d	1	3.31	2.73	2.050	*18.481*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*4.077*	*4.485*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.68*	*1.94*	*4.077*	*42.413*	*Cum*
	Floor						
	U/S key	*1*	*1.35*	*2.5245*	*0.850*	*2.897*	*Cum*
	Floor	*1*	*3.434*	*2.5245*	*0.650*	*5.635*	*Cum*
		1	*0.418*	*1.400*	*0.450*	*0.263*	*Cum*
		1	*0.718*	*1.400*	*0.350*	*0.352*	*Cum*
		1	*0.418*	*1.400*	*0.300*	*0.585*	*Cum*
		1	*3.079*	*1.400*	*0.950*	*4.095*	*Cum*
		1	*0.9*	*1.400*	*0.200*	*0.252*	*Cum*
		1	*0.135*	*1.400*	*0.200*	*0.038*	*Cum*
		1	*1.917*	*1.400*	*0.650*	*1.744*	*Cum*
		1	*0.725*	*1.400*	*0.650*	*0.660*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.400*	*0.600*	*1.848*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.400*	*0.850*	*1.200*	*1.428*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*0.800*	*2.160*	*Cum*
						229.30	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.629*	*2.955*	*0.150*	*0.28*	*Cum*
		1	*1.655*	*1.830*	*0.150*	*0.45*	*Cum*
		1	*1.274*	*1.400*	*0.150*	*0.27*	*Cum*
		1	*0.670*	*1.400*	*0.150*	*0.14*	*Cum*
		1	*3.338*	*1.400*	*0.150*	*0.70*	*Cum*
		1	*0.948*	*1.400*	*0.150*	*0.20*	*Cum*
		1	*0.869*	*1.400*	*0.150*	*0.18*	*Cum*
		1	*0.600*	*1.400*	*0.150*	*0.13*	*Cum*
		1	*0.692*	*1.400*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.700*	*1.640*	*0.300*	*1.67*	*Cum*
	Section B-B	*2*	*5.250*	*2.750*	*0.300*	*8.66*	*Cum*
	Section C-C	*2*	*0.500*	*2.570*	*0.300*	*0.77*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.559*	*1.270*	*0.300*	*1.36*	*Cum*
	Left Bank Sec a to d	*1*	*3.307*	*2.726*	*0.150*	*1.35*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.500*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.675*	*1.945*	*0.300*	*3.12*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.400*	*0.850*	*0.300*	*0.36*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.400*	*0.450*	*0.900*	*0.57*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*6*	*0.600*	*0.600*	*0.300*	*0.65*	*Cum*
	TOTAL					**22.22**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.70*	*0.82*	*0.50*	*1.39*	*Cum*
		2	*1.70*	*1.03*	*0.70*	*2.45*	*Cum*
		2	*1.70*	*1.24*	*1.20*	*5.06*	*Cum*
	Section B-B	*2*	*5.25*	*1.58*	*0.79*	*13.14*	*Cum*
		2	*5.25*	*2.35*	*2.55*	*62.87*	*Cum*
	Section C-C	*2*	*0.50*	*1.49*	*2.25*	*3.36*	*Cum*
		2	*0.50*	*2.17*	*1.20*	*2.60*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.56*	*0.45*	*0.50*	*0.80*	*Cum*
		1	*3.56*	*0.66*	*0.70*	*1.64*	*Cum*
		1	*3.56*	*0.87*	*1.20*	*3.72*	*Cum*
	Left Bank						
	Section a-a	*1*		*2.58*	*0.50*	*1.29*	*Sqm*
		1		*2.43*	*0.20*	*0.49*	*Sqm*
		1		*1.38*	*1.20*	*1.66*	*Sqm*
						3.43	***Sqm***
	Section b-b	*1*		*2.58*	*0.50*	*1.29*	*Sqm*
		1		*2.16*	*0.20*	*0.43*	*Sqm*
		1		*1.32*	*1.20*	*1.58*	*Sqm*
						3.31	***Sqm***
	Section c-c	*1*		*2.58*	*0.50*	*1.29*	*Sqm*
		1		*1.73*	*0.20*	*0.35*	*Sqm*
		1		*1.10*	*1.20*	*1.32*	*Sqm*
						2.96	***Sqm***
	Section d-d	*1*		*2.58*	*0.50*	*1.29*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.20*	*0.58*	*Sqm*
						1.96	***Sqm***
	Bottom Key	*1*	*3.31*	*1.35*	*0.70*	*3.13*	*Cum*
	Top Stem Area	*1*	*3.31*	*2.91*		*9.64*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*0.90*	*0.63*	*Cum*
		2	*0.50*	*0.53*	*2.38*	*1.25*	*Cum*
		2	*0.50*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.68*	*1.54*	*0.90*	*7.44*	*Cum*
		2	*2.68*	*1.12*	*2.38*	*14.21*	*Cum*
		2	*2.68*	*0.62*	*0.50*	*1.66*	*Cum*
	TOTAL					**135.17**	**Cum**
	Floor						
	U/S key	*1*	*1.35*	*2.52*	*0.70*	*2.39*	*Cum*
	Floor	*1*	*3.43*	*2.52*	*0.50*	*4.33*	*Cum*
		1	*0.42*	*1.40*	*0.30*	*0.18*	*Cum*
		1	*0.72*	*1.40*	*0.20*	*0.20*	*Cum*
		1	*0.42*	*1.40*	*0.30*	*0.18*	*Cum*
		1	*3.08*	*1.40*	*0.50*	*2.16*	*Cum*
		1	*0.90*	*1.40*	*0.20*	*0.25*	*Cum*
		1	*0.14*	*1.40*		*0.19*	*Cum*
		1	*0.53*	*1.40*	*0.30*	*0.22*	*Cum*
		1	*1.92*	*1.40*	*0.50*	*1.34*	*Cum*
	D/S key	*1*	*0.73*	*1.40*	*0.50*	*0.51*	*Cum*
	TOTAL					**147.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.55*	*2.52*	*0.20*	*1.79*	*Cum*
		1	*0.67*	*1.40*	*0.20*	*0.19*	*Cum*
		1	*3.08*	*1.40*	*0.20*	*0.86*	*Cum*
		1	*0.95*	*1.40*	*0.20*	*0.27*	*Cum*
		1	*1.92*	*1.40*	*0.20*	*0.54*	*Cum*
	Top Slab	*1*	*5.25*	*2.17*	*0.33*	*3.72*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.17*	*0.08*	*0.69*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*3.01*	*0.45*	*0.18*	*0.47*	*Cum*
		2	*3.01*	*0.35*	*0.25*	*0.53*	*Cum*
		2	*3.01*	*0.22*	*0.55*	*0.72*	*Cum*
	TOTAL					**16.45**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*2.660*	*29*		*1.578*	*121.738*	*Kg*
a2	*10*	*5.650*	*11*		*0.616*	*38.313*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.580*	*18*		*0.616*	*28.628*	*Kg*
a5	*10*	*5.550*	*8*		*0.616*	*27.371*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*36*		*0.888*	*79.925*	*Kg*
x2	*16*	*1.265*	*36*		*1.578*	*71.868*	*Kg*
x3	*10*	*2.100*	*24*		*0.616*	*31.070*	*Kg*
	Floor R/F						
	U/S Key						
	12	*6.955*	*6*		*0.888*	*37.044*	*Kg*
	12	*2.094*	*27*		*0.888*	*50.189*	*Kg*
	floor raft						
	12	*3.394*	*6*		*0.888*	*18.077*	*Kg*
	12	*8.119*	*12*		*0.888*	*86.487*	*Kg*
	12	*2.094*	*71*		*0.888*	*131.978*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*135.17*	*0.25%*	*0.34*	*7850*	*2652.62*	*Kg*
	TOTAL Weight of steel (in kg)					3553.57	Kg
	TOTAL Weight of Steel (in Tonne)					**3.55**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.21		**2.21**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.70*		*0.50*	*3.40*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.70*		*0.70*	*4.76*	*Sqm*
		4		*1.03*	*0.70*	*2.88*	*Sqm*
		4	*1.70*		*1.20*	*8.16*	*Sqm*
		4		*1.24*	*1.20*	*5.95*	*Sqm*
	Section B-B	*4*	*5.25*		*0.79*	*16.59*	*Sqm*
		4		*1.58*	*0.79*	*5.01*	*Sqm*
		4	*5.25*		*2.55*	*53.53*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		2.35	2.55	23.95	Sqm
	Section C-C	4	0.50		2.25	4.50	Sqm
		4		1.49	2.25	13.44	Sqm
		4	0.50		1.20	2.40	Sqm
		4		2.17	1.20	10.41	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.56		0.50	3.56	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.56		0.70	4.98	Sqm
		2		0.66	0.70	0.92	Sqm
		2	3.56		1.20	8.54	Sqm
		2		0.87	1.20	2.09	Sqm
	Left Bank						
	Bottom Key	2	3.31		0.70	4.63	Sqm
		2		1.35	0.70	1.89	Sqm
	Section a-a	2	1.10		0.50	1.10	Sqm
		2		2.58	0.50	2.58	Sqm
		2	1.10		0.20	0.44	Sqm
		2		2.43	0.20	0.97	Sqm
		2	1.10		1.20	2.65	Sqm
		2		1.38	1.20	3.31	Sqm
	Section b-b	2	1.10		0.50	1.10	Sqm
		2		2.58	0.50	2.58	Sqm
		2	1.10		0.20	0.44	Sqm
		2		2.16	0.20	0.86	Sqm
		2	1.10		1.20	2.65	Sqm
		2		1.32	1.20	3.17	Sqm
	Section c-c	2	1.10		0.50	1.10	Sqm
		2		2.58	0.50	2.58	Sqm
		2	1.10		0.20	0.44	Sqm
		2		1.73	0.20	0.69	Sqm
		2	1.10		1.20	2.65	Sqm
		2		1.10	1.20	2.65	Sqm
	Section d-d	2	1.10		0.50	1.10	Sqm
		2		2.58	0.50	2.58	Sqm
		2	1.10		0.20	0.44	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.10		1.20	2.65	Sqm
		2		0.48	1.20	1.15	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		0.90	1.80	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.50		2.38	4.75	Sqm
		4		0.53	2.38	4.99	Sqm
		4	0.50		0.50	1.00	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.68		0.90	9.63	Sqm
		4		1.54	0.90	5.56	Sqm
		4	2.68		2.38	25.43	Sqm
		4		1.12	2.38	10.62	Sqm
		4	2.68		0.50	5.35	Sqm
		4		0.62	0.50	1.24	Sqm
	Floor						
	U/S key	2	1.35		0.70	1.89	Sqm
		2		2.52	0.70	3.53	Sqm
	Floor	2	3.43		0.50	3.43	Sqm
		2		2.52	0.50	2.52	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.40	0.30	0.84	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.40	0.20	0.56	Sqm
		2	0.42			0.84	Sqm
		2		1.40		2.80	Sqm
		2	3.08		0.50	3.08	Sqm
		2		1.40	0.50	1.40	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.40	0.20	0.56	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.40*		*2.80*	*Sqm*
		2	*0.5275*		*0.3*	*0.32*	*Sqm*
		2		*1.4*	*0.30*	*0.84*	*Sqm*
		2	*1.92*		*0.50*	*1.92*	*Sqm*
		2		*1.40*	*0.50*	*1.40*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*1.40*	*0.50*	*1.40*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.40*		*0.30*	*0.84*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.40*		*0.90*	*2.52*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.17*	*0.33*	*1.42*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.01*		*0.18*	*2.11*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.01*		*0.25*	*3.01*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.01*		*0.55*	*6.62*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**375.39**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.13*		*9.37*	*Sqm*
	TOTAL					**9.37**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*0.80*	*2.16*	***Cum***
	TOTAL					**2.16**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.40*	*0.15*	*0.46*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.40*	*0.15*	*0.46*	*Cum*
	TOTAL					**0.92**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.80*	*0.48*		*1.73*	*Sqm*
	On Abutment Top	*2*	*5.43*	*0.45*		*1.62*	*Sqm*
	TOTAL					**3.35**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	4			**8.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.70*	*0.91*		*3.084*	*Cum*
	Section B-B	*2*	*5.25*	*4.24*		*44.552*	*Cum*
	Section C-C	*2*	*0.50*	*3.71*		*3.714*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.56*	*0.84*		*2.978*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*1.35*		*1.346*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.68*	*2.20*		*11.754*	*Cum*
	TOTAL					**67.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR THAKUR BIGHA MINOR OFFTAKING FROM RD-6+500 KM (RT.) AT KONCHI DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*1*	*1.78*	*1.67*	*2.815*	*8.344*	*Cum*
	Section B-B	*2*	*5.25*	*1.76*	*2.165*	*40.009*	*Cum*
	Section C-C	*1*	*0.50*	*1.58*	*2.065*	*1.631*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.40*	*1.30*	*2.815*	*12.442*	*Cum*
	Left Bank Sec a to d	1	3.43	2.80	2.100	*20.117*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.365*	*2.628*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.71*	*1.99*	*2.365*	*25.461*	*Cum*
	Floor						
	U/S key	*1*	*1.3875*	*3.112*	*0.850*	*3.670*	*Cum*
	Floor	*1*	*3.509*	*3.112*	*0.650*	*7.098*	*Cum*
		1	*0.418*	*1.800*	*0.450*	*0.339*	*Cum*
		1	*0.718*	*1.800*	*0.350*	*0.452*	*Cum*
		1	*0.418*	*1.800*	*0.300*	*0.752*	*Cum*
		1	*3.579*	*1.800*	*0.950*	*6.120*	*Cum*
		1	*0.9*	*1.800*	*0.200*	*0.324*	*Cum*
		1	*0.135*	*1.800*	*0.200*	*0.049*	*Cum*
		1	*1.492*	*1.800*	*0.650*	*1.746*	*Cum*
		1	*0.741*	*1.800*	*0.715*	*0.954*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.800*	*0.600*	*2.376*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.800*	*0.850*	*1.200*	*1.836*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*1.200*	*3.040*	*10.944*	*Cum*
						147.29	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*3.632*	*0.150*	*0.34*	*Cum*
		1	*1.723*	*1.800*	*0.150*	*0.47*	*Cum*
		1	*1.274*	*1.800*	*0.150*	*0.34*	*Cum*
		1	*0.670*	*1.800*	*0.150*	*0.18*	*Cum*
		1	*3.838*	*1.800*	*0.150*	*1.04*	*Cum*
		1	*0.948*	*1.800*	*0.150*	*0.26*	*Cum*
		1	*0.412*	*1.800*	*0.150*	*0.11*	*Cum*
		1	*0.631*	*1.800*	*0.150*	*0.17*	*Cum*
		1	*0.692*	*1.800*	*0.150*	*0.19*	*Cum*
	PCC Below Abutment						
	Section A-A	*1*	*1.775*	*1.670*	*0.300*	*0.89*	*Cum*
	Section B-B	*2*	*5.250*	*1.760*	*0.300*	*5.54*	*Cum*
	Section C-C	*1*	*0.500*	*1.580*	*0.300*	*0.24*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.400*	*1.300*	*0.300*	*1.33*	*Cum*
	Left Bank Sec a to d	*1*	*3.425*	*2.797*	*0.150*	*1.44*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.505*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.709*	*1.987*	*0.300*	*3.23*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.800*	*0.850*	*0.300*	*0.46*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.800*	*0.450*	*0.900*	*0.73*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*8*	*0.600*	*0.600*	*0.300*	*0.86*	*Cum*
	TOTAL					**19.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.78*	*0.82*	*0.50*	*1.46*	*Cum*
		2	*1.78*	*1.05*	*0.75*	*2.78*	*Cum*
		2	*1.78*	*1.27*	*1.27*	*5.70*	*Cum*
	Section B-B	*2*	*5.25*	*1.09*	*0.90*	*10.30*	*Cum*
		2	*5.25*	*1.36*	*0.97*	*13.78*	*Cum*
	Section C-C	*2*	*0.50*	*0.82*	*0.50*	*0.41*	*Cum*
		2	*0.50*	*1.00*	*0.60*	*0.60*	*Cum*
		2	*0.50*	*1.18*	*1.27*	*1.49*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.40*	*0.45*	*0.50*	*0.77*	*Cum*
		1	*3.40*	*0.68*	*0.75*	*1.72*	*Cum*
		1	*3.40*	*0.90*	*1.27*	*3.87*	*Cum*
	Left Bank						
	Section a-a	*1*		2.655	*0.50*	*1.33*	*Sqm*
		1		*2.51*	*0.20*	*0.50*	*Sqm*
		1		*1.42*	*1.25*	*1.77*	*Sqm*
						3.60	***Sqm***
	Section b-b	*1*		*2.66*	*0.50*	*1.33*	*Sqm*
		1		*2.22*	*0.20*	*0.44*	*Sqm*
		1		*1.35*	*1.25*	*1.69*	*Sqm*
						3.46	***Sqm***
	Section c-c	*1*		*2.66*	*0.50*	*1.33*	*Sqm*
		1		*1.76*	*0.20*	*0.35*	*Sqm*
		1		*1.12*	*1.25*	*1.40*	*Sqm*
						3.08	***Sqm***
	Section d-d	*1*		*2.66*	*0.50*	*1.33*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.25*	*0.60*	*Sqm*
						2.02	***Sqm***
	Bottom Key	*1*	*3.43*	*1.39*	*0.70*	*3.33*	*Cum*
	Top Stem Area	*1*	*3.43*	*3.04*		*10.41*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.97*	*0.68*	*Cum*
		2	*0.51*	*0.53*	*0.60*	*0.32*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.71*	*1.59*	*0.97*	*8.30*	*Cum*
		2	*2.71*	*1.26*	*0.60*	*4.09*	*Cum*
		2	*2.71*	*0.74*	*0.50*	*2.01*	*Cum*
	TOTAL					**72.20**	**Cum**
	Floor						
	U/S key	*1*	*1.39*	*3.11*	*0.70*	*3.02*	*Cum*
	Floor	*1*	*3.51*	*3.11*	*0.50*	*5.46*	*Cum*
		1	*0.42*	*1.80*	*0.30*	*0.23*	*Cum*
		1	*0.72*	*1.80*	*0.20*	*0.26*	*Cum*
		1	*0.42*	*1.80*	*0.30*	*0.23*	*Cum*
		1	*3.58*	*1.80*	*0.50*	*3.22*	*Cum*
		1	*0.90*	*1.80*	*0.20*	*0.32*	*Cum*
		1	*0.14*	*1.80*		*0.24*	*Cum*
		1	*0.53*	*1.80*	*0.30*	*0.28*	*Cum*
		1	*1.49*	*1.80*	*0.50*	*1.34*	*Cum*
	D/S key	*1*	*0.74*	*1.80*	*0.57*	*0.75*	*Cum*
	TOTAL					**87.56**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.63*	*3.11*	*0.20*	*2.26*	*Cum*
		1	*0.67*	*1.80*	*0.20*	*0.24*	*Cum*
		1	*3.58*	*1.80*	*0.20*	*1.29*	*Cum*
		1	*0.95*	*1.80*	*0.20*	*0.34*	*Cum*
		1	*1.49*	*1.80*	*0.20*	*0.54*	*Cum*
	Top Slab	*1*	*5.25*	*2.60*	*0.33*	*4.46*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.60*	*0.08*	*0.83*	*Cum*
	Dirt wall	*2*	*5.75*	*0.82*	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*3.44*	*0.45*	*0.18*	*0.54*	*Cum*
		2	*3.44*	*0.35*	*0.25*	*0.60*	*Cum*
		2	*3.44*	*0.22*	*0.55*	*0.83*	*Cum*
	TOTAL					**18.59**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.060*	*29*		*1.578*	*140.044*	*Kg*
a2	*10*	*5.650*	*13*		*0.616*	*45.279*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.980*	*9*		*0.616*	*16.533*	*Kg*
a5	*10*	*5.550*	*9*		*0.616*	*30.792*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*42*		*0.888*	*93.246*	*Kg*
x2	*16*	*1.265*	*42*		*1.578*	*83.847*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.098*	*7*		*0.888*	*44.106*	*Kg*
	12	*2.500*	*27*		*0.888*	*59.920*	*Kg*
	floor raft						
	12	*3.500*	*7*		*0.888*	*21.749*	*Kg*
	12	*8.195*	*14*		*0.888*	*101.846*	*Kg*
	12	*2.500*	*72*		*0.888*	*159.787*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*72.20*	*0.25%*	*0.18*	*7850*	*1416.91*	*Kg*
	TOTAL Weight of steel (in kg)					2434.49	Kg
	TOTAL Weight of Steel (in Tonne)					**2.43**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.56		**2.56**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.78*		*0.50*	*3.55*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.78*		*0.75*	*5.33*	*Sqm*
		4		*1.05*	*0.75*	*3.14*	*Sqm*
		4	*1.78*		*1.27*	*8.98*	*Sqm*
		4		*1.27*	*1.27*	*6.43*	*Sqm*
	Section B-B	*4*	*5.25*		*0.90*	*18.90*	*Sqm*
		4		*1.09*	*0.90*	*3.92*	*Sqm*
		4	*5.25*		*0.97*	*20.27*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.36	0.97	5.25	Sqm
	Section C-C	4	0.50		0.50	1.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	0.50		0.60	1.20	Sqm
		4		1.00	0.60	2.40	Sqm
		4	0.50		1.27	2.53	Sqm
		4		1.18	1.27	5.97	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.40		0.50	3.40	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.40		0.75	5.10	Sqm
		2		0.68	0.75	1.01	Sqm
		2	3.40		1.27	8.60	Sqm
		2		0.90	1.27	2.28	Sqm
	Left Bank						
	Bottom Key	2	3.43		0.70	4.80	Sqm
		2		1.39	0.70	1.94	Sqm
	Section a-a	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.51	0.20	1.00	Sqm
		2	1.14		1.25	2.85	Sqm
		2		1.42	1.25	3.54	Sqm
	Section b-b	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.22	0.20	0.89	Sqm
		2	1.14		1.25	2.85	Sqm
		2		1.35	1.25	3.37	Sqm
	Section c-c	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		1.76	0.20	0.70	Sqm
		2	1.14		1.25	2.85	Sqm
		2		1.12	1.25	2.79	Sqm
	Section d-d	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.14		1.25	2.85	Sqm
		2		0.48	1.25	1.20	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.97	1.95	Sqm
		4		0.70	0.97	2.70	Sqm
		4	0.51		0.60	1.21	Sqm
		4		0.53	0.60	1.26	Sqm
		4	0.51		0.50	1.01	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.71		0.97	10.46	Sqm
		4		1.59	0.97	6.13	Sqm
		4	2.71		0.60	6.50	Sqm
		4		1.26	0.60	3.02	Sqm
		4	2.71		0.50	5.42	Sqm
		4		0.74	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.39		0.70	1.94	Sqm
		2		3.11	0.70	4.36	Sqm
	Floor	2	3.51		0.50	3.51	Sqm
		2		3.11	0.50	3.11	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.80	0.30	1.08	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.80	0.20	0.72	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.80	0.30	1.08	Sqm
		2	3.58		0.50	3.58	Sqm
		2		1.80	0.50	1.80	Sqm
		2	0.90		0.20	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.80*	*0.20*	*0.72*	*Sqm*
		2	*0.14*			*0.27*	*Sqm*
		2		*1.80*		*3.60*	*Sqm*
		2	*0.5275*		*0.30*	*0.32*	*Sqm*
		2		*1.8*	*0.30*	*1.08*	*Sqm*
		2	*1.49*		*0.50*	*1.49*	*Sqm*
		2		*1.80*	*0.50*	*1.80*	*Sqm*
	D/S key	*2*	*0.74*		*0.57*	*0.84*	*Sqm*
		2		*1.80*	*0.57*	*2.03*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.80*		*0.30*	*1.08*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.80*		*0.90*	*3.24*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.60*	*0.33*	*1.70*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.44*		*0.18*	*2.41*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.44*		*0.25*	*3.44*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.44*		*0.55*	*7.57*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**287.08**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.22*		*9.76*	*Sqm*
	TOTAL					**9.76**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.20*	*3.04*	*10.94*	***Cum***
	TOTAL					**10.94**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.80*	*0.15*	*0.59*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.80*	*0.15*	*0.59*	*Cum*
	TOTAL					**1.19**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.87*	*0.48*		*1.80*	*Sqm*
	On Abutment Top	*2*	*5.17*	*0.45*		*1.69*	*Sqm*
	TOTAL					**3.49**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.78*	*0.98*		*3.475*	*Cum*
	Section B-B	*2*	*5.25*	*1.30*		*13.671*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section C-C	2	*0.50*	*1.08*		*1.083*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.40*	*1.00*		*3.389*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.69*		*0.700*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.71*	*1.15*		*6.244*	*Cum*
	TOTAL					**28.56**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF DADHPA SUB-DISTRIBUTARY OFFTAKING FROM RD-11+300 KM AT KONCHI DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.72*	*1.63*	*2.688*	*15.082*	*Cum*
	Section B-B	*2*	*5.25*	*1.72*	*2.040*	*36.928*	*Cum*
	Section C-C	*2*	*0.50*	*1.54*	*2.040*	*3.150*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.20*	*1.26*	*2.688*	*10.877*	*Cum*
	Left Bank Sec a to d	1	2.26	2.71	2.025	*12.422*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*2.240*	*2.464*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.67*	*1.94*	*2.240*	*23.140*	*Cum*
	Floor						
	U/S key	*1*	*1.341*	*3.2925*	*0.850*	*3.753*	*Cum*
	Floor	*1*	*3.416*	*3.2925*	*0.650*	*7.311*	*Cum*
		1	*0.418*	*2.000*	*0.450*	*0.376*	*Cum*
		1	*0.718*	*2.000*	*0.350*	*0.503*	*Cum*
		1	*0.418*	*2.000*	*0.300*	*0.836*	*Cum*
		1	*3.079*	*2.000*	*0.950*	*5.850*	*Cum*
		1	*0.900*	*2.000*	*0.200*	*0.360*	*Cum*
		1	*0.135*	*2.000*	*0.200*	*0.054*	*Cum*
		1	*1.935*	*2.000*	*0.650*	*2.516*	*Cum*
		1	*0.725*	*2.000*	*0.650*	*0.943*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.000*	*0.600*	*2.640*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.000*	*0.850*	*1.200*	*2.040*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*1.400*	*3.780*	*Cum*
						135.02	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*3.783*	*0.150*	*0.35*	*Cum*
		1	*1.639*	*2.491*	*0.150*	*0.61*	*Cum*
		1	*1.274*	*2.000*	*0.150*	*0.38*	*Cum*
		1	*0.670*	*2.000*	*0.150*	*0.20*	*Cum*
		1	*3.338*	*2.000*	*0.150*	*1.00*	*Cum*
		1	*0.948*	*2.000*	*0.150*	*0.28*	*Cum*
		1	*0.887*	*2.000*	*0.150*	*0.27*	*Cum*
		1	*0.559*	*2.000*	*0.150*	*0.17*	*Cum*
		1	*0.692*	*2.000*	*0.150*	*0.21*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.718*	*1.633*	*0.300*	*1.68*	*Cum*
	Section B-B	*2*	*5.250*	*1.724*	*0.300*	*5.43*	*Cum*
	Section C-C	*2*	*0.500*	*1.544*	*0.300*	*0.46*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.204*	*1.263*	*0.300*	*1.21*	*Cum*
	Left Bank Sec a to d	*1*	*2.261*	*2.713*	*0.150*	*0.92*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.500*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.668*	*1.936*	*0.300*	*3.10*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.000*	*0.850*	*0.300*	*0.51*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.000*	*0.450*	*0.900*	*0.81*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*8*	*0.600*	*0.600*	*0.300*	*0.86*	*Cum*
	TOTAL					**19.69**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.72*	*0.82*	*0.50*	*1.41*	*Cum*
		2	*1.72*	*1.03*	*0.69*	*2.43*	*Cum*
		2	*1.72*	*1.23*	*1.20*	*5.08*	*Cum*
	Section B-B	*2*	*5.25*	*1.07*	*0.84*	*9.46*	*Cum*
		2	*5.25*	*1.32*	*0.90*	*12.51*	*Cum*
	Section C-C	*2*	*0.50*	*0.98*	*0.54*	*0.53*	*Cum*
		2	*0.50*	*1.14*	*1.20*	*1.37*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.20*	*0.45*	*0.50*	*0.72*	*Cum*
		1	*3.20*	*0.66*	*0.69*	*1.45*	*Cum*
		1	*3.20*	*0.86*	*1.20*	*3.32*	*Cum*
	Left Bank						
	Section a-a	*1*		2.562	*0.50*	*1.28*	*Sqm*
		1		*2.41*	*0.20*	*0.48*	*Sqm*
		1		*1.37*	*1.18*	*1.61*	*Sqm*
						3.37	***Sqm***
	Section b-b	*1*		*2.56*	*0.50*	*1.28*	*Sqm*
		1		*2.13*	*0.20*	*0.43*	*Sqm*
		1		*1.30*	*1.18*	*1.53*	*Sqm*
						3.24	***Sqm***
	Section c-c	*1*		*2.56*	*0.50*	*1.28*	*Sqm*
		1		*1.66*	*0.20*	*0.33*	*Sqm*
		1		*1.07*	*1.18*	*1.26*	*Sqm*
						2.87	***Sqm***
	Section d-d	*1*		*2.56*	*0.50*	*1.28*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.18*	*0.56*	*Sqm*
						1.94	***Sqm***
	Bottom Key	*1*	*2.26*	*1.34*	*0.70*	*2.12*	*Cum*
	Top Stem Area	*1*	*2.26*	*2.86*		*6.46*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*0.90*	*0.63*	*Cum*
		2	*0.50*	*0.53*	*0.54*	*0.28*	*Cum*
		2	*0.50*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.67*	*1.54*	*0.90*	*7.38*	*Cum*
		2	*2.67*	*1.23*	*0.54*	*3.55*	*Cum*
		2	*2.67*	*0.74*	*0.50*	*1.98*	*Cum*
	TOTAL					**60.85**	**Cum**
	Floor						
	U/S key	*1*	*1.34*	*3.29*	*0.70*	*3.09*	*Cum*
	Floor	*1*	*3.42*	*3.29*	*0.50*	*5.62*	*Cum*
		1	*0.42*	*2.00*	*0.30*	*0.25*	*Cum*
		1	*0.72*	*2.00*	*0.20*	*0.29*	*Cum*
		1	*0.42*	*2.00*	*0.30*	*0.25*	*Cum*
		1	*3.08*	*2.00*	*0.50*	*3.08*	*Cum*
		1	*0.90*	*2.00*	*0.20*	*0.36*	*Cum*
		1	*0.14*	*2.00*		*0.27*	*Cum*
		1	*0.55*	*2.00*	*0.30*	*0.33*	*Cum*
		1	*1.94*	*2.00*	*0.50*	*1.94*	*Cum*
	D/S key	*1*	*0.73*	*2.00*	*0.50*	*0.73*	*Cum*
	TOTAL					**77.05**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.53*	*3.29*	*0.20*	*2.33*	*Cum*
		1	*0.67*	*2.00*	*0.20*	*0.27*	*Cum*
		1	*3.08*	*2.00*	*0.20*	*1.23*	*Cum*
		1	*0.95*	*2.00*	*0.20*	*0.38*	*Cum*
		1	*1.94*	*2.00*	*0.20*	*0.77*	*Cum*
	Top Slab	*1*	*5.25*	*2.80*	*0.33*	*4.80*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.80*	*0.08*	*0.89*	*Cum*
	Dirt wall	*2*	*5.75*	*0.82*	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*3.64*	*0.45*	*0.18*	*0.57*	*Cum*
		2	*3.64*	*0.35*	*0.25*	*0.64*	*Cum*
		2	*3.64*	*0.22*	*0.55*	*0.87*	*Cum*
	TOTAL					**19.42**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.260*	*29*		*1.578*	*149.197*	*Kg*
a2	*10*	*5.650*	*14*		*0.616*	*48.762*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.180*	*9*		*0.616*	*17.643*	*Kg*
a5	*10*	*5.550*	*11*		*0.616*	*37.635*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*42*		*0.888*	*93.246*	*Kg*
x2	*16*	*1.265*	*42*		*1.578*	*83.847*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	Floor R/F						
	U/S Key						
	12	*6.921*	*8*		*0.888*	*49.150*	*Kg*
	12	*2.700*	*26*		*0.888*	*62.317*	*Kg*
	floor raft						
	12	*3.394*	*8*		*0.888*	*24.103*	*Kg*
	12	*8.137*	*16*		*0.888*	*115.572*	*Kg*
	12	*2.700*	*71*		*0.888*	*170.173*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*60.85*	*0.25%*	*0.15*	*7850*	*1194.10*	*Kg*
	TOTAL Weight of steel (in kg)					2266.17	Kg
	TOTAL Weight of Steel (in Tonne)					**2.27**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.57		**2.57**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.72*		*0.50*	*3.44*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.72*		*0.69*	*4.73*	*Sqm*
		4		*1.03*	*0.69*	*2.82*	*Sqm*
		4	*1.72*		*1.20*	*8.25*	*Sqm*
		4		*1.23*	*1.20*	*5.92*	*Sqm*
	Section B-B	*4*	*5.25*		*0.84*	*17.64*	*Sqm*
		4		*1.07*	*0.84*	*3.60*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.32	0.90	4.77	Sqm
	Section C-C	4	0.50		0.54	1.08	Sqm
		4		0.98	0.54	2.12	Sqm
		4	0.50		1.20	2.40	Sqm
		4		1.14	1.20	5.49	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.20		0.50	3.20	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.20		0.69	4.41	Sqm
		2		0.66	0.69	0.90	Sqm
		2	3.20		1.20	7.69	Sqm
		2		0.86	1.20	2.07	Sqm
	Left Bank						
	Bottom Key	2	2.26		0.70	3.17	Sqm
		2		1.34	0.70	1.88	Sqm
	Section a-a	2	0.75		0.50	0.75	Sqm
		2		2.56	0.50	2.56	Sqm
		2	0.75		0.20	0.30	Sqm
		2		2.41	0.20	0.96	Sqm
		2	0.75		1.18	1.77	Sqm
		2		1.37	1.18	3.22	Sqm
	Section b-b	2	0.75		0.50	0.75	Sqm
		2		2.56	0.50	2.56	Sqm
		2	0.75		0.20	0.30	Sqm
		2		2.13	0.20	0.85	Sqm
		2	0.75		1.18	1.77	Sqm
		2		1.30	1.18	3.06	Sqm
	Section c-c	2	0.75		0.50	0.75	Sqm
		2		2.56	0.50	2.56	Sqm
		2	0.75		0.20	0.30	Sqm
		2		1.66	0.20	0.66	Sqm
		2	0.75		1.18	1.77	Sqm
		2		1.07	1.18	2.52	Sqm
	Section d-d	2	0.75		0.50	0.75	Sqm
		2		2.56	0.50	2.56	Sqm
		2	0.75		0.20	0.30	Sqm
		2		0.48	0.20	0.19	Sqm
		2	0.75		1.18	1.77	Sqm
		2		0.48	1.18	1.13	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		0.90	1.80	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.50		0.54	1.08	Sqm
		4		0.53	0.54	1.13	Sqm
		4	0.50		0.50	1.00	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.67		0.90	9.60	Sqm
		4		1.54	0.90	5.53	Sqm
		4	2.67		0.54	5.76	Sqm
		4		1.23	0.54	2.66	Sqm
		4	2.67		0.50	5.34	Sqm
		4		0.74	0.50	1.48	Sqm
	Floor						
	U/S key	2	1.34		0.70	1.88	Sqm
		2		3.29	0.70	4.61	Sqm
	Floor	2	3.42		0.50	3.42	Sqm
		2		3.29	0.50	3.29	Sqm
		2	0.42		0.30	0.25	Sqm
		2		2.00	0.30	1.20	Sqm
		2	0.72		0.20	0.29	Sqm
		2		2.00	0.20	0.80	Sqm
		2	0.42		0.30	0.25	Sqm
		2		2.00	0.30	1.20	Sqm
		2	3.08		0.50	3.08	Sqm
		2		2.00	0.50	2.00	Sqm
		2	0.90		0.20	0.36	Sqm
		2		2.00	0.20	0.80	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.00*		*4.00*	*Sqm*
		2	*0.55*		*0.30*	*0.33*	*Sqm*
		2		*2*	*0.30*	*1.20*	*Sqm*
		2	*1.94*		*0.50*	*1.94*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.00*		*0.30*	*1.20*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.00*		*0.90*	*3.60*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.80*	*0.33*	*1.83*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.64*		*0.18*	*2.55*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.64*		*0.25*	*3.64*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.64*		*0.55*	*8.01*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**265.52**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.11*		*9.29*	*Sqm*
	TOTAL					**9.29**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*1.40*	*3.78*	***Cum***
	TOTAL					**3.78**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.00*	*0.15*	*0.66*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.00*	*0.15*	*0.66*	*Cum*
	TOTAL					**1.32**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.78*	*0.48*		*1.71*	*Sqm*
	On Abutment Top	*2*	*5.44*	*0.45*		*1.60*	*Sqm*
	TOTAL					**3.31**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.72*	*0.90*		*3.079*	*Cum*
	Section B-B	*2*	*5.25*	*1.21*		*12.737*	*Cum*
	Section C-C	*2*	*0.50*	*0.99*		*0.992*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.20*	*0.83*		*2.647*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.65*		*0.650*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.67*	*1.09*		*5.806*	*Cum*
	TOTAL					**25.91**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE HR OF IGUNI MR OFFTAKING FROM RD- 15+150 KM KONCHI DY.						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.64*	*0.85*	*1.31*	*0.72*	*Cum*
	D/S Toe Wall Base	*1*	*0.88*	*0.85*	*1.31*	*0.99*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.45*	*0.60*	*1.15*	*1.00*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	*1*	*2.28*	*2.47*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.45*	*1*	*2.13*	*10.47*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*1.43*	*14.69*	*Cum*
	TOTAL					**30.34**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.64*	*0.85*	*0.30*	*0.16*	*Cum*
	U/S Toe Wall Stem	*1*	*0.64*	*0.45*	*1.01*	*0.29*	*Cum*
	D/S Toe Wall Base	*1*	*0.88*	*0.85*	*0.30*	*0.23*	*Cum*
	D/S Toe Wall Stem	*1*	*0.88*	*0.45*	*1.01*	*0.40*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.45*	*0.60*	*0.39*	*0.33*	*Cum*
	Floor Apron (D/S Portion)	*1*	*1.55*	*0.64*	*0.39*	*0.38*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	*1.00*	*0.30*	*0.32*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.45*	*1.00*	*0.30*	*1.47*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.30*	*3.08*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	Collar Joint	*3*	*1.37*	*0.30*	*1.14*	*1.41*	*Cum*
	Deduct Pipe Area	*3*	*0.28*		*0.30*	*-0.25*	*Cum*
	TOTAL					**9.62**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	*0.60*	*1.01*	*0.66*	*Cum*
		2	*0.54*	*0.45*	*0.47*	*0.23*	*Cum*
		2	*0.54*	*0.30*	*0.50*	*0.16*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.45*	*0.60*	*1.01*	*2.98*	*Cum*
		2	*2.45*	*0.45*	*0.32*	*0.71*	*Cum*
		2	*2.45*	*0.30*	*0.50*	*0.74*	*Cum*
	Section A-C	*2*	*2.45*	*1.27*	*1.01*	*6.32*	*Cum*
		2	*2.45*	*2.12*	*0.32*	*3.33*	*Cum*
		2	*2.45*	*1.33*	*0.50*	*3.26*	*Cum*
	Gate Abutment	*2*	*0.70*	*0.60*	*1.10*	*0.92*	*Cum*
	Deduct gate Groove	*2*	*0.20*	*0.10*	*1.10*	*-0.04*	*Cum*
	Parapet wall for earth filling Protection	*2*	*1.14*	*0.25*	*0.30*	*0.17*	*Cum*
	TOTAL					**19.45**	**Cum**
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Toe Wall Base	*2*	*0.64*		*0.30*	*0.39*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Toe Wall Stem	*2*	*0.64*		*1.01*	*1.30*	*Sqm*
		2		*0.45*	*1.01*	*0.91*	*Sqm*
	D/S Toe Wall Base	*2*	*0.88*		*0.30*	*0.53*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	D/S Toe Wall Stem	*2*	*0.88*		*1.01*	*1.79*	*Sqm*
		2		*0.45*	*1.01*	*0.91*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*1.45*		*0.39*	*1.12*	*Sqm*
		2		*0.60*	*0.39*	*0.46*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*1.55*		*0.39*	*1.19*	*Sqm*
		2		*0.64*	*0.39*	*0.49*	*Sqm*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*4*	*0.54*		*1.01*	*2.20*	*Sqm*
		4		*0.60*	*1.01*	*2.43*	*Sqm*
		4	*0.54*		*0.32*	*0.69*	*Sqm*
		4		*0.45*	*0.32*	*0.58*	*Sqm*
		4	*0.54*		*0.50*	*1.08*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*4*	*2.45*		*1.01*	*9.95*	*Sqm*
		4		*0.60*	*1.01*	*2.43*	*Sqm*
		4	*2.45*		*0.32*	*3.14*	*Sqm*
		4		*0.45*	*0.32*	*0.58*	*Sqm*
		4	*2.45*		*0.50*	*4.91*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Gate Abutment	*4*	*0.70*		*1.10*	*3.08*	*Sqm*
		4		*0.60*	*1.10*	*2.64*	*Sqm*
	Parapet wall for earth filling Protection	*4*	*1.14*		*0.30*	*1.37*	*Sqm*
		4		*0.25*	*0.30*	*0.30*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.30*	*4.50*	*Sqm*
		2		*1.37*	*0.30*	*0.82*	*Sqm*
	PCC Below Hume Pipe in (Curve Portion)	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	Collar Joint	*6*	*1.37*		*1.44*	*11.84*	*Sqm*
		6		*0.30*	*1.44*	*2.59*	*Sqm*
	TOTAL					**73.97**	**Sqm**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*19.45*	*0.25%*	*0.05*	*7850*	*381.72*	*Kg*
	TOTAL Weight of steel (in kg)					381.72	Kg
	TOTAL Weight of Steel (in Tonne)					**0.38**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*0.82*	*3.16*	*Kg*
		1	*0.000491*	*7850.00*	*0.23*	*0.87*	*Kg*
	800 X800 MM MS GATE	*1*		*40.19*		*40.19*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*	*9.56*		*0.40*	*7.65*	*Kg*
		2	*9.56*		*1.07*	*20.46*	*Kg*
	TOTAL (In Kg)					**72.32**	**Kg**
	TOTAL					**0.07**	**MT**
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
8	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)						
		1	10.055	1.37	0.075	*1.03*	**Cum**
	TOTAL					**1.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Toe Wall Base	1	0.64	0.27		0.176	*Cum*
	D/S Toe Wall Base	1	0.88	0.29		0.257	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.54*	0.62		0.669	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.45*	0.37		1.796	*Cum*
	Section A-C	*2*	*2.45*	0.73		3.591	*Cum*
	Above Hume Pipe	*1*	*1.14*	3.81		4.349	*Cum*
	TOTAL					**10.84**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE HR OF KONCHI MR OFFTAKING FROM RD- 16+460 KM KONCHI DY.						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.66*	*0.85*	*1.66*	*0.93*	*Cum*
	D/S Toe Wall Base	*1*	*0.88*	*0.85*	*1.66*	*1.25*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.46*	*0.60*	*1.15*	*1.00*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.58*	*1*	*2.63*	*3.04*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.45*	*1*	*2.48*	*12.17*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*1.43*	*14.69*	*Cum*
	TOTAL					**33.08**	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	U/S Toe Wall Base	*1*	*0.66*	*0.85*	*0.30*	*0.17*	*Cum*
	U/S Toe Wall Stem	*1*	*0.66*	*0.45*	*1.36*	*0.40*	*Cum*
	D/S Toe Wall Base	*1*	*0.88*	*0.85*	*0.30*	*0.23*	*Cum*
	D/S Toe Wall Stem	*1*	*0.88*	*0.45*	*1.36*	*0.54*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.46*	*0.60*	*0.39*	*0.34*	*Cum*
	Floor Apron (D/S Portion)	*1*	*1.55*	*0.64*	*0.39*	*0.38*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section C-D	*2*	*2.45*	*1.00*	*0.30*	*1.47*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*0.30*	*3.08*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.51*	*0.24*	*1.79*	*Cum*
	Collar Joint	*3*	*1.37*	*0.30*	*1.14*	*1.41*	*Cum*
	Deduct Pipe Area	*3*	*0.28*		*0.30*	*-0.25*	*Cum*
	TOTAL					**9.89**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.58*	*0.60*	*1.36*	*0.94*	*Cum*
		2	*0.58*	*0.45*	*0.47*	*0.24*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.45*	*0.60*	*1.36*	*4.00*	*Cum*
		2	*2.45*	*0.45*	*0.32*	*0.71*	*Cum*
		2	*2.45*	*0.30*	*0.50*	*0.74*	*Cum*
	Section A-C	*2*	*2.45*	*1.27*	*1.36*	*8.45*	*Cum*
		2	*2.45*	*2.12*	*0.32*	*3.33*	*Cum*
		2	*2.45*	*1.33*	*0.50*	*3.26*	*Cum*
	Gate Abutment	*2*	*0.70*	*0.60*	*1.10*	*0.92*	*Cum*
	Deduct gate Groove	*2*	*0.20*	*0.10*	*1.10*	*-0.04*	*Cum*
	Parapet wall for earth filling Protection	*2*	*1.14*	*0.25*	*0.30*	*0.17*	*Cum*
	TOTAL					**22.89**	**Cum**
4	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Toe Wall Base	*2*	*0.66*		*0.30*	*0.39*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Toe Wall Stem	*2*	*0.66*		*1.36*	*1.79*	*Sqm*
		2		*0.45*	*1.36*	*1.22*	*Sqm*
	D/S Toe Wall Base	*2*	*0.88*		*0.30*	*0.53*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	D/S Toe Wall Stem	*2*	*0.88*		*1.36*	*2.40*	*Sqm*
		2		*0.45*	*1.36*	*1.22*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*1.46*		*0.39*	*1.12*	*Sqm*
		2		*0.60*	*0.39*	*0.46*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*1.55*		*0.39*	*1.19*	*Sqm*
		2		*0.64*	*0.39*	*0.49*	*Sqm*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*4*	*0.58*		*1.36*	*3.14*	*Sqm*
		4		*0.60*	*1.36*	*3.26*	*Sqm*
		4	*0.58*		*0.32*	*0.74*	*Sqm*
		4		*0.45*	*0.32*	*0.58*	*Sqm*
		4	*0.58*		*0.50*	*1.16*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*4*	*2.45*		*1.36*	*13.34*	*Sqm*
		4		*0.60*	*1.36*	*3.26*	*Sqm*
		4	*2.45*		*0.32*	*3.14*	*Sqm*
		4		*0.45*	*0.32*	*0.58*	*Sqm*
		4	*2.45*		*0.50*	*4.91*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Gate Abutment	*4*	*0.70*		*1.10*	*3.08*	*Sqm*
		4		*0.60*	*1.10*	*2.64*	*Sqm*
	Parapet wall for earth filling Protection	*4*	*1.14*		*0.30*	*1.37*	*Sqm*
		4		*0.25*	*0.30*	*0.30*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.30*	*4.50*	*Sqm*
		2		*1.37*	*0.30*	*0.82*	*Sqm*
	PCC Below Hume Pipe in (Curve Portion)	*4*	*7.50*		*0.24*	*7.05*	*Sqm*
		4		*0.51*	*0.24*	*0.48*	*Sqm*
	Collar Joint	*6*	*1.37*		*1.44*	*11.84*	*Sqm*
		6		*0.30*	*1.44*	*2.59*	*Sqm*
	TOTAL					**81.83**	**Sqm**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*22.89*	*0.25%*	*0.06*	*7850*	*449.25*	*Kg*
	TOTAL Weight of steel (in kg)					449.25	Kg
	TOTAL Weight of Steel (in Tonne)					**0.45**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*0.82*	*3.16*	*Kg*
		1	*0.000491*	*7850.00*	*0.23*	*0.87*	*Kg*
	800 X800 MM MS GATE	*1*		*40.19*		*40.19*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*	*9.56*		*0.40*	*7.65*	*Kg*
		2	*9.56*		*1.07*	*20.46*	*Kg*
	TOTAL (In Kg)					**72.32**	**Kg**
	TOTAL					**0.07**	**MT**
7	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	3	2.50			7.5	Rm
	TOTAL					**7.50**	**Rm**
8	Providing compacted 75 mm thick sand filter of required F.M. as per design on slopes and in bed of canal with local sand inclusing cost of water, ramming, levelling and dressing, etc. all complete as per specification and direction of E/I. (5.2.1)						
		1	10.055	1.37	0.075	*1.03*	**Cum**
	TOTAL					**1.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Toe Wall Base	1	0.66	0.44		0.288	*Cum*
	D/S Toe Wall Base	1	0.88	0.36		0.317	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.58*	0.69		0.793	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*2.45*	0.44		2.134	*Cum*
	Section A-C	*2*	*2.45*	0.87		4.275	*Cum*
	Above Hume Pipe	*1*	*1.14*	3.81		4.349	*Cum*
	TOTAL					**12.16**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF GURARU SUB DISTRIBUTARY OFFTAKING FROM RD-16+700 KM AT KONCHI DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.82*	*1.81*	*3.051*	*20.079*	*Cum*
	Section B-B	*2*	*5.25*	*1.81*	*2.251*	*42.733*	*Cum*
	Section C-C	*2*	*0.50*	*1.63*	*2.251*	*3.665*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.57*	*1.44*	*3.051*	*15.680*	*Cum*
	Left Bank Sec a to d	1	3.35	3.03	2.330	*23.702*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.451*	*2.761*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.77*	*2.06*	*2.451*	*27.867*	*Cum*
	Floor						
	U/S key	*1*	*1.515*	*3.0515*	*0.850*	*3.930*	*Cum*
	Floor	*1*	*3.764*	*3.0515*	*0.650*	*7.466*	*Cum*
		1	*0.418*	*2.000*	*0.450*	*0.376*	*Cum*
		1	*0.718*	*2.000*	*0.350*	*0.503*	*Cum*
		1	*0.418*	*2.000*	*0.300*	*0.836*	*Cum*
		1	*3.579*	*2.000*	*0.950*	*6.800*	*Cum*
		1	*0.900*	*2.000*	*0.200*	*0.360*	*Cum*
		1	*0.135*	*2.000*	*0.200*	*0.054*	*Cum*
		1	*1.537*	*2.000*	*0.650*	*1.998*	*Cum*
		1	*0.743*	*2.000*	*0.721*	*1.071*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.000*	*0.600*	*2.640*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.000*	*0.850*	*1.200*	*2.040*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*1.400*	*3.780*	*Cum*
						168.34	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.629*	*4.083*	*0.150*	*0.39*	*Cum*
		1	*1.959*	*2.854*	*0.150*	*0.84*	*Cum*
		1	*1.274*	*2.000*	*0.150*	*0.38*	*Cum*
		1	*0.670*	*2.000*	*0.150*	*0.20*	*Cum*
		1	*3.838*	*2.000*	*0.150*	*1.15*	*Cum*
		1	*0.948*	*2.000*	*0.150*	*0.28*	*Cum*
		1	*0.454*	*2.000*	*0.150*	*0.14*	*Cum*
		1	*0.638*	*2.000*	*0.150*	*0.19*	*Cum*
		1	*0.692*	*2.000*	*0.150*	*0.21*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.820*	*1.808*	*0.300*	*1.97*	*Cum*
	Section B-B	*2*	*5.250*	*1.808*	*0.300*	*5.70*	*Cum*
	Section C-C	*2*	*0.500*	*1.628*	*0.300*	*0.49*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.574*	*1.438*	*0.300*	*1.54*	*Cum*
	Left Bank Sec a to d	*1*	*3.354*	*3.033*	*0.150*	*1.53*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.512*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.765*	*2.056*	*0.300*	*3.41*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.000*	*0.850*	*0.300*	*0.51*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.000*	*0.450*	*0.900*	*0.81*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*8*	*0.600*	*0.600*	*0.300*	*0.86*	*Cum*
	TOTAL					**21.83**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.82*	*0.82*	*0.50*	*1.49*	*Cum*
		2	*1.82*	*1.11*	*0.98*	*3.97*	*Cum*
		2	*1.82*	*1.41*	*1.27*	*6.51*	*Cum*
	Section B-B	*2*	*5.25*	*1.11*	*0.98*	*11.46*	*Cum*
		2	*5.25*	*1.41*	*0.97*	*14.36*	*Cum*
	Section C-C	*2*	*0.50*	*1.02*	*0.68*	*0.70*	*Cum*
		2	*0.50*	*1.23*	*1.27*	*1.56*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.57*	*0.45*	*0.50*	*0.80*	*Cum*
		1	*3.57*	*0.74*	*0.98*	*2.61*	*Cum*
		1	*3.57*	*1.04*	*1.27*	*4.72*	*Cum*
	Left Bank						
	Section a-a	*1*		2.91	*0.50*	*1.46*	*Sqm*
		1		*2.31*	*0.46*	*1.06*	*Sqm*
		1		*1.40*	*1.22*	*1.70*	*Sqm*
						4.22	***Sqm***
	Section b-b	*1*		*2.91*	*0.50*	*1.46*	*Sqm*
		1		*2.19*	*0.20*	*0.44*	*Sqm*
		1		*1.33*	*1.48*	*1.97*	*Sqm*
						3.86	***Sqm***
	Section c-c	*1*		*2.91*	*0.50*	*1.46*	*Sqm*
		1		*1.74*	*0.46*	*0.80*	*Sqm*
		1		*1.11*	*1.48*	*1.64*	*Sqm*
						3.89	***Sqm***
	Section d-d	*1*		*2.91*	*0.50*	*1.46*	*Sqm*
		1		*0.48*	*0.46*	*0.22*	*Sqm*
		1		*0.48*	*1.48*	*0.71*	*Sqm*
						2.39	***Sqm***
	Bottom Key	*1*	*3.35*	*1.52*	*0.70*	*3.56*	*Cum*
	Top Stem Area	*1*	*3.35*	*3.59*		*12.04*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.97*	*0.70*	*Cum*
		2	*0.51*	*0.53*	*0.68*	*0.37*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.77*	*1.66*	*0.97*	*8.89*	*Cum*
		2	*2.77*	*1.30*	*0.68*	*4.87*	*Cum*
		2	*2.77*	*0.75*	*0.50*	*2.07*	*Cum*
	TOTAL					**80.86**	**Cum**
	Floor						
	U/S key	*1*	*1.52*	*3.05*	*0.70*	*3.24*	*Cum*
	Floor	*1*	*3.76*	*3.05*	*0.50*	*5.74*	*Cum*
		1	*0.42*	*2.00*	*0.30*	*0.25*	*Cum*
		1	*0.72*	*2.00*	*0.20*	*0.29*	*Cum*
		1	*0.42*	*2.00*	*0.30*	*0.84*	*Cum*
		1	*3.58*	*2.00*	*0.50*	*3.58*	*Cum*
		1	*0.90*	*2.00*	*0.20*	*0.36*	*Cum*
		1	*0.14*	*2.00*		*0.27*	*Cum*
		1	*0.53*	*2.00*	*0.30*	*1.06*	*Cum*
		1	*1.54*	*2.00*	*0.50*	*1.54*	*Cum*
	D/S key	*1*	*0.74*	*2.00*	*0.57*	*0.85*	*Cum*
	TOTAL					**98.86**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.88*	*3.05*	*0.20*	*2.37*	*Cum*
		1	*0.67*	*2.00*	*0.20*	*0.27*	*Cum*
		1	*3.58*	*2.00*	*0.20*	*1.43*	*Cum*
		1	*0.95*	*2.00*	*0.20*	*0.38*	*Cum*
		1	*1.54*	*2.00*	*0.20*	*0.61*	*Cum*
	Top Slab	*1*	*5.25*	*2.80*	*0.33*	*4.80*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.80*	*0.08*	*0.89*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*3.64*	*0.45*	*0.18*	*0.57*	*Cum*
		2	*3.64*	*0.35*	*0.25*	*0.64*	*Cum*
		2	*3.64*	*0.22*	*0.55*	*0.87*	*Cum*
	TOTAL					**19.51**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.260*	*29*		*1.578*	*149.197*	*Kg*
a2	*10*	*5.650*	*14*		*0.616*	*48.762*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.180*	*9*		*0.616*	*17.643*	*Kg*
a5	*10*	*5.550*	*11*		*0.616*	*37.635*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*42*		*0.888*	*93.246*	*Kg*
x2	*16*	*1.265*	*42*		*1.578*	*83.847*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.059*	*8*		*0.888*	*50.130*	*Kg*
	12	*2.700*	*29*		*0.888*	*69.507*	*Kg*
	floor raft						
	12	*3.394*	*8*		*0.888*	*24.103*	*Kg*
	12	*8.239*	*16*		*0.888*	*117.021*	*Kg*
	12	*2.700*	*71*		*0.888*	*170.173*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*80.86*	*0.25%*	*0.20*	*7850*	*1586.80*	*Kg*
	TOTAL Weight of steel (in kg)					2668.49	Kg
	TOTAL Weight of Steel (in Tonne)					**2.67**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		3.17		**3.17**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.82*		*0.50*	*3.64*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.82*		*0.98*	*7.13*	*Sqm*
		4		*1.11*	*0.98*	*4.37*	*Sqm*
		4	*1.82*		*1.27*	*9.25*	*Sqm*
		4		*1.41*	*1.27*	*7.16*	*Sqm*
	Section B-B	*4*	*5.25*		*0.98*	*20.58*	*Sqm*
		4		*1.11*	*0.98*	*4.37*	*Sqm*
		4	*5.25*		*0.97*	*20.39*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.41	0.97	5.47	Sqm
	Section C-C	4	0.50		0.68	1.36	Sqm
		4		1.02	0.68	2.79	Sqm
		4	0.50		1.27	2.54	Sqm
		4		1.23	1.27	6.24	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.57		0.50	3.57	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.57		0.98	7.01	Sqm
		2		0.74	0.98	1.46	Sqm
		2	3.57		1.27	9.09	Sqm
		2		1.04	1.27	2.64	Sqm
	Left Bank						
	Bottom Key	2	3.35		0.70	4.70	Sqm
		2		1.52	0.70	2.12	Sqm
	Section a-a	2	1.12		0.50	1.12	Sqm
		2		2.91	0.50	2.91	Sqm
		2	1.12		0.46	1.03	Sqm
		2		2.31	0.46	2.13	Sqm
		2	1.12		1.22	2.73	Sqm
		2		1.40	1.22	3.40	Sqm
	Section b-b	2	1.12		0.50	1.12	Sqm
		2		2.91	0.50	2.91	Sqm
		2	1.12		0.20	0.45	Sqm
		2		2.19	0.20	0.87	Sqm
		2	1.12		1.48	3.31	Sqm
		2		1.33	1.48	3.94	Sqm
	Section c-c	2	1.12		0.50	1.12	Sqm
		2		2.91	0.50	2.91	Sqm
		2	1.12		0.46	1.03	Sqm
		2		1.74	0.46	1.60	Sqm
		2	1.12		1.48	3.31	Sqm
		2		1.11	1.48	3.28	Sqm
	Section d-d	2	1.12		0.50	1.12	Sqm
		2		2.91	0.50	2.91	Sqm
		2	1.12		0.46	1.03	Sqm
		2		0.48	0.46	0.44	Sqm
		2	1.12		1.48	3.31	Sqm
		2		0.48	1.48	1.42	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.97	1.99	Sqm
		4		0.70	0.97	2.72	Sqm
		4	0.51		0.68	1.39	Sqm
		4		0.53	0.68	1.43	Sqm
		4	0.51		0.50	1.02	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.77		0.97	10.74	Sqm
		4		1.66	0.97	6.43	Sqm
		4	2.77		0.68	7.52	Sqm
		4		1.30	0.68	3.52	Sqm
		4	2.77		0.50	5.53	Sqm
		4		0.75	0.50	1.50	Sqm
	Floor						
	U/S key	2	1.52		0.70	2.12	Sqm
		2		3.05	0.70	4.27	Sqm
	Floor	2	3.76		0.50	3.76	Sqm
		2		3.05	0.50	3.05	Sqm
		2	0.42		0.30	0.25	Sqm
		2		2.00	0.30	1.20	Sqm
		2	0.72		0.20	0.29	Sqm
		2		2.00	0.20	0.80	Sqm
		2	0.42		0.30	0.25	Sqm
		2		2.00	0.30	1.20	Sqm
		2	3.58		0.50	3.58	Sqm
		2		2.00	0.50	2.00	Sqm
		2	0.90		0.20	0.36	Sqm
		2		2.00	0.20	0.80	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.00*		*4.00*	*Sqm*
		2	*0.53*		*0.30*	*0.32*	*Sqm*
		2		*2*	*0.30*	*1.20*	*Sqm*
		2	*1.54*		*0.50*	*1.54*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
	D/S key	*2*	*0.74*		*0.57*	*0.85*	*Sqm*
		2		*2.00*	*0.57*	*2.28*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.00*		*0.30*	*1.20*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.00*		*0.90*	*3.60*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.80*	*0.33*	*1.83*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.64*		*0.18*	*2.55*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.64*		*0.25*	*3.64*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.64*		*0.55*	*8.01*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**308.54**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.36*		*10.40*	*Sqm*
	TOTAL					**10.40**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*1.40*	*3.78*	***Cum***
	TOTAL					**3.78**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.00*	*0.15*	*0.66*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.00*	*0.15*	*0.66*	*Cum*
	TOTAL					**1.32**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.83*	*0.48*		*1.76*	*Sqm*
	On Abutment Top	*2*	*5.65*	*0.45*		*1.65*	*Sqm*
	TOTAL					**3.40**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.82*	*1.22*		*4.427*	*Cum*
	Section B-B	*2*	*5.25*	*1.41*		*14.795*	*Cum*
	Section C-C	*2*	*0.50*	*1.18*		*1.177*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.57*	*1.13*		*4.046*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.72*		*0.741*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.77*	*0.82*		*4.540*	*Cum*
	TOTAL					**29.73**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR FALL OF MISHRICHAK MINOR

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	3.213	1.828 M Fall	₹ 20,72,514.67
2	7.075	0.457 M Fall	₹ 14,24,568.20
3	13.777	1.828 M Fall	₹ 25,25,418.28
4	16.700	0.610 M Fall	₹ 7,72,472.00
5	17.600	1.524 M Fall	₹ 16,15,714.88
6	18.200	0.610 M Fall	₹ 5,21,769.51
7	18.895	1.220 M Fall	₹ 4,00,156.02
		Sub-Total	₹ 93,32,613.55
		Seigniorage charges	₹ 81,623.63
		Total (in Rs. Lakhs)	**₹ 94.14**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KONCHI DY.								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.3.213 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	289.107	Cum	**195.20**	56433.74			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.68	Cum	**6381.70**	100046.56	5.08	7.05	14.11
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	151.52	Cum	**6914.20**	1047635.52	62.50	65.15	130.31
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.32	Cum	**8151.40**	10773.79	0.75	0.52	1.04
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	3.57	MT	**73574.90**	262536.00			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	382.20	Sqm	**578.60**	221138.05			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	17.71	Sqm	**680.10**	12043.89			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.27	Cum	**694.61**	187.54			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.27	Cum	**1237.00**	333.99			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.27	Cum	**1377.70**	371.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.27	Cum	**516.50**	139.46			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	21.63	Sqm	**63.20**	1367.28			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	65.37	Cum	**149.30**	9759.26			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	72.724	Cum	**1075.00**	78177.77			
	Coarse Aggregates (100 Km lead)	145.460	Cum	**1398.00**	203353.41			
	Cement (30 km lead)	68.331	MT	**742.00**	50701.27			
	Boulder (60 Km lead)	0.27	Cum	**1159.00**	312.93			
	Brick (15 km lead)	1062.00	No.	**3.18**	3377.16			
	Steel (30 Km lead)	3.57	MT	**742.00**	2647.67			
	TOTAL (In Rs.)				**2072514.67**			
	TOTAL (In Rs.)				**2072514.67**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	72.72	Cum	**584.64**	42517.07	4251.71		
	Coarse Aggregate	145.46	Cum	**944.26**	137352.28	13735.23		
	Boulders	0.27	Cum	**694.61**	187.54	18.75		
	Total					18005.69		
	For 1 nos. fall, Total Seigniorage charges					**18005.69**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.7.075 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	106.293	Cum	**195.20**	20748.48			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	22.22	Cum	**6381.70**	141815.39	7.20	10.00	20.00
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	94.00	Cum	**6914.20**	649967.76	38.78	40.42	80.84
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.36	Cum	**8151.40**	11068.95	0.77	0.53	1.07
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	2.21	MT	**73574.90**	162881.01			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	245.11	Sqm	**578.60**	141822.69			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	33.18	Sqm	**680.10**	22563.00			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.80	Cum	**694.61**	2641.25			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.80	Cum	**1237.00**	4703.69			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	3.80	Cum	**1377.70**	5238.70			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	3.80	Cum	**516.50**	1963.99			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.46	Sqm	**63.20**	976.97			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	17.96	Cum	**149.30**	2682.04			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	50.952	Cum	**1075.00**	54773.00			
	Coarse Aggregates (100 Km lead)	101.917	Cum	**1398.00**	142479.73			
	Cement (30 km lead)	46.747	MT	**742.00**	34686.20			
	Boulder (60 Km lead)	3.80	Cum	**1159.00**	4407.10			
	Brick (15 km lead)	1990.00	No.	**3.18**	6328.20			
	Steel (30 Km lead)	2.21	MT	**742.00**	1642.65			
	TOTAL (In Rs.)				**1424568.20**			
	TOTAL (In Rs.)				**1424568.20**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	50.95	Cum	**584.64**	29788.36	2978.84		
	Coarse Aggregate	101.92	Cum	**944.26**	96235.99	9623.60		
	Boulders	3.80	Cum	**694.61**	2641.25	264.13		
	Total					12866.56		
	For 1 nos. fall, Total Seigniorage charges					**12866.56**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.13.777 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	266.640	Cum	**195.20**	52048.18			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	25.73	Cum	**6381.70**	164179.37	8.34	11.58	23.15
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	181.20	Cum	**6914.20**	1252860.60	74.75	77.92	155.83
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.60	Cum	**8151.40**	13019.09	0.91	0.62	1.26
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	4.27	MT	**73574.90**	313965.12			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	429.33	Sqm	**578.60**	248409.49			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	23.89	Sqm	**680.10**	16248.95			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.64	Cum	**694.61**	1833.77			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.64	Cum	**1237.00**	3265.68			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.64	Cum	**1377.70**	3637.13			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.64	Cum	**516.50**	1363.56			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.50	Sqm	**63.20**	1106.20			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	61.37	Cum	**149.30**	9162.73			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	90.116	Cum	**1075.00**	96875.05			
	Coarse Aggregates (100 Km lead)	180.249	Cum	**1398.00**	251987.58			
	Cement (30 km lead)	83.986	MT	**742.00**	62317.95			
	Boulder (60 Km lead)	2.64	Cum	**1159.00**	3059.76			
	Brick (15 km lead)	1433.00	No.	**3.18**	4556.94			
	Steel (30 Km lead)	4.27	MT	**742.00**	3166.33			
	TOTAL (In Rs.)				**2525418.28**			
	TOTAL (In Rs.)				**2525418.28**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	90.12	Cum	**584.64**	52685.61	5268.56		
	Coarse Aggregate	180.25	Cum	**944.26**	170201.57	17020.16		
	Boulders	2.64	Cum	**694.61**	1833.77	183.38		
	Total					22472.09		
	For 1 nos. fall, Total Seigniorage charges					**22472.09**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.16.700 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	66.615	Cum	**195.20**	13003.22			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.12	Cum	**6381.70**	70986.66	3.60	5.01	10.01
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	46.63	Cum	**6914.20**	322390.68	19.23	20.05	40.10
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.78	Cum	**8151.40**	6380.71	0.44	0.31	0.62
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.10	MT	**73574.90**	80790.66			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	166.60	Sqm	**578.60**	96395.26			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.15	Sqm	**680.10**	6224.96			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	7.64	Cum	**694.61**	5307.75			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	7.64	Cum	**1237.00**	9452.33			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.87	Cum	**1377.70**	6708.33			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.87	Cum	**516.50**	2514.95			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.15	Sqm	**63.20**	767.60			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	15.54	Cum	**149.30**	2320.43			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	25.361	Cum	**1075.00**	27262.64			
	Coarse Aggregates (100 Km lead)	50.729	Cum	**1398.00**	70919.17			
	Cement (30 km lead)	23.282	MT	**742.00**	17274.96			
	Boulder (60 Km lead)	7.64	Cum	**1159.00**	8856.31			
	Brick (15 km lead)	549.00	No.	**3.18**	1745.82			
	Steel (30 Km lead)	1.10	MT	**742.00**	814.77			
	TOTAL (In Rs.)				**772472.00**			
	TOTAL (In Rs.)				**772472.00**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.36	Cum	**584.64**	14826.82	1482.68		
	Coarse Aggregate	50.73	Cum	**944.26**	47901.38	4790.14		
	Boulders	7.64	Cum	**694.61**	5307.75	530.77		
	Total					6803.60		
	For 1 nos. fall, Total Seigniorage charges					**6803.60**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.17.600 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	226.097	Cum	**195.20**	44134.23			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.54	Cum	**6381.70**	92778.68	4.71	6.54	13.08
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	105.52	Cum	**6914.20**	729580.79	43.53	45.37	90.75
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	8.94	Cum	**8151.40**	72903.64	5.07	3.49	7.07
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	2.85	MT	**73574.90**	209347.10			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	292.82	Sqm	**578.60**	169427.88			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.15	Sqm	**680.10**	6224.96			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.27	Cum	**694.61**	187.54			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.27	Cum	**1237.00**	333.99			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.27	Cum	**1377.70**	371.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.27	Cum	**516.50**	139.46			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.51	Sqm	**63.20**	601.28			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	60.36	Cum	**149.30**	9011.94			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	55.404	Cum	**1075.00**	59558.76			
	Coarse Aggregates (100 Km lead)	110.896	Cum	**1398.00**	155033.22			
	Cement (30 km lead)	53.308	MT	**742.00**	39554.63			
	Boulder (60 Km lead)	0.27	Cum	**1159.00**	312.93			
	Brick (15 km lead)	549.00	No.	**3.18**	1745.82			
	Steel (30 Km lead)	2.85	MT	**742.00**	2111.26			
	TOTAL (In Rs.)				**1615714.88**			
	TOTAL (In Rs.)				**1615714.88**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	55.40	Cum	**584.64**	32391.10	3239.11		
	Coarse Aggregate	110.90	Cum	**944.26**	104715.07	10471.51		
	Boulders	0.27	Cum	**694.61**	187.54	18.75		
	Total					13729.37		
	For 1 nos. fall, Total Seigniorage charges					**13729.37**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.18.200 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	42.924	Cum	**195.20**	8378.67			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.83	Cum	**6381.70**	56327.51	2.86	3.97	7.94
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	32.69	Cum	**6914.20**	225991.25	13.48	14.05	28.11
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.44	Cum	**8151.40**	3626.19	0.25	0.17	0.35
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.77	MT	**73574.90**	56633.09			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	117.51	Sqm	**578.60**	67990.76			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	6.68	Sqm	**680.10**	4539.67			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.09	Cum	**694.61**	65.12			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.09	Cum	**1237.00**	115.97			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.09	Cum	**1377.70**	129.16			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.09	Cum	**516.50**	48.42			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.86	Sqm	**63.20**	433.37			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	10.65	Cum	**149.30**	1589.66			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	18.200	Cum	**1075.00**	19564.96			
	Coarse Aggregates (100 Km lead)	36.404	Cum	**1398.00**	50893.33			
	Cement (30 km lead)	16.595	MT	**742.00**	12313.19			
	Boulder (60 Km lead)	0.09	Cum	**1159.00**	108.66			
	Brick (15 km lead)	400.00	No.	**3.18**	1272.00			
	Steel (30 Km lead)	0.77	MT	**742.00**	571.14			
	TOTAL (In Rs.)				**521769.51**			
	TOTAL (In Rs.)				**521769.51**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	18.20	Cum	**584.64**	10640.43	1064.04		
	Coarse Aggregate	36.40	Cum	**944.26**	34375.20	3437.52		
	Boulders	0.09	Cum	**694.61**	65.12	6.51		
	Total					4508.08		
	For 1 nos. fall, Total Seigniorage charges					**4508.08**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.18.895 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	49.366	Cum	**195.20**	9636.23			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	4.09	Cum	**6381.70**	26125.41	1.33	1.84	3.68
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	25.73	Cum	**6914.20**	177892.90	10.61	11.06	22.13
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.48	Cum	**8151.40**	3891.80	0.27	0.19	0.38
5	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.61	MT	**73574.90**	44579.71			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	110.69	Sqm	**578.60**	64043.10			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.09	Sqm	**63.20**	511.46			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	14.09	Cum	**149.30**	2103.73			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	13.092	Cum	**1075.00**	14073.60			
	Coarse Aggregates (100 Km lead)	26.188	Cum	**1398.00**	36611.13			
	Cement (30 km lead)	12.210	MT	**742.00**	9059.94			
	Steel (30 Km lead)	0.61	MT	**742.00**	449.58			
	TOTAL (In Rs.)				**400156.02**			
	TOTAL (In Rs.)				**400156.02**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	13.09	Cum	**584.64**	7653.95	765.39		
	Coarse Aggregate	26.19	Cum	**944.26**	24728.49	2472.85		
	Total					3238.24		
	For 1 nos. fall, Total Seigniorage charges					**3238.24**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KONCHI DY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.3.213 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.43*	*2.777*	*4.300*	*34.247*	*Cum*
	Section 2-2	*2*	*4.00*	*1.680*	*4.300*	*57.792*	*Cum*
	Section 3-3	*2*	*3.95*	*1.500*	*4.100*	*48.585*	*Cum*
	Section 5-5	*2*	*3.74*	*2.927*	*4.300*	*94.245*	*Cum*
	Section 6-6	*2*	*1.29*	*1.500*	*4.100*	*15.879*	*Cum*
	U/S Key Floor	*1*	*0.75*	*1.200*	*1.350*	*1.215*	*Cum*
	U/S Floor	*1*	*4.50*	*1.200*	*3.378*	*18.241*	*Cum*
	D/S Floor	*1*	*6.00*	*1.200*	*0.950*	*6.840*	*Cum*
		1	*3.40*	*1.200*	*0.750*	*3.060*	*Cum*
	D/S Key Floor	*1*	*0.99*	*1.200*	*2.300*	*2.726*	*Cum*
	Toe Wall D/S Portion	*1*	*7.30*	*0.750*	*0.900*	*4.928*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						289.11	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
		1	*1.06*	*1.200*	*0.150*	*0.19*	*Cum*
		1	*0.96*	*1.200*	*0.150*	*0.17*	*Cum*
		1	*0.35*	*1.200*	*0.150*	*0.06*	*Cum*
		1	*5.65*	*1.200*	*0.150*	*1.02*	*Cum*
		1	*0.49*	*1.200*	*0.150*	*0.09*	*Cum*
		1	*1.58*	*1.200*	*0.150*	*0.28*	*Cum*
		1	*0.14*	*1.200*	*0.150*	*0.03*	*Cum*
		1	*0.82*	*1.200*	*0.150*	*0.15*	*Cum*
		1	*1.62*	*1.200*	*0.150*	*0.29*	*Cum*
		1	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.43*	*2.777*	*0.150*	*1.19*	*Cum*
	Section 2-2	*2*	*4.00*	*1.680*	*0.150*	*2.02*	*Cum*
	Section 3-3	*2*	*3.95*	*1.500*	*0.150*	*1.78*	*Cum*
	Section 5-5	*2*	*3.74*	*2.927*	*0.150*	*3.29*	*Cum*
	Section 6-6	*2*	*1.29*	*1.500*	*0.150*	*0.58*	*Cum*
	Toe Wall D/S Portion	*1*	*7.30*	*0.750*	*0.300*	*1.64*	*Cum*
	Toe Wall D/S Portion	*1*	*7.00*	*0.450*	*0.600*	*1.89*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**15.68**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.28*	*0.450*	*0.450*	*0.52*	*Cum*
		2	*1.28*	*1.464*	*3.378*	*12.66*	*Cum*
		2	*1.28*	*2.627*	*1.100*	*7.40*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.915*	*1.550*	*11.35*	*Cum*
		2	*4.00*	*1.530*	*1.100*	*13.46*	*Cum*
	Section 3-3	*2*	*3.65*	*0.450*	*0.450*	*1.48*	*Cum*
		2	*3.65*	*0.825*	*1.250*	*7.53*	*Cum*
		2	*3.65*	*1.350*	*0.850*	*8.38*	*Cum*
	Section 5-5	*2*	*3.70*	*0.450*	*0.450*	*1.50*	*Cum*
		2	*3.70*	*1.464*	*3.378*	*36.59*	*Cum*
		2	*3.70*	*2.627*	*0.600*	*11.67*	*Cum*
	Section 6-6	*2*	*2.73*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.73*	*0.825*	*1.250*	*5.64*	*Cum*
		2	*2.73*	*1.350*	*0.850*	*6.27*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor	*1*	*0.75*	*1.200*	*1.200*	*1.08*	*Cum*
		1	*2.16*	*1.200*	*0.600*	*1.56*	*Cum*
		1	*0.50*	*1.200*	*0.850*	*0.51*	*Cum*
		1	*7.84*	*1.200*	*1.100*	*10.34*	*Cum*
		1	*0.20*	*1.200*	*0.700*	*0.17*	*Cum*
		1	*0.68*	*1.200*	*0.550*	*0.45*	*Cum*
		1	*3.20*	*1.200*	*0.850*	*3.26*	*Cum*
		1	*0.99*	*1.200*	*2.150*	*2.55*	*Cum*
	Crest	*1*	*1.42*	*1.200*	*2.608*	*4.44*	*Cum*
	TOTAL					**151.52**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.00*	*1.200*	*0.200*	*0.24*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*24.04*	*0.450*	*0.050*	*0.54*	*Cum*
	On Abutment Top (Right Side)	*1*	*24.04*	*0.450*	*0.050*	*0.54*	*Cum*
	TOTAL					**1.32**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**151.52**	**0.00**	**0.455**	**7850.0**	**3568.28**	**Kg**
	Total Weight in Metric Tonne					**3.57**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.28*		*0.450*	*2.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.28*		*3.378*	*17.30*	*Sqm*
		4		*1.464*	*3.378*	*19.77*	*Sqm*
		4	*1.28*		*1.100*	*5.63*	*Sqm*
		4		*2.627*	*1.100*	*11.56*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*1.550*	*24.80*	*Sqm*
		4		*0.915*	*1.550*	*5.67*	*Sqm*
		4	*4.00*		*1.100*	*17.60*	*Sqm*
		4		*1.530*	*1.100*	*6.73*	*Sqm*
	Section 3-3	*4*	*3.65*		*0.450*	*6.57*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.65*		*1.250*	*18.25*	*Sqm*
		4		*0.825*	*1.250*	*4.13*	*Sqm*
		4	*3.65*		*0.850*	*12.41*	*Sqm*
		4		*1.350*	*0.850*	*4.59*	*Sqm*
	Section 5-5	*4*	*3.70*		*0.450*	*6.66*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.70*		*3.378*	*50.00*	*Sqm*
		4		*1.464*	*3.378*	*19.77*	*Sqm*
		4	*3.70*		*0.600*	*8.88*	*Sqm*
		4		*2.627*	*0.600*	*6.30*	*Sqm*
	Section 6-6	*4*	*2.73*		*0.450*	*4.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.73*		*1.250*	*13.67*	*Sqm*
		4		*0.825*	*1.250*	*4.13*	*Sqm*
		4	*2.73*		*0.850*	*9.29*	*Sqm*
		4		*1.350*	*0.850*	*4.59*	*Sqm*
	Floor	*2*	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*1.200*	*1.200*	*2.88*	*Sqm*
		2	*2.16*		*0.600*	*2.60*	*Sqm*
		2		*1.200*	*0.600*	*1.44*	*Sqm*
		2	*0.50*		*0.850*	*0.85*	*Sqm*
		2		*1.200*	*0.850*	*2.04*	*Sqm*
		2	*7.84*		*1.100*	*17.24*	*Sqm*
		2		*1.200*	*1.100*	*2.64*	*Sqm*
		2	*0.20*		*0.700*	*0.28*	*Sqm*
		2		*1.200*	*0.700*	*1.68*	*Sqm*
		2	*0.68*		*0.550*	*0.75*	*Sqm*
		2		*1.200*	*0.550*	*1.32*	*Sqm*
		2	*3.20*		*0.850*	*5.44*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.200*	*0.850*	*2.04*	*Sqm*
		2	*0.99*		*2.150*	*4.25*	*Sqm*
		2		*1.200*	*2.150*	*5.16*	*Sqm*
	Crest	*2*	*1.42*		*2.608*	*7.40*	*Sqm*
		2		*1.200*	*2.608*	*6.26*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.30*		*0.300*	*4.38*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.00*		*0.600*	*8.40*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**382.20**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*5.903*		*17.71*	*Sqm*
	TOTAL					**17.71**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.600*	*0.300*	**0.27**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.600*	*0.150*	**0.27**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*24.04*	*0.450*		*10.82*	*Sqm*
	On Abutment Top (Right Side)	*1*	*24.04*	*0.450*		*10.82*	*Sqm*
	TOTAL					**21.63**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		37.407		37.41	**Cum**
	Abutment						
	Section 1-1	2	*1.43*	*0.807*		*2.314*	*Cum*
	Section 2-2	2	*4.00*	*0.807*		*6.456*	*Cum*
	Section 3-3	2	*3.95*	*1.020*		*8.054*	*Cum*
	Section 5-5	2	*3.74*	*0.807*		*6.043*	*Cum*
	Section 6-6	2	*1.29*	*1.020*		*2.632*	*Cum*
	Toe wall	2	*7.30*	*0.150*	*0.600*	*2.190*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**65.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.7.075 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.04*	*1.768*	*1.168*	*4.289*	*Cum*
	Section 2-2	*2*	*3.00*	*1.494*	*1.168*	*10.470*	*Cum*
	Section 3-3	*2*	*1.95*	*1.374*	*0.968*	*5.187*	*Cum*
	Section 5-5	*2*	*6.48*	*1.918*	*1.168*	*29.045*	*Cum*
	Section 6-6	*2*	*3.57*	*1.374*	*0.968*	*9.486*	*Cum*
	U/S Key Floor	*1*	*0.63*	*4.500*	*0.850*	*2.391*	*Cum*
	U/S Floor	*1*	*2.00*	*4.500*	*1.307*	*11.763*	*Cum*
	D/S Floor	*1*	*3.00*	*4.500*	*0.850*	*11.475*	*Cum*
		1	*2.25*	*4.500*	*0.650*	*6.581*	*Cum*
	D/S Key Floor	*1*	*0.63*	*4.500*	*0.850*	*2.391*	*Cum*
	Toe Wall D/S Portion	*1*	*14.38*	*0.750*	*0.900*	*9.707*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.900*	*3.510*	*Cum*
						106.29	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.500*	*0.150*	*0.37*	*Cum*
		1	*0.78*	*4.500*	*0.150*	*0.53*	*Cum*
		1	*4.83*	*4.500*	*0.150*	*3.26*	*Cum*
		1	*0.28*	*4.500*	*0.150*	*0.19*	*Cum*
		1	*0.44*	*4.500*	*0.150*	*0.30*	*Cum*
		1	*0.78*	*4.500*	*0.150*	*0.53*	*Cum*
		1	*0.54*	*4.500*	*0.150*	*0.37*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.04*	*1.768*	*0.150*	*0.55*	*Cum*
	Section 2-2	*2*	*3.00*	*1.494*	*0.150*	*1.34*	*Cum*
	Section 3-3	*2*	*1.95*	*1.374*	*0.150*	*0.80*	*Cum*
	Section 5-5	*2*	*6.48*	*1.918*	*0.150*	*3.73*	*Cum*
	Section 6-6	*2*	*3.57*	*1.374*	*0.150*	*1.47*	*Cum*
	Toe Wall D/S Portion	*1*	*14.38*	*0.750*	*0.300*	*3.24*	*Cum*
	Toe Wall D/S Portion	*1*	*14.08*	*0.450*	*0.600*	*3.80*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**22.22**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.04*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.04*	*0.959*	*1.697*	*3.38*	*Cum*
		2	*1.04*	*1.618*	*0.500*	*1.68*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.822*	*1.240*	*6.12*	*Cum*
		2	*3.00*	*1.344*	*0.500*	*4.03*	*Cum*
	Section 3-3	*2*	*1.49*	*0.450*	*0.450*	*0.60*	*Cum*
		2	*1.49*	*0.762*	*1.040*	*2.36*	*Cum*
		2	*1.49*	*1.224*	*0.500*	*1.82*	*Cum*
	Section 5-5	*2*	*6.44*	*0.450*	*0.450*	*2.61*	*Cum*
		2	*6.44*	*0.959*	*1.697*	*20.96*	*Cum*
		2	*6.44*	*1.618*	*0.500*	*10.42*	*Cum*
	Section 6-6	*2*	*4.25*	*0.450*	*0.450*	*1.72*	*Cum*
		2	*4.25*	*0.762*	*1.040*	*6.74*	*Cum*
		2	*4.25*	*1.224*	*0.500*	*5.21*	*Cum*
	Floor	*1*	*0.63*	*4.500*	*0.700*	*1.97*	*Cum*
		1	*5.00*	*4.500*	*0.500*	*11.25*	*Cum*
		1	*0.20*	*4.500*	*0.400*	*0.36*	*Cum*
		1	*0.20*	*4.500*	*0.757*	*0.68*	*Cum*
		1	*2.05*	*4.500*	*0.500*	*4.61*	*Cum*
		1	*0.63*	*4.500*	*0.700*	*1.97*	*Cum*
	Crest	*1*	*0.83*	*4.500*	*1.047*	*3.89*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**94.00**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*4.500*	*0.200*	*0.59*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*17.18*	*0.450*	*0.050*	*0.39*	*Cum*
	On Abutment Top (Right Side)	*1*	*17.18*	*0.450*	*0.050*	*0.39*	*Cum*
	TOTAL					**1.36**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**94.00**	**0.00**	**0.282**	**7850.0**	**2213.81**	**Kg**
	Total Weight in Metric Tonne					**2.21**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.04*		*0.450*	*1.87*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.04*		*1.697*	*7.05*	*Sqm*
		4		*0.959*	*1.697*	*6.51*	*Sqm*
		4	*1.04*		*0.500*	*2.08*	*Sqm*
		4		*1.618*	*0.500*	*3.24*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*1.240*	*14.88*	*Sqm*
		4		*0.822*	*1.240*	*4.08*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*1.344*	*0.500*	*2.69*	*Sqm*
	Section 3-3	*4*	*1.49*		*0.450*	*2.68*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.49*		*1.040*	*6.19*	*Sqm*
		4		*0.762*	*1.040*	*3.17*	*Sqm*
		4	*1.49*		*0.500*	*2.98*	*Sqm*
		4		*1.224*	*0.500*	*2.45*	*Sqm*
	Section 5-5	*4*	*6.44*		*0.450*	*11.59*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.44*		*1.697*	*43.70*	*Sqm*
		4		*0.959*	*1.697*	*6.51*	*Sqm*
		4	*6.44*		*0.500*	*12.88*	*Sqm*
		4		*1.618*	*0.500*	*3.24*	*Sqm*
	Section 6-6	*4*	*4.25*		*0.450*	*7.66*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.25*		*1.040*	*17.69*	*Sqm*
		4		*0.762*	*1.040*	*3.17*	*Sqm*
		4	*4.25*		*0.500*	*8.51*	*Sqm*
		4		*1.224*	*0.500*	*2.45*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.500*	*0.700*	*6.30*	*Sqm*
		2	*5.00*		*0.500*	*5.00*	*Sqm*
		2		*4.500*	*0.500*	*4.50*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.500*	*0.400*	*3.60*	*Sqm*
		2	*0.20*		*0.757*	*0.30*	*Sqm*
		2		*4.500*	*0.757*	*6.81*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*4.500*	*0.500*	*4.50*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*4.500*	*0.700*	*6.30*	*Sqm*
	Crest	*2*	*0.83*		*1.047*	*1.73*	*Sqm*
		2		*4.500*	*1.047*	*9.42*	*Sqm*
	TOTAL					**245.11**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*5.104*		*33.18*	*Sqm*
	TOTAL					**33.18**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*3.900*	*0.300*	**3.80**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*3.900*	*0.150*	**3.80**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*17.18*	*0.450*		*7.73*	*Sqm*
	On Abutment Top (Right Side)	*1*	*17.18*	*0.450*		*7.73*	*Sqm*
	TOTAL					**15.46**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.097		3.10	**Cum**
	Abutment						
	Section 1-1	2	*1.04*	*0.311*		*0.646*	*Cum*
	Section 2-2	2	*3.00*	*0.311*		*1.865*	*Cum*
	Section 3-3	2	*1.95*	*0.311*		*1.212*	*Cum*
	Section 5-5	2	*6.48*	*0.311*		*4.030*	*Cum*
	Section 6-6	2	*3.57*	*0.311*		*2.217*	*Cum*
	Toe wall	2	*14.38*	*0.150*	*0.600*	*4.314*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**17.96**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.13.777 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.60*	*2.472*	*2.452*	*19.433*	*Cum*
	Section 2-2	*2*	*5.00*	*1.374*	*2.452*	*33.690*	*Cum*
	Section 3-3	*2*	*3.20*	*1.254*	*2.252*	*18.074*	*Cum*
	Section 5-5	*2*	*5.35*	*2.622*	*2.452*	*68.753*	*Cum*
	Section 6-6	*2*	*2.99*	*1.254*	*2.252*	*16.865*	*Cum*
	U/S Key Floor	*1*	*0.74*	*3.800*	*1.300*	*3.643*	*Cum*
	U/S Floor	*1*	*4.00*	*3.800*	*3.180*	*48.336*	*Cum*
	D/S Floor	*1*	*5.00*	*3.800*	*1.350*	*25.650*	*Cum*
		1	*3.50*	*3.800*	*1.150*	*15.295*	*Cum*
	D/S Key Floor	*1*	*1.90*	*3.800*	*0.850*	*6.137*	*Cum*
	Toe Wall D/S Portion	*1*	*12.28*	*0.750*	*0.900*	*8.289*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.75*	*0.600*	*0.750*	*2.475*	*Cum*
						266.64	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*3.800*	*0.150*	*0.31*	*Cum*
		1	*1.29*	*3.800*	*0.150*	*0.73*	*Cum*
		1	*0.87*	*3.800*	*0.150*	*0.49*	*Cum*
		1	*0.57*	*3.800*	*0.150*	*0.32*	*Cum*
		1	*6.73*	*3.800*	*0.150*	*3.83*	*Cum*
		1	*0.57*	*3.800*	*0.150*	*0.32*	*Cum*
		1	*1.05*	*3.800*	*0.150*	*0.60*	*Cum*
		1	*0.14*	*3.800*	*0.150*	*0.08*	*Cum*
		1	*0.27*	*3.800*	*0.150*	*0.15*	*Cum*
		1	*2.29*	*3.800*	*0.150*	*1.31*	*Cum*
		1	*0.54*	*3.800*	*0.150*	*0.31*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.60*	*2.472*	*0.150*	*1.19*	*Cum*
	Section 2-2	*2*	*5.00*	*1.374*	*0.150*	*2.06*	*Cum*
	Section 3-3	*2*	*3.20*	*1.254*	*0.150*	*1.20*	*Cum*
	Section 5-5	*2*	*5.35*	*2.622*	*0.150*	*4.21*	*Cum*
	Section 6-6	*2*	*2.99*	*1.254*	*0.150*	*1.12*	*Cum*
	Toe Wall D/S Portion	*1*	*12.28*	*0.750*	*0.300*	*2.76*	*Cum*
	Toe Wall D/S Portion	*1*	*11.98*	*0.450*	*0.600*	*3.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.75*	*0.600*	*0.150*	*0.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.75*	*0.300*	*0.600*	*0.99*	*Cum*
	TOTAL					**25.73**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.45*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.45*	*1.311*	*2.870*	*10.94*	*Cum*
		2	*1.45*	*2.322*	*1.000*	*6.75*	*Cum*
	Section 2-2	*2*	*5.00*	*0.450*	*0.450*	*2.03*	*Cum*
		2	*5.00*	*0.762*	*1.040*	*7.92*	*Cum*
		2	*5.00*	*1.224*	*1.000*	*12.24*	*Cum*
	Section 3-3	*2*	*2.80*	*0.450*	*0.450*	*1.13*	*Cum*
		2	*2.80*	*0.702*	*0.840*	*3.30*	*Cum*
		2	*2.80*	*1.104*	*0.800*	*4.94*	*Cum*
	Section 5-5	*2*	*5.30*	*0.450*	*0.450*	*2.15*	*Cum*
		2	*5.30*	*1.311*	*2.870*	*39.91*	*Cum*
		2	*5.30*	*2.322*	*0.600*	*14.78*	*Cum*
	Section 6-6	*2*	*3.61*	*0.450*	*0.450*	*1.46*	*Cum*
		2	*3.61*	*0.702*	*0.840*	*4.26*	*Cum*
		2	*3.61*	*1.104*	*0.700*	*5.58*	*Cum*
	Floor	*1*	*0.74*	*3.800*	*1.150*	*3.22*	*Cum*
		1	*2.05*	*3.800*	*0.600*	*4.66*	*Cum*
		1	*0.40*	*3.800*	*0.800*	*1.22*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*6.55*	*3.800*	*1.000*	*24.89*	*Cum*
		1	*0.25*	*3.800*	*0.400*	*0.38*	*Cum*
		1	*0.20*	*3.800*	*0.700*	*0.53*	*Cum*
		1	*1.30*	*3.800*	*0.800*	*3.95*	*Cum*
		1	*0.10*	*3.800*	*0.750*	*0.29*	*Cum*
		1	*1.90*	*3.800*	*0.700*	*5.05*	*Cum*
		1	*0.96*	*3.800*	*2.050*	*7.50*	*Cum*
	Crest	*1*	*1.33*	*3.800*	*2.280*	*11.52*	*Cum*
	TOTAL					**181.20**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.95*	*3.800*	*0.200*	*0.72*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*19.45*	*0.450*	*0.050*	*0.44*	*Cum*
	On Abutment Top (Right Side)	*1*	*19.45*	*0.450*	*0.050*	*0.44*	*Cum*
	TOTAL					**1.60**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**181.20**	**0.00**	**0.544**	**7850.0**	**4267.29**	**Kg**
	Total Weight in Metric Tonne					**4.27**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.45*		*0.450*	*2.62*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.45*		*2.870*	*16.69*	*Sqm*
		4		*1.311*	*2.870*	*15.05*	*Sqm*
		4	*1.45*		*1.000*	*5.82*	*Sqm*
		4		*2.322*	*1.000*	*9.29*	*Sqm*
	Section 2-2	*4*	*5.00*		*0.450*	*9.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.00*		*1.040*	*20.80*	*Sqm*
		4		*0.762*	*1.040*	*3.17*	*Sqm*
		4	*5.00*		*1.000*	*20.00*	*Sqm*
		4		*1.224*	*1.000*	*4.90*	*Sqm*
	Section 3-3	*4*	*2.80*		*0.450*	*5.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.80*		*0.840*	*9.40*	*Sqm*
		4		*0.702*	*0.840*	*2.36*	*Sqm*
		4	*2.80*		*0.800*	*8.95*	*Sqm*
		4		*1.104*	*0.800*	*3.53*	*Sqm*
	Section 5-5	*4*	*5.30*		*0.450*	*9.55*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.30*		*2.870*	*60.88*	*Sqm*
		4		*1.311*	*2.870*	*15.05*	*Sqm*
		4	*5.30*		*0.600*	*12.73*	*Sqm*
		4		*2.322*	*0.600*	*5.57*	*Sqm*
	Section 6-6	*4*	*3.61*		*0.450*	*6.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.61*		*0.840*	*12.14*	*Sqm*
		4		*0.702*	*0.840*	*2.36*	*Sqm*
		4	*3.61*		*0.700*	*10.12*	*Sqm*
		4		*1.104*	*0.700*	*3.09*	*Sqm*
	Floor	*2*	*0.74*		*1.150*	*1.70*	*Sqm*
		2		*3.800*	*1.150*	*8.74*	*Sqm*
		2	*2.05*		*0.600*	*2.46*	*Sqm*
		2		*3.800*	*0.600*	*4.56*	*Sqm*
		2	*0.40*		*0.800*	*0.64*	*Sqm*
		2		*3.800*	*0.800*	*6.08*	*Sqm*
		2	*6.55*		*1.000*	*13.10*	*Sqm*
		2		*3.800*	*1.000*	*7.60*	*Sqm*
		2	*0.25*		*0.400*	*0.20*	*Sqm*
		2		*3.800*	*0.400*	*3.04*	*Sqm*
		2	*0.20*		*0.700*	*0.28*	*Sqm*
		2		*3.800*	*0.700*	*5.32*	*Sqm*
		2	*1.30*		*0.800*	*2.08*	*Sqm*
		2		*3.800*	*0.800*	*6.08*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.10*		*0.750*	*0.15*	*Sqm*
		2		*3.800*	*0.750*	*5.70*	*Sqm*
		2	*1.90*		*0.700*	*2.66*	*Sqm*
		2		*3.800*	*0.700*	*5.32*	*Sqm*
		2	*0.96*		*2.050*	*3.95*	*Sqm*
		2		*3.800*	*2.050*	*15.58*	*Sqm*
	Crest	*2*	*1.33*		*2.280*	*6.06*	*Sqm*
		2		*3.800*	*2.280*	*17.33*	*Sqm*
	Toe Wall D/S Portion	*2*	*12.28*		*0.300*	*7.37*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.98*		*0.600*	*14.38*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.75*		*0.150*	*1.65*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.75*		*0.600*	*6.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**429.33**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.75*	*4.344*		*23.89*	*Sqm*
	TOTAL					**23.89**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.75*	*3.200*	*0.300*	**2.64**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.75*	*3.200*	*0.150*	**2.64**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*19.45*	*0.450*		*8.75*	*Sqm*
	On Abutment Top (Right Side)	*1*	*19.45*	*0.450*		*8.75*	*Sqm*
	TOTAL					**17.50**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		31.478		31.48	**Cum**
	Abutment						
	Section 1-1	2	*1.60*	*0.665*		*2.131*	*Cum*
	Section 2-2	2	*5.00*	*0.665*		*6.646*	*Cum*
	Section 3-3	2	*3.20*	*0.794*		*5.084*	*Cum*
	Section 5-5	2	*5.35*	*0.665*		*7.109*	*Cum*
	Section 6-6	2	*2.99*	*0.794*		*4.744*	*Cum*
	Toe wall	2	*12.28*	*0.150*	*0.600*	*3.684*	*Cum*
		2	*2.75*	0.150	*0.600*	*0.495*	*Cum*
	TOTAL					**61.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.16.700 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*2.35*	*1.668*	*1.460*	*11.446*	*Cum*
	Section 2-2	*2*	*2.50*	*1.170*	*1.460*	*8.541*	*Cum*
	Section 3-3	*2*	*2.15*	*1.050*	*1.260*	*5.689*	*Cum*
	Section 5-5	*2*	*3.19*	*1.818*	*1.460*	*16.910*	*Cum*
	Section 6-6	*2*	*2.00*	*1.050*	*1.260*	*5.292*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.350*	*0.850*	*0.717*	*Cum*
	U/S Floor	*1*	*2.05*	*1.350*	*1.460*	*4.041*	*Cum*
	D/S Floor	*1*	*2.50*	*1.350*	*1.129*	*3.810*	*Cum*
		1	*2.45*	*1.350*	*0.929*	*3.073*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.350*	*0.850*	*0.717*	*Cum*
	Toe Wall D/S Portion	*1*	*7.45*	*0.750*	*0.900*	*5.029*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						66.61	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.350*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.350*	*0.150*	*0.16*	*Cum*
		1	*3.93*	*1.350*	*0.150*	*0.80*	*Cum*
		1	*0.28*	*1.350*	*0.150*	*0.06*	*Cum*
		1	*1.09*	*1.350*	*0.150*	*0.22*	*Cum*
		1	*0.78*	*1.350*	*0.150*	*0.16*	*Cum*
		1	*0.54*	*1.350*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.35*	*1.668*	*0.150*	*1.18*	*Cum*
	Section 2-2	*2*	*2.50*	*1.170*	*0.150*	*0.88*	*Cum*
	Section 3-3	*2*	*2.15*	*1.050*	*0.150*	*0.68*	*Cum*
	Section 5-5	*2*	*3.19*	*1.818*	*0.150*	*1.74*	*Cum*
	Section 6-6	*2*	*2.00*	*1.050*	*0.150*	*0.63*	*Cum*
	Toe Wall D/S Portion	*1*	*7.45*	*0.750*	*0.300*	*1.68*	*Cum*
	Toe Wall D/S Portion	*1*	*7.15*	*0.450*	*0.600*	*1.93*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**11.12**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*2.28*	*0.450*	*0.450*	*0.92*	*Cum*
		2	*2.28*	*0.909*	*1.530*	*6.33*	*Cum*
		2	*2.28*	*1.518*	*0.500*	*3.45*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.660*	*0.700*	*2.31*	*Cum*
		2	*2.50*	*1.020*	*0.500*	*2.55*	*Cum*
	Section 3-3	*2*	*1.85*	*0.450*	*0.450*	*0.75*	*Cum*
		2	*1.85*	*0.600*	*0.500*	*1.11*	*Cum*
		2	*1.85*	*0.900*	*0.500*	*1.67*	*Cum*
	Section 5-5	*2*	*2.95*	*0.450*	*0.450*	*1.19*	*Cum*
		2	*2.95*	*0.909*	*1.530*	*8.21*	*Cum*
		2	*2.95*	*1.518*	*0.600*	*5.37*	*Cum*
	Section 6-6	*2*	*2.45*	*0.450*	*0.450*	*0.99*	*Cum*
		2	*2.45*	*0.600*	*0.500*	*1.47*	*Cum*
		2	*2.45*	*0.900*	*0.500*	*2.21*	*Cum*
	Floor	*1*	*0.63*	*1.350*	*0.700*	*0.59*	*Cum*
		1	*4.55*	*1.350*	*0.500*	*3.07*	*Cum*
		1	*0.31*	*1.350*	*0.200*	*0.08*	*Cum*
		1	*0.40*	*1.350*	*0.200*	*0.11*	*Cum*
		1	*2.25*	*1.350*	*0.500*	*1.52*	*Cum*
		1	*0.63*	*1.350*	*0.700*	*0.59*	*Cum*
	Crest	*1*	*0.83*	*1.350*	*1.010*	*1.12*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**46.63**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.350*	*0.200*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.50*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.50*	*0.450*	*0.050*	*0.30*	*Cum*
	TOTAL					**0.78**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**46.63**	**0.00**	**0.140**	**7850.0**	**1098.07**	**Kg**
	Total Weight in Metric Tonne					**1.10**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*2.28*		*0.450*	*4.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.28*		*1.530*	*13.92*	*Sqm*
		4		*0.909*	*1.530*	*5.56*	*Sqm*
		4	*2.28*		*0.500*	*4.55*	*Sqm*
		4		*1.518*	*0.500*	*3.04*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.700*	*7.00*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.020*	*0.500*	*2.04*	*Sqm*
	Section 3-3	*4*	*1.85*		*0.450*	*3.33*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.85*		*0.500*	*3.70*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.85*		*0.500*	*3.70*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 5-5	*4*	*2.95*		*0.450*	*5.31*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.95*		*1.530*	*18.05*	*Sqm*
		4		*0.909*	*1.530*	*5.56*	*Sqm*
		4	*2.95*		*0.600*	*7.08*	*Sqm*
		4		*1.518*	*0.600*	*3.64*	*Sqm*
	Section 6-6	*4*	*2.45*		*0.450*	*4.41*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.45*		*0.500*	*4.90*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.45*		*0.500*	*4.90*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.350*	*0.700*	*1.89*	*Sqm*
		2	*4.55*		*0.500*	*4.55*	*Sqm*
		2		*1.350*	*0.500*	*1.35*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*1.350*	*0.200*	*0.54*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*1.350*	*0.200*	*0.54*	*Sqm*
		2	*2.25*		*0.500*	*2.25*	*Sqm*
		2		*1.350*	*0.500*	*1.35*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.350*	*0.700*	*1.89*	*Sqm*
	Crest	*2*	*0.83*		*1.010*	*1.67*	*Sqm*
		2		*1.350*	*1.010*	*2.73*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.45*		*0.300*	*4.47*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.15*		*0.600*	*8.58*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**166.60**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*3.051*		*9.15*	*Sqm*
	TOTAL					**9.15**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In U/S Portion	*1*	*6.83*	*2.375*	*0.450*	**7.30**	**Cum**
	In D/S Portion	*1*	*1.50*	*0.750*	*0.300*	**0.34**	**Cum**
	TOTAL					**7.64**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*6.83*	*2.375*	*0.150*	**4.87**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.50*	*0.450*		*6.07*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.50*	*0.450*		*6.07*	*Sqm*
	TOTAL					**12.15**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		0.748		0.75	**Cum**
	Abutment						
	Section 1-1	2	*2.35*	*0.515*		*2.420*	*Cum*
	Section 2-2	2	*2.50*	*0.511*		*2.556*	*Cum*
	Section 3-3	2	*2.15*	*0.486*		*2.090*	*Cum*
	Section 5-5	2	*3.19*	*0.515*		*3.280*	*Cum*
	Section 6-6	2	*2.00*	*0.486*		*1.944*	*Cum*
	Toe wall	2	*7.45*	*0.150*	*0.600*	*2.235*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**15.54**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.17.600 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.43*	*2.084*	*2.846*	*16.969*	*Cum*
	Section 2-2	*2*	*4.00*	*1.697*	*2.846*	*38.637*	*Cum*
	Section 3-3	*2*	*3.95*	*1.577*	*2.646*	*32.965*	*Cum*
	Section 5-5	*2*	*3.74*	*2.234*	*2.596*	*43.426*	*Cum*
	Section 6-6	*2*	*1.29*	*1.057*	*2.646*	*7.217*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*2.29*	*5.500*	*2.624*	*33.107*	*Cum*
	D/S Floor	*1*	*5.46*	*5.500*	*1.150*	*34.509*	*Cum*
		1	*2.00*	*1.200*	*0.800*	*1.920*	*Cum*
		1	*2.25*	*1.200*	*0.700*	*1.890*	*Cum*
	D/S Key Floor	*1*	*0.81*	*5.500*	*1.600*	*7.150*	*Cum*
	Toe Wall D/S Portion	*1*	*7.30*	*0.750*	*0.900*	*4.928*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
	TOTAL					**226.10**	***Cum***
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
		1	*1.06*	*1.200*	*0.150*	*0.19*	*Cum*
		1	*0.96*	*1.200*	*0.150*	*0.17*	*Cum*
		1	*0.35*	*1.200*	*0.150*	*0.06*	*Cum*
		1	*5.65*	*1.200*	*0.150*	*1.02*	*Cum*
		1	*0.49*	*1.200*	*0.150*	*0.09*	*Cum*
		1	*1.58*	*1.200*	*0.150*	*0.28*	*Cum*
		1	*0.14*	*1.200*	*0.150*	*0.03*	*Cum*
		1	*0.82*	*1.200*	*0.150*	*0.15*	*Cum*
		1	*1.62*	*1.200*	*0.150*	*0.29*	*Cum*
		1	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.43*	*2.084*	*0.150*	*0.89*	*Cum*
	Section 2-2	*2*	*4.00*	*1.697*	*0.150*	*2.04*	*Cum*
	Section 3-3	*2*	*3.95*	*1.577*	*0.150*	*1.87*	*Cum*
	Section 5-5	*2*	*3.74*	*2.234*	*0.150*	*2.51*	*Cum*
	Section 6-6	*2*	*1.29*	*1.057*	*0.150*	*0.41*	*Cum*
	Toe Wall D/S Portion	*1*	*7.30*	*0.750*	*0.300*	*1.64*	*Cum*
	Toe Wall D/S Portion	*1*	*7.00*	*0.450*	*0.600*	*1.89*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**14.54**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.28*	*0.450*	*0.450*	*0.52*	*Cum*
		2	*1.28*	*1.117*	*2.224*	*6.36*	*Cum*
		2	*1.28*	*1.934*	*0.800*	*3.96*	*Cum*
	Section 2-2	*2*	*4.00*	*0.820*	*0.500*	*3.28*	*Cum*
		2	*4.00*	*1.034*	*0.712*	*5.89*	*Cum*
		2	*4.00*	*1.397*	*1.600*	*17.88*	*Cum*
	Section 3-3	*2*	*3.65*	*0.820*	*0.500*	*2.99*	*Cum*
		2	*3.65*	*0.974*	*0.512*	*3.64*	*Cum*
		2	*3.65*	*1.277*	*1.800*	*16.78*	*Cum*
	Section 5-5	*2*	*3.70*	*0.450*	*0.450*	*1.50*	*Cum*
		2	*3.70*	*1.117*	*2.224*	*18.39*	*Cum*
		2	*3.70*	*1.934*	*0.550*	*7.87*	*Cum*
	Section 6-6	*2*	*2.10*	*0.450*	*0.450*	*0.85*	*Cum*
		2	*2.10*	*0.604*	*0.512*	*1.29*	*Cum*
		2	*2.10*	*0.907*	*0.650*	*2.47*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.69*	*1.200*	*0.950*	*0.78*	*Cum*
		1	*2.00*	*1.200*	*0.550*	*1.32*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.20	1.200	0.675	0.16	Cum
		1	5.46	1.200	0.800	5.24	Cum
		1	0.24	1.200	0.300	0.09	Cum
		1	0.20	1.200	0.550	0.13	Cum
		1	1.80	1.200	0.650	1.40	Cum
		1	0.10	1.200	0.600	0.07	Cum
		1	2.15	1.200	0.550	1.42	Cum
		1	0.81	1.200	1.450	1.41	Cum
	Crest	1	1.15	1.200	1.819	2.52	Cum
	TOTAL					**105.52**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	1	0.85	1.200	0.200	0.20	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	10.57	0.450	0.050	0.24	Cum
	On Abutment Top (Right Side)	1	10.57	0.450	0.050	0.24	Cum
	Slab Bridge						
	Slab	1	2.00	5.500	0.328	3.61	Cum
	Wearing coat	1	2.00	4.500	0.070	0.63	Cum
	Dirt wall	2	0.40	5.500	0.300	1.32	Cum
	300 mm thick pedastal	2	0.82	5.500	0.300	2.71	Cum
	TOTAL					**8.94**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	16	31	2.46		1.578	120.3	Kg
a2	10	10	5.90		0.616	36.4	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	2.38		0.616	27.9	Kg
a5	10	8	5.75		0.616	28.4	Kg
x1	12	30	2.50		0.888	66.6	Kg
x2	12	30	1.27		0.888	33.7	Kg
x3	12	24	1.90		0.888	40.5	Kg
	Taking Skin reinforcement @0.3% of M-20	**105.52**	**0.003**	**0.317**	**7850.0**	**2485.0**	**Kg**
	Total Reinforcement Steel (in kg)					*2845.4*	*Kg*
	Total Weight in Metric Tonne					**2.85**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.28		0.450	2.30	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.28		2.224	11.39	Sqm
		4		1.117	2.224	9.94	Sqm
		4	1.28		0.800	4.10	Sqm
		4		1.934	0.800	6.19	Sqm
	Section 2-2	4	4.00		0.500	8.00	Sqm
		4		0.820	0.500	1.64	Sqm
		4	4.00		0.712	11.39	Sqm
		4		1.034	0.712	2.94	Sqm
		4	4.00		1.600	25.60	Sqm
		4		1.397	1.600	8.94	Sqm
	Section 3-3	4	3.65		0.500	7.30	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.65		0.512	7.48	Sqm
		4		0.974	0.512	1.99	Sqm
		4	3.65		1.800	26.28	Sqm
		4		1.277	1.800	9.19	Sqm
	Section 5-5	4	3.70		0.450	6.66	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.70		2.224	32.92	Sqm
		4		1.117	2.224	9.94	Sqm
		4	3.70		0.550	8.14	Sqm
		4		1.934	0.550	4.25	Sqm
	Section 6-6	4	2.10		0.450	3.77	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.10		0.512	4.29	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.604*	*0.512*	*1.24*	*Sqm*
		4	*2.10*		*0.650*	*5.45*	*Sqm*
		4		*0.907*	*0.650*	*2.36*	*Sqm*
	Floor	*2*	*0.69*		*0.950*	*1.31*	*Sqm*
		2		*1.200*	*0.950*	*2.28*	*Sqm*
		2	*2.00*		*0.550*	*2.20*	*Sqm*
		2		*1.200*	*0.550*	*1.32*	*Sqm*
		2	*0.20*		*0.675*	*0.27*	*Sqm*
		2		*1.200*	*0.675*	*1.62*	*Sqm*
		2	*5.46*		*0.800*	*8.73*	*Sqm*
		2		*1.200*	*0.800*	*1.92*	*Sqm*
		2	*0.24*		*0.300*	*0.15*	*Sqm*
		2		*1.200*	*0.300*	*0.72*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*1.200*	*0.550*	*1.32*	*Sqm*
		2	*1.80*		*0.650*	*2.34*	*Sqm*
		2		*1.200*	*0.650*	*1.56*	*Sqm*
		2	*0.10*		*0.600*	*0.12*	*Sqm*
		2		*1.200*	*0.600*	*1.44*	*Sqm*
		2	*2.15*		*0.550*	*2.37*	*Sqm*
		2		*1.200*	*0.550*	*1.32*	*Sqm*
		2	*0.81*		*1.450*	*2.36*	*Sqm*
		2		*1.200*	*1.450*	*3.48*	*Sqm*
	Crest	*2*	*1.15*		*1.819*	*4.19*	*Sqm*
		2		*1.200*	*1.819*	*4.37*	*Sqm*
	Bridge Slab	*2*	*2.00*		*0.33*	*1.31*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*2.00*	*5.50*		*11.00*	*Sqm*
	Dirt Wall	*2*	*0.40*		*0.30*	*0.24*	*Sqm*
		2		5.50	0.30	*3.30*	*Sqm*
	TOTAL					**292.82**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*3.051*		*9.15*	*Sqm*
	TOTAL					**9.15**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.600*	*0.300*	**0.27**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.600*	*0.150*	**0.27**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.57*	*0.450*		*4.76*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.57*	*0.450*		*4.76*	*Sqm*
	TOTAL					**9.51**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		14.963		14.96	**Cum**
	Abutment						
	Section 1-1	2	1.43	*1.426*		*4.080*	*Cum*
	Section 2-2	2	4.00	*1.797*		*14.376*	*Cum*
	Section 3-3	2	3.95	*1.552*		*12.261*	*Cum*
	Section 5-5	2	3.74	*1.426*		*10.678*	*Cum*
	Section 6-6	2	1.29	*1.552*		*4.004*	*Cum*
	TOTAL					**60.36**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.18.200 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.96*	*1.488*	*1.178*	*3.367*	*Cum*
	Section 2-2	*2*	*2.00*	*1.110*	*1.178*	*5.230*	*Cum*
	Section 3-3	*2*	*2.45*	*0.990*	*0.978*	*4.744*	*Cum*
	Section 5-5	*2*	*3.72*	*1.638*	*1.178*	*14.352*	*Cum*
	Section 6-6	*2*	*1.71*	*0.990*	*0.978*	*3.311*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.850*	*0.850*	*0.452*	*Cum*
	U/S Floor	*1*	*2.00*	*0.850*	*1.460*	*2.482*	*Cum*
	D/S Floor	*1*	*2.00*	*0.850*	*0.850*	*1.445*	*Cum*
		1	*2.75*	*0.850*	*0.650*	*1.519*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.850*	*0.850*	*0.452*	*Cum*
	Toe Wall D/S	*1*	*6.25*	*0.750*	*0.900*	*4.219*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.25*	*0.600*	*0.900*	*1.350*	*Cum*
						42.92	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.850*	*0.150*	*0.07*	*Cum*
		1	*0.78*	*0.850*	*0.150*	*0.10*	*Cum*
		1	*3.32*	*0.850*	*0.150*	*0.42*	*Cum*
		1	*0.28*	*0.850*	*0.150*	*0.04*	*Cum*
		1	*1.45*	*0.850*	*0.150*	*0.18*	*Cum*
		1	*0.78*	*0.850*	*0.150*	*0.10*	*Cum*
		1	*0.54*	*0.850*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.96*	*1.488*	*0.150*	*0.43*	*Cum*
	Section 2-2	*2*	*2.00*	*1.110*	*0.150*	*0.67*	*Cum*
	Section 3-3	*2*	*2.45*	*0.990*	*0.150*	*0.73*	*Cum*
	Section 5-5	*2*	*3.72*	*1.638*	*0.150*	*1.83*	*Cum*
	Section 6-6	*2*	*1.71*	*0.990*	*0.150*	*0.51*	*Cum*
	Toe Wall D/S Portion	*1*	*6.25*	*0.750*	*0.300*	*1.41*	*Cum*
	Toe Wall D/S Portion	*1*	*5.95*	*0.450*	*0.600*	*1.61*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.600*	*0.150*	*0.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.25*	*0.300*	*0.600*	*0.45*	*Cum*
	TOTAL					**8.83**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.81*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.81*	*0.819*	*1.230*	*1.63*	*Cum*
		2	*0.81*	*1.338*	*0.500*	*1.08*	*Cum*
	Section 2-2	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.630*	*0.600*	*1.51*	*Cum*
		2	*2.00*	*0.960*	*0.500*	*1.92*	*Cum*
	Section 3-3	*2*	*2.18*	*0.450*	*0.450*	*0.88*	*Cum*
		2	*2.18*	*0.570*	*0.400*	*0.99*	*Cum*
		2	*2.18*	*0.840*	*0.500*	*1.83*	*Cum*
	Section 5-5	*2*	*3.68*	*0.450*	*0.450*	*1.49*	*Cum*
		2	*3.68*	*0.819*	*1.230*	*7.40*	*Cum*
		2	*3.68*	*1.338*	*0.500*	*4.92*	*Cum*
	Section 6-6	*2*	*2.21*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.21*	*0.570*	*0.400*	*1.01*	*Cum*
		2	*2.21*	*0.840*	*0.500*	*1.85*	*Cum*
	Floor	*1*	*0.63*	*0.850*	*0.700*	*0.37*	*Cum*
		1	*4.00*	*0.850*	*0.500*	*1.70*	*Cum*
		1	*0.20*	*0.850*	*0.400*	*0.07*	*Cum*
		1	*0.20*	*0.850*	*0.248*	*0.04*	*Cum*
		1	*2.55*	*0.850*	*0.500*	*1.08*	*Cum*
		1	*0.63*	*0.850*	*0.700*	*0.37*	*Cum*
	Crest	*1*	*0.73*	*0.850*	*0.790*	*0.49*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**32.69**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.850*	*0.200*	*0.10*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.62*	*0.450*	*0.050*	*0.17*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.62*	*0.450*	*0.050*	*0.17*	*Cum*
	TOTAL					**0.44**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**32.69**	**0.00**	**0.098**	**7850.0**	**769.73**	**Kg**
	Total Weight in Metric Tonne					**0.77**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.81*		*0.450*	*1.46*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.81*		*1.230*	*3.99*	*Sqm*
		4		*0.819*	*1.230*	*4.03*	*Sqm*
		4	*0.81*		*0.500*	*1.62*	*Sqm*
		4		*1.338*	*0.500*	*2.68*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*2.00*		*0.500*	*4.00*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Section 3-3	*4*	*2.18*		*0.450*	*3.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.18*		*0.400*	*3.49*	*Sqm*
		4		*0.570*	*0.400*	*0.91*	*Sqm*
		4	*2.18*		*0.500*	*4.36*	*Sqm*
		4		*0.840*	*0.500*	*1.68*	*Sqm*
	Section 5-5	*4*	*3.68*		*0.450*	*6.62*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.68*		*1.230*	*18.08*	*Sqm*
		4		*0.819*	*1.230*	*4.03*	*Sqm*
		4	*3.68*		*0.500*	*7.35*	*Sqm*
		4		*1.338*	*0.500*	*2.68*	*Sqm*
	Section 6-6	*4*	*2.21*		*0.450*	*3.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.21*		*0.400*	*3.53*	*Sqm*
		4		*0.570*	*0.400*	*0.91*	*Sqm*
		4	*2.21*		*0.500*	*4.41*	*Sqm*
		4		*0.840*	*0.500*	*1.68*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.850*	*0.700*	*1.19*	*Sqm*
		2	*4.00*		*0.500*	*4.00*	*Sqm*
		2		*0.850*	*0.500*	*0.85*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.850*	*0.400*	*0.68*	*Sqm*
		2	*0.20*		*0.248*	*0.10*	*Sqm*
		2		*0.850*	*0.248*	*0.42*	*Sqm*
		2	*2.55*		*0.500*	*2.55*	*Sqm*
		2		*0.850*	*0.500*	*0.85*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.850*	*0.700*	*1.19*	*Sqm*
	Crest	*2*	*0.73*		*0.790*	*1.16*	*Sqm*
		2		*0.850*	*0.790*	*1.34*	*Sqm*
	TOTAL					**117.51**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.25*	*2.670*		*6.68*	*Sqm*
	TOTAL					**6.68**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.25*	*0.250*	*0.300*	**0.09**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.25*	*0.250*	*0.150*	**0.09**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.62*	*0.450*		*3.43*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.62*	*0.450*		*3.43*	*Sqm*
	TOTAL					**6.86**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.717		1.72	**Cum**
	Abutment						
	Section 1-1	2	*0.96*	*0.317*		*0.609*	*Cum*
	Section 2-2	2	*2.00*	*0.317*		*1.268*	*Cum*
	Section 3-3	2	*2.45*	*0.312*		*1.529*	*Cum*
	Section 5-5	2	*3.72*	*0.317*		*2.358*	*Cum*
	Section 6-6	2	*1.71*	*0.312*		*1.067*	*Cum*
	Toe wall	2	*6.25*	*0.150*	*0.600*	*1.875*	*Cum*
		2	*1.25*	0.150	*0.600*	*0.225*	*Cum*
	TOTAL					**10.65**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.18.895 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.22*	*1.782*	*2.116*	*9.174*	*Cum*
	Section 2-2	*2*	*3.00*	*1.050*	*2.116*	*13.331*	*Cum*
	Section 3-3	*2*	*3.70*	*0.930*	*1.916*	*13.186*	*Cum*
	Section 5-5	*2*	*0.55*	*1.932*	*2.116*	*4.530*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*1.916*	*0.535*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.650*	*0.850*	*0.345*	*Cum*
	U/S Floor	*1*	*3.00*	*0.650*	*2.220*	*4.329*	*Cum*
	D/S Floor	*1*	*3.00*	*0.650*	*0.850*	*1.658*	*Cum*
		1	*4.00*	*0.650*	*0.650*	*1.690*	*Cum*
	D/S Key Floor	*1*	*0.73*	*0.650*	*1.250*	*0.589*	*Cum*
						49.37	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.650*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.650*	*0.150*	*0.08*	*Cum*
		1	*0.72*	*0.650*	*0.150*	*0.07*	*Cum*
		1	*0.21*	*0.650*	*0.150*	*0.02*	*Cum*
		1	*4.36*	*0.650*	*0.150*	*0.43*	*Cum*
		1	*0.49*	*0.650*	*0.150*	*0.05*	*Cum*
		1	*2.44*	*0.650*	*0.150*	*0.24*	*Cum*
		1	*1.23*	*0.650*	*0.150*	*0.12*	*Cum*
		1	*0.54*	*0.650*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.22*	*1.782*	*0.150*	*0.65*	*Cum*
	Section 2-2	*2*	*3.00*	*1.050*	*0.150*	*0.95*	*Cum*
	Section 3-3	*2*	*3.70*	*0.930*	*0.150*	*1.03*	*Cum*
	Section 5-5	*2*	*0.55*	*1.932*	*0.150*	*0.32*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**4.09**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.07*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.07*	*0.966*	*1.720*	*3.55*	*Cum*
		2	*1.07*	*1.632*	*0.500*	*1.74*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.600*	*0.500*	*1.80*	*Cum*
		2	*3.00*	*0.900*	*0.500*	*2.70*	*Cum*
	Section 3-3	*2*	*3.46*	*0.450*	*0.450*	*1.40*	*Cum*
		2	*3.46*	*0.540*	*0.300*	*1.12*	*Cum*
		2	*3.46*	*0.780*	*0.500*	*2.70*	*Cum*
	Section 5-5	*2*	*0.51*	*0.450*	*0.450*	*0.21*	*Cum*
		2	*0.51*	*0.966*	*1.720*	*1.69*	*Cum*
		2	*0.51*	*1.632*	*0.500*	*0.83*	*Cum*
	Section 6-6	*2*	*0.62*	*0.450*	*0.450*	*0.25*	*Cum*
		2	*0.62*	*0.540*	*0.300*	*0.20*	*Cum*
		2	*0.62*	*0.780*	*0.500*	*0.48*	*Cum*
	Floor	*1*	*0.63*	*0.650*	*0.700*	*0.28*	*Cum*
		1	*1.67*	*0.650*	*0.500*	*0.54*	*Cum*
		1	*0.15*	*0.650*	*0.575*	*0.06*	*Cum*
		1	*4.18*	*0.650*	*0.650*	*1.77*	*Cum*
		1	*0.20*	*0.650*	*0.400*	*0.05*	*Cum*
		1	*0.23*	*0.650*	*0.350*	*0.05*	*Cum*
		1	*3.80*	*0.650*	*0.500*	*1.24*	*Cum*
		1	*0.73*	*0.650*	*1.100*	*0.52*	*Cum*
	Crest	*1*	*0.94*	*0.650*	*1.480*	*0.90*	*Cum*
	TOTAL					**25.73**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*0.650*	*0.160*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.99*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.99*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.48**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**25.73**	**0.00**	**0.077**	**7850.0**	**605.91**	**Kg**
	Total Weight in Metric Tonne					**0.61**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.07*		*0.450*	*1.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.07*		*1.720*	*7.34*	*Sqm*
		4		*0.966*	*1.720*	*6.65*	*Sqm*
		4	*1.07*		*0.500*	*2.13*	*Sqm*
		4		*1.632*	*0.500*	*3.26*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*3.46*		*0.450*	*6.23*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.46*		*0.300*	*4.15*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*3.46*		*0.500*	*6.92*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*0.51*		*0.450*	*0.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.51*		*1.720*	*3.51*	*Sqm*
		4		*0.966*	*1.720*	*6.65*	*Sqm*
		4	*0.51*		*0.500*	*1.02*	*Sqm*
		4		*1.632*	*0.500*	*3.26*	*Sqm*
	Section 6-6	*4*	*0.62*		*0.450*	*1.11*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.62*		*0.300*	*0.74*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.62*		*0.500*	*1.23*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.650*	*0.700*	*0.91*	*Sqm*
		2	*1.67*		*0.500*	*1.67*	*Sqm*
		2		*0.650*	*0.500*	*0.65*	*Sqm*
		2	*0.15*		*0.575*	*0.17*	*Sqm*
		2		*0.650*	*0.575*	*0.75*	*Sqm*
		2	*4.18*		*0.650*	*5.43*	*Sqm*
		2		*0.650*	*0.650*	*0.85*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.650*	*0.400*	*0.52*	*Sqm*
		2	*0.23*		*0.350*	*0.16*	*Sqm*
		2		*0.650*	*0.350*	*0.46*	*Sqm*
		2	*3.80*		*0.500*	*3.80*	*Sqm*
		2		*0.650*	*0.500*	*0.65*	*Sqm*
		2	*0.73*		*1.100*	*1.60*	*Sqm*
		2		*0.650*	*1.100*	*1.43*	*Sqm*
	Crest	*2*	*0.94*		*1.480*	*2.78*	*Sqm*
		2		*0.650*	*1.480*	*1.92*	*Sqm*
	TOTAL					**110.69**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.99*	*0.450*		*4.05*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*8.99*	*0.450*		*4.05*	*Sqm*
	TOTAL					**8.09**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.425		3.43	**Cum**
	Abutment						
	Section 1-1	2	*1.22*	*1.159*		*2.820*	*Cum*
	Section 2-2	2	*3.00*	*0.570*		*3.420*	*Cum*
	Section 3-3	2	*3.70*	*0.408*		*3.019*	*Cum*
	Section 5-5	2	*0.55*	*1.159*		*1.284*	*Cum*
	Section 6-6	2	*0.15*	*0.408*		*0.122*	*Cum*
	TOTAL					**14.09**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR SLAB BRIDGE

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	1.150	Slab Bridge	₹ 22,09,415.68
2	1.471	Slab Bridge	₹ 22,08,610.58
		Sub-Total	₹ 44,18,026.26
		Seigniorage charges	₹ 24,338.49
		Total (in Rs. Lakhs)	**₹ 44.42**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KONCHI DY.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 1.150						Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	128.032	Cum	**195.20**	24991.88			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.36	Cum	**6381.70**	66110.58	3.36	4.66	9.32
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	52.46	Cum	**6914.20**	362752.78	21.64	22.56	45.12
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	55.82	Cum	**8151.40**	455025.30	31.65	21.77	44.10
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.32	MT	**73574.90**	391067.99			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	284.96	Sqm	**578.60**	164879.47			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	97.25	Cum	**149.30**	14519.33			

AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 1.150						Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	48.992	Cum	**1075.00**	52666.52			
	Coarse Aggregates (100 Km lead)	98.542	Cum	**1398.00**	137762.33			
	Cement (30 km lead)	56.649	MT	**742.00**	42033.66			
	Steel (30 Km lead)	5.32	MT	**742.00**	3943.91			
TOTAL (In Rs.)					**2209415.68**			
TOTAL (In Rs.)					**2209415.68**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	48.99	Cum	**584.64**	28642.75	2864.27		
	Coarse Aggregate	98.54	Cum	**944.26**	93049.69	9304.97		
	Total					12169.24		
	For 1 nos. fall, Total Seigniorage charges					**12169.24**		

	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 1.150					Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 1.471							
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	125.122	Cum	**195.20**	24423.87			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.36	Cum	**6381.70**	66110.58	3.36	4.66	9.32
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	52.46	Cum	**6914.20**	362752.78	21.64	22.56	45.12
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	55.82	Cum	**8151.40**	455025.30	31.65	21.77	44.10
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.32	MT	**73574.90**	391067.99			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	284.96	Sqm	**578.60**	164879.47			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	95.66	Cum	**149.30**	14282.24			

AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 1.150						Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	48.992	Cum	**1075.00**	52666.52			
	Coarse Aggregates (100 Km lead)	98.542	Cum	**1398.00**	137762.33			
	Cement (30 km lead)	56.649	MT	**742.00**	42033.66			
	Steel (30 Km lead)	5.32	MT	**742.00**	3943.91			
	TOTAL (In Rs.)				**2208610.58**			
	TOTAL (In Rs.)				**2208610.58**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	48.99	Cum	**584.64**	28642.75	2864.27		
	Coarse Aggregate	98.54	Cum	**944.26**	93049.69	9304.97		
	Total					12169.24		
	For 1 nos. fall, Total Seigniorage charges					**12169.24**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 1.150							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*180.00*			**180.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.30*	*2.02*	*1.49*	*13.80*	*Cum*
		1	*5.28*	*2.30*	*1.49*	*18.07*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.58*	*2.02*	*1.49*	*45.55*	*Cum*
	Left abutment	*2*	*2.30*	*2.30*	*1.49*	*15.71*	*Cum*
		1	*5.28*	*2.30*	*1.49*	*18.07*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.58*	*0.75*	*1.49*	*16.83*	*Cum*
	TOTAL					**128.03**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.00*	*1.72*	*0.20*	*1.37*	*Cum*
		1	*4.98*	*2.00*	*0.20*	*1.99*	*Cum*
	Left abutment	*2*	*2.00*	*1.72*	*0.20*	*1.37*	*Cum*
		1	*4.98*	*2.00*	*0.20*	*1.99*	*Cum*
	Levelling course	*2*	*3.50*	*6.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.36**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*4.98*	*1.70*	*0.20*	*1.69*	*Cum*
		1	*4.98*	*1.55*	*0.80*	*6.16*	*Cum*
		1	*4.98*	*1.01*	*1.25*	*6.27*	*Cum*
		1	*4.98*	*0.82*	*0.50*	*2.04*	*Cum*
		1	*4.98*	*0.40*	*0.20*	*0.40*	
	Return wall	*2*	*1.90*	*1.52*	*0.20*	*1.15*	*Cum*
		2	*1.90*	*1.32*	*0.80*	*4.00*	*Cum*
		2	*1.90*	*0.66*	*1.72*	*4.30*	*Cum*
		2	*1.90*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*4.98*	*1.70*	*0.20*	*1.69*	*Cum*
		1	*4.98*	*1.55*	*0.80*	*6.16*	*Cum*
		1	*4.98*	*1.01*	*1.25*	*6.27*	*Cum*
		1	*4.98*	*0.82*	*0.50*	*2.04*	*Cum*
		1	*4.98*	*0.40*	*0.20*	*0.40*	*Cum*
	Return wall	*2*	*1.90*	*1.52*	*0.20*	*1.15*	*Cum*
		2	*1.90*	*1.32*	*0.80*	*4.00*	*Cum*
		2	*1.90*	*0.66*	*1.72*	*4.30*	*Cum*
		2	*1.90*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**52.46**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Slab	1	7.55	6.50	0.54	*26.26*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.34*	*15.24*	*Cum*
	Wearing coat	*1*	*14.55*	*5.50*	*0.08*	*6.00*	*Cum*
	Parapet	*2*	*14.55*	*0.44*	*0.18*	*2.26*	*Cum*
		2	*14.55*	*0.35*	*0.25*	*2.55*	*Cum*
		2	*14.55*	*0.22*	*0.55*	*3.51*	*Cum*
	TOTAL					**55.82**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*66*	*8.15*		*2.466*	*1326.4*	*Kg*
a2	*12*	*50*	*6.94*		*0.888*	*308.0*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*33*	*8.17*		*0.616*	*166.2*	*Kg*
a5	*10*	*38*	*6.69*		*0.616*	*156.7*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*5.65*		*0.888*	*230.7*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*126*	*2.52*		*0.888*	*282.2*	*Kg*
x2	*16*	*126*	*1.44*		*1.578*	*287.1*	*Kg*
x3	*10*	*24*	*7.45*		*0.616*	*110.2*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*52.46*	*0.0025*	*0.131*	*7850.00*	#######	*Kg*
	Total Reinforcement Steel (in kg)					*5315.2*	*Kg*
	Total Weight in Metric Tonne					**5.32**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*4.98*		*0.20*	*1.99*	*Sqm*
		2		*1.70*	*0.20*	*0.68*	*Sqm*
		2	*4.98*		*0.80*	*7.97*	*Sqm*
		2		*1.55*	*0.80*	*2.47*	*Sqm*
		2	*4.98*		*1.25*	*12.46*	*Sqm*
		2		*1.01*	*1.25*	*2.52*	*Sqm*
		2	*4.98*		*0.50*	*4.98*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
		2	*4.9825*		*0.2*	*1.99*	*Sqm*
		2		*0.4*	*0.20*	*0.16*	*Sqm*
	Return wall	*2*	*1.90*		*0.20*	*0.76*	*Sqm*
		2		*1.52*	*0.20*	*0.61*	*Sqm*
		2	*1.90*		*0.80*	*3.04*	*Sqm*
		2		*1.32*	*0.80*	*2.11*	*Sqm*
		2	*1.90*		*1.72*	*6.53*	*Sqm*
		2		*0.66*	*1.72*	*2.26*	*Sqm*
		2	*1.90*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*4.98*		*0.20*	*1.99*	*Sqm*
		2		*1.70*	*0.20*	*0.68*	*Sqm*
		2	*4.98*		*0.80*	*7.97*	*Sqm*
		2		*1.55*	*0.80*	*2.47*	*Sqm*
		2	*4.98*		*1.25*	*12.46*	*Sqm*
		2		*1.01*	*1.25*	*2.52*	*Sqm*
		2	*4.98*		*0.50*	*4.98*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
		2	*4.9825*		*0.2*	*1.99*	*Sqm*
		2		*0.4*	*0.20*	*0.16*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Return wall	*2*	*1.90*		*0.20*	*0.76*	*Sqm*
		2		*1.52*	*0.20*	*0.61*	*Sqm*
		2	*1.90*		*0.80*	*3.04*	*Sqm*
		2		*1.32*	*0.80*	*2.11*	*Sqm*
		2	*1.90*		*1.72*	*6.53*	*Sqm*
		2		*0.66*	*1.72*	*2.26*	*Sqm*
		2	*1.90*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.55*		*0.54*	*8.08*	*Sqm*
		1	*7.55*	6.50		*49.08*	*Sqm*
		2		*6.50*	0.54	*6.96*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.34*	*4.69*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.34	*8.71*	*Sqm*
	Parapet	*4*	*14.55*		*0.18*	*10.19*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.55*		*0.25*	*14.55*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.55*		*0.55*	*32.01*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**284.96**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	4.98	1.31		*13.04*	*Cum*
	Right and left Return wall	4	2.30	2.38		*21.83*	*Cum*
	Extra slope	*2*	*7.58*	*2.016*	*1.49*	*45.55*	*Cum*
		2	*7.58*	*0.745*	*1.49*	*16.83*	*Cum*
	TOTAL					**97.25**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 1.471						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*200.00*			**200.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.30*	*2.02*	*1.46*	*13.52*	*Cum*
		1	*5.28*	*2.30*	*1.46*	*17.71*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.58*	*2.02*	*1.46*	*44.63*	*Cum*
	Left abutment	*2*	*2.30*	*2.30*	*1.46*	*15.40*	*Cum*
		1	*5.28*	*2.30*	*1.46*	*17.71*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.58*	*0.73*	*1.46*	*16.16*	*Cum*
	TOTAL					**125.12**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.00*	*1.72*	*0.20*	*1.37*	*Cum*
		1	*4.98*	*2.00*	*0.20*	*1.99*	*Cum*
	Left abutment	*2*	*2.00*	*1.72*	*0.20*	*1.37*	*Cum*
		1	*4.98*	*2.00*	*0.20*	*1.99*	*Cum*
	Levelling course	*2*	*3.50*	*6.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.36**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*4.98*	*1.70*	*0.20*	*1.69*	*Cum*
		1	*4.98*	*1.55*	*0.80*	*6.16*	*Cum*
		1	*4.98*	*1.01*	*1.25*	*6.27*	*Cum*
		1	*4.98*	*0.82*	*0.50*	*2.04*	*Cum*
		1	*4.98*	*0.40*	*0.20*	*0.40*	
	Return wall	*2*	*1.90*	*1.52*	*0.20*	*1.15*	*Cum*
		2	*1.90*	*1.32*	*0.80*	*4.00*	*Cum*
		2	*1.90*	*0.66*	*1.72*	*4.30*	*Cum*
		2	*1.90*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*4.98*	*1.70*	*0.20*	*1.69*	*Cum*
		1	*4.98*	*1.55*	*0.80*	*6.16*	*Cum*
		1	*4.98*	*1.01*	*1.25*	*6.27*	*Cum*
		1	*4.98*	*0.82*	*0.50*	*2.04*	*Cum*
		1	*4.98*	*0.40*	*0.20*	*0.40*	*Cum*
	Return wall	*2*	*1.90*	*1.52*	*0.20*	*1.15*	*Cum*
		2	*1.90*	*1.32*	*0.80*	*4.00*	*Cum*
		2	*1.90*	*0.66*	*1.72*	*4.30*	*Cum*
		2	*1.90*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**52.46**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.55	6.50	0.54	*26.26*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Approch Slab	*2*	*3.50*	*6.50*	*0.34*	*15.24*	*Cum*
	Wearing coat	*1*	*14.55*	*5.50*	*0.08*	*6.00*	*Cum*
	Parapet	*2*	*14.55*	*0.44*	*0.18*	*2.26*	*Cum*
		2	*14.55*	*0.35*	*0.25*	*2.55*	*Cum*
		2	*14.55*	*0.22*	*0.55*	*3.51*	*Cum*
	TOTAL					**55.82**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*66*	*8.15*		*2.466*	*1326.4*	*Kg*
a2	*12*	*50*	*6.94*		*0.888*	*308.0*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*33*	*8.17*		*0.616*	*166.2*	*Kg*
a5	*10*	*38*	*6.69*		*0.616*	*156.7*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*5.65*		*0.888*	*230.7*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*126*	*2.52*		*0.888*	*282.2*	*Kg*
x2	*16*	*126*	*1.44*		*1.578*	*287.1*	*Kg*
x3	*10*	*24*	*7.45*		*0.616*	*110.2*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*52.46*	*0.0025*	*0.131*	*7850.00*	#######	*Kg*
	Total Reinforcement Steel (in kg)					*5315.2*	*Kg*
	Total Weight in Metric Tonne					**5.32**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*4.98*		*0.20*	*1.99*	*Sqm*
		2		*1.70*	*0.20*	*0.68*	*Sqm*
		2	*4.98*		*0.80*	*7.97*	*Sqm*
		2		*1.55*	*0.80*	*2.47*	*Sqm*
		2	*4.98*		*1.25*	*12.46*	*Sqm*
		2		*1.01*	*1.25*	*2.52*	*Sqm*
		2	*4.98*		*0.50*	*4.98*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
		2	*4.9825*		*0.2*	*1.99*	*Sqm*
		2		*0.4*	*0.20*	*0.16*	*Sqm*
	Return wall	*2*	*1.90*		*0.20*	*0.76*	*Sqm*
		2		*1.52*	*0.20*	*0.61*	*Sqm*
		2	*1.90*		*0.80*	*3.04*	*Sqm*
		2		*1.32*	*0.80*	*2.11*	*Sqm*
		2	*1.90*		*1.72*	*6.53*	*Sqm*
		2		*0.66*	*1.72*	*2.26*	*Sqm*
		2	*1.90*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*4.98*		*0.20*	*1.99*	*Sqm*
		2		*1.70*	*0.20*	*0.68*	*Sqm*
		2	*4.98*		*0.80*	*7.97*	*Sqm*
		2		*1.55*	*0.80*	*2.47*	*Sqm*
		2	*4.98*		*1.25*	*12.46*	*Sqm*
		2		*1.01*	*1.25*	*2.52*	*Sqm*
		2	*4.98*		*0.50*	*4.98*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
		2	*4.9825*		*0.2*	*1.99*	*Sqm*
		2		*0.4*	*0.20*	*0.16*	*Sqm*
	Return wall	*2*	*1.90*		*0.20*	*0.76*	*Sqm*
		2		*1.52*	*0.20*	*0.61*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.90*		*0.80*	*3.04*	*Sqm*
		2		*1.32*	*0.80*	*2.11*	*Sqm*
		2	*1.90*		*1.72*	*6.53*	*Sqm*
		2		*0.66*	*1.72*	*2.26*	*Sqm*
		2	*1.90*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.55*		*0.54*	*8.08*	*Sqm*
		1	*7.55*	6.50		*49.08*	*Sqm*
		2		*6.50*	0.54	*6.96*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.34*	*4.69*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.34	*8.71*	*Sqm*
	Parapet	*4*	*14.55*		*0.18*	*10.19*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.55*		*0.25*	*14.55*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.55*		*0.55*	*32.01*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**284.96**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	4.98	1.31		*13.04*	*Cum*
	Right and left Return wall	4	2.30	2.38		*21.83*	*Cum*
	Extra slope	*2*	*7.58*	*2.016*	*1.46*	*44.63*	*Cum*
		2	*7.58*	*0.73*	*1.46*	*16.16*	*Cum*
	TOTAL					**95.66**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR CD WORK

Sr. No.	KM	STRUCTURE	Amount in Rs.
1	7.326	CD Work	₹ 14,34,363.80
2	9.906	CD Work	₹ 17,06,519.96
3	10.430	CD Work	₹ 21,97,361.11
		Sub-Total	₹ 53,38,244.87
		Seigniorage charges	₹ 43,496.84
		Total (in Rs. Lakhs)	**₹ 53.82**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF KONCHI DY.									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch.7.326 Km									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	109.40	Cum	**149.30**	16333.17			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	47.17	Cum	**6381.70**	301014.18	15.28	21.23	42.45
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	57.78	Cum	**6914.20**	399530.53	23.84	24.85	49.69
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	295.35	Sqm	**578.60**	170886.77			
5	**RCD M-148**	Providing 1000mm NP4 RCC Hume Pipe with Spigot	20.00	RM	**6002.82**	120056.40			
6	**5.6.2.4**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	20.00	RM	**1713.33**	34266.61			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.13	MT	**73574.90**	83434.83			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	364.89	Cum	**195.20**	71225.78			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	46.07	Cum	**1075.00**	49528.36			
		Coarse Aggregates (100 Km lead)	92.15	Cum	**1398.00**	128819.82			
		Cement (30 km lead)	39.12	MT	**742.00**	29025.90			
		Steel (30 Km lead)	1.13	MT	**742.00**	841.44			
		Hume Pipe (30 Km)	20.00	RM	**1470.00**	29400.00			
TOTAL (In Rs.)						**₹ 14,34,363.80**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	46.07	Cum	**584.64**	26936.06	2693.61		
		Coarse Aggregate	92.15	Cum	**944.26**	87009.59	8700.96		
		Total					**11394.56**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 9.906 km									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	88.33	Cum	**149.30**	13187.65			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	63.60	Cum	**6381.70**	405895.47	20.61	28.62	57.24
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	64.55	Cum	**6914.20**	446282.15	26.63	27.75	55.51
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	337.63	Sqm	**578.60**	195351.45			
5	**RCD M-149**	Providing 1200mm NP4 RCC Hume Pipe with Spigot	20.00	RM	**7015.86**	140317.20			
6	**5.6.2.5**	Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	20.00	RM	**2047.70**	40954.08			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.27	MT	**73574.90**	93198.07			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	411.66	Cum	**195.20**	80355.84			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	56.38	Cum	**1075.00**	60604.23			
		Coarse Aggregates (100 Km lead)	112.75	Cum	**1398.00**	157627.39			
		Cement (30 km lead)	47.23	MT	**742.00**	35046.52			
		Steel (30 Km lead)	1.27	MT	**742.00**	939.90			
		Hume Pipe (30 Km)	20.00	RM	**1838.00**	36760.00			
TOTAL (In Rs.)						**₹ 17,06,519.96**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	56.38	Cum	**584.64**	32959.68	3295.97		
		Coarse Aggregate	112.75	Cum	**944.26**	106467.26	10646.73		
		Total					**13942.69**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 10.430 Km									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	141.44	Cum	**149.30**	21116.86			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	70.13	Cum	**6381.70**	447519.04	22.72	31.56	63.11
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	97.37	Cum	**6914.20**	673253.62	40.17	41.87	83.74
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	415.68	Sqm	**578.60**	240514.95			
5	**RCD M-149**	Providing 1200mm NP4 RCC Hume Pipe with Spigot	22.50	RM	**7015.86**	157856.85			
6	**5.6.2.5**	Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	22.50	RM	**2047.70**	46073.34			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.91	MT	**73574.90**	140597.02			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	495.70	Cum	**195.20**	96760.02			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	73.43	Cum	**1075.00**	78933.63			
		Coarse Aggregates (100 Km lead)	146.85	Cum	**1398.00**	205300.86			
		Cement (30 km lead)	62.89	MT	**742.00**	46662.02			
		Steel (30 Km lead)	1.91	MT	**742.00**	1417.92			
		Hume Pipe (30 Km)	22.50	RM	**1838.00**	41355.00			
TOTAL (In Rs.)						**₹ 21,97,361.11**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	73.43	Cum	**584.64**	42928.15	4292.81		
		Coarse Aggregate	146.85	Cum	**944.26**	138667.66	13866.77		
		Total					**18159.58**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF KONCHI DY.							
Cross Drainage at Ch.7.326 Km							
S. No.	**Item of Works**	**No.**		**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*9.65*	*0.76*		*7.36*	*Cum*
		1	*5.72*	*3.60*		*20.59*	*Cum*
	Middle Portion	*1*	*1.83*	*28.06*		*51.35*	*Cum*
	Right Portion	*1*	*9.65*	*0.76*		*7.36*	*Cum*
		1	*6.02*	*3.77*		*22.73*	*Cum*
	TOTAL					**109.40**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	Left Abutment	*1*	*9.65*	*0.91*	*0.30*	*2.63*	*Cum*
		1	*5.72*	*4.08*	*0.30*	*7.00*	*Cum*
	Right Abutment	*1*	*9.65*	*1.12*	*0.30*	*3.25*	*Cum*
		1	*6.02*	*4.08*	*0.30*	*7.37*	*Cum*
	Below Pipe Section	*1*	*20.00*	*1.83*	*0.30*	*10.98*	*Cum*
		1	*20.00*	*0.37*		*7.45*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.33*	*2.50*	*0.20*	*4.33*	*Cum*
	Pipe Section	*7*	*0.30*	*1.73*	*1.83*	*6.65*	*Cum*
	Deduct Area of Pipe	*7*	*0.30*	*1.19*		*-2.49*	*Cum*
	TOTAL					**47.17**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*1*	*9.35*	*0.30*	*0.30*	*0.84*	*Cum*
		1	*9.35*	*0.53*	*1.53*	*7.57*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*1*	*2.33*	*0.30*	*0.50*	*0.35*	*Cum*
		1	*2.33*	*0.87*	*3.83*	*7.80*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.18*	*0.30*	*0.40*	*1.00*	*Cum*
		2	*4.18*	*0.70*	*2.68*	*15.71*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*1*	*9.35*	*0.30*	*0.30*	*0.84*	*Cum*
		1	*9.35*	*0.60*	*1.53*	*8.64*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*1*	*2.33*	*0.30*	*0.50*	*0.35*	*Cum*
		1	*2.33*	*0.87*	*3.83*	*7.80*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*1*	*4.20*	*0.74*	*2.68*	*8.33*	*Cum*
		1	*4.20*	*0.30*	*0.40*	*0.50*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*1*	*1.21*	*1.628*		*-1.96*	*Cum*
	TOTAL					**57.78**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	300 mm Thick Left Abutment	2	*9.65*		*0.30*	5.79	*Sqm*
		2		*0.91*	*0.30*	0.55	*Sqm*
		2	5.72		1.53	17.50	*Sqm*
		2		4.08	1.53	12.48	*Sqm*
	300 mm Thick Right Abutment	2	*9.65*		*0.30*	5.79	*Sqm*
		2		*1.12*	*0.30*	0.67	*Sqm*
		2	6.02		0.30	3.61	*Sqm*
		2		4.08	0.30	2.45	*Sqm*
	200 mm Thick Left and Right Portion Well	4	4.33		0.20	3.46	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	14	0.30		1.83	7.69	*Sqm*
		14		1.73	1.83	44.32	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	2	*9.35*		*0.30*	5.61	*Sqm*
		2		0.30	0.30	0.18	*Sqm*
		2	*9.35*		*1.53*	28.60	*Sqm*
		2		0.53	1.53	1.62	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.33		0.50	4.66	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		2	2.33		3.83	17.84	*Sqm*
		2		0.87	3.83	6.70	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	2	4.18		0.40	3.34	*Sqm*
		2		0.30	0.40	0.24	*Sqm*
		2	4.18		2.68	22.38	*Sqm*
		2		0.70	2.68	3.76	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	2	2.33		3.83	17.84	*Sqm*
		2		0.87	3.83	6.70	*Sqm*
		2	2.33		0.50	2.33	*Sqm*
		2		0.30	0.50	0.30	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	2	9.35		1.53	28.60	*Sqm*
		2		0.60	1.53	1.85	*Sqm*
		2	9.35		0.30	5.61	*Sqm*
		2		0.30	0.30	0.18	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	2	4.20		2.68	22.53	*Sqm*
		2		0.74	2.68	3.96	*Sqm*
		2	4.20		0.40	3.36	*Sqm*
		2		0.30	0.40	0.24	*Sqm*
	TOTAL					**295.35**	***Sqm***
5	Providing RCC Pipe NP4 heavy duty non pressure pipe 1000 mm dia with spigot						
	1000 mm dia pipe	*8*	*2.50*			*20.00*	*RM*
	TOTAL					**20.00**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*57.78*	*0.0025*	*0.144*	*7850.00*	*1134.012*	*Kg*
	TOTAL					*1134.012*	*Kg*
	TOTAL					**1.13**	**M.T.**
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*9.65*	*0.91*	*3.55*	*31.14*	*Cum*
		1	*5.72*	*4.08*	*3.55*	*82.87*	*Cum*

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Middle Portion	*1*	*1.83*	*53.91*		*98.66*	*Cum*
	Right Portion	*1*	*9.65*	*1.12*	*4.30*	*46.54*	*Cum*
		1	*6.02*	*4.08*	*4.30*	*105.69*	*Cum*
	TOTAL					**364.89**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Cross Drainage at Ch. 9.906 km						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*9.98*	*0.76*		*7.62*	*Cum*
		1	*4.16*	*3.60*		*14.98*	*Cum*
	Middle Portion	*1*	*2.04*	*28.00*		*57.12*	*Cum*
	Right Portion	*1*	*9.98*	*0.48*		*4.79*	*Cum*
		1	*4.16*	*0.92*		*3.81*	*Cum*
	TOTAL					**88.33**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	Left Abutment	*1*	*9.98*	*0.97*	*0.30*	*2.91*	*Cum*
		1	*6.02*	*4.16*	*0.30*	*7.52*	*Cum*
	Right Abutment	*1*	*9.98*	*0.97*	*0.30*	*2.91*	*Cum*
		1	*6.02*	*4.16*	*0.30*	*7.52*	*Cum*
	Below Pipe Section	*1*	*20.00*	*2.04*	*0.30*	*12.24*	*Cum*
		1	*20.00*	*1.07*		*21.47*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.54*	*2.50*	*0.20*	*4.54*	*Cum*
	Pipe Section	*7*	*0.30*	*1.94*	*1.94*	*7.90*	*Cum*
	Deduct Area of Pipe	*7*	*0.30*	*1.63*		*-3.42*	*Cum*
	TOTAL					**63.60**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*1*	*9.68*	*0.30*	*0.30*	*0.87*	*Cum*
		1	*9.68*	*0.56*	*1.74*	*9.45*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*1*	*2.62*	*0.30*	*0.50*	*0.39*	*Cum*
		1	*2.62*	*0.91*	*4.04*	*9.59*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.22*	*0.30*	*0.40*	*1.01*	*Cum*
		2	*4.22*	*0.73*	*2.89*	*17.89*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*1*	*9.68*	*0.30*	*0.30*	*0.87*	*Cum*
		1	*9.68*	*0.56*	*1.74*	*9.45*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*1*	*2.62*	*0.30*	*0.50*	*0.39*	*Cum*
		1	*2.62*	*0.91*	*4.04*	*9.59*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*1*	*4.22*	*0.73*	*2.89*	*8.95*	*Cum*
		0	*4.22*	*0.30*	*0.40*	*0.00*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*1.21*	*1.628*		*-3.93*	*Cum*
	TOTAL					**64.55**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	300 mm Thick Left Abutment	2	*9.98*		*0.30*	5.99	*Sqm*
		2		*0.97*	*0.30*	0.58	*Sqm*
		2	6.02		0.30	3.61	*Sqm*
		2		4.16	0.30	2.50	*Sqm*
	300 mm Thick Right Abutment	2	*9.98*		*0.30*	5.99	*Sqm*
		2		*0.97*	*0.30*	0.58	*Sqm*
		2	6.02		0.30	3.61	*Sqm*
		2		4.16	0.30	2.50	*Sqm*
	200 mm Thick Left and Right Portion Well	4	4.54		0.20	3.63	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	14	0.30		1.94	8.15	*Sqm*
		14		1.94	1.94	52.69	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	2	*9.68*		*0.30*	5.81	*Sqm*
		2		0.30	0.30	0.18	*Sqm*
		2	*9.68*		*1.74*	33.70	*Sqm*
		2		0.56	1.74	1.95	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.62		0.50	5.24	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		2	2.62		4.04	21.18	*Sqm*
		2		0.91	4.04	7.32	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.22		0.40	6.75	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.22		2.89	48.78	*Sqm*
		4		0.73	2.89	8.48	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	2	2.62		4.04	21.18	*Sqm*
		2		0.91	4.04	7.32	*Sqm*
		2	2.62		0.50	2.62	*Sqm*
		2		0.30	0.50	0.30	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	2	9.68		1.74	33.70	*Sqm*
		2		0.56	1.74	1.95	*Sqm*
		2	9.68		0.30	5.81	*Sqm*
		2		0.30	0.30	0.18	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	2	4.22		2.89	24.39	*Sqm*
		2		0.73	2.89	4.24	*Sqm*
		2	4.22		0.40	3.38	*Sqm*
		2		0.30	0.40	0.24	*Sqm*
	TOTAL					**337.63**	***Sqm***
5	Providing RCC Pipe NP4 heavy duty non pressure pipe 1200 mm dia with spigot						
	1200 mm dia pipe	*8*	*2.50*			*20.00*	*RM*
	TOTAL					**20.00**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*64.55*	*0.0025*	*0.161*	*7850.00*	*1266.710*	*Kg*
	TOTAL					*1266.710*	*Kg*
	TOTAL					**1.27**	**M.T.**
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*9.98*	*0.97*	*4.33*	*41.98*	*Cum*
		1	*6.02*	*4.16*	*4.33*	*108.46*	*Cum*

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Middle Portion	*1*	*2.04*	*55.00*		*112.20*	*Cum*
	Right Portion	*1*	*9.98*	*0.97*	*4.29*	*41.58*	*Cum*
		1	*6.02*	*4.16*	*4.29*	*107.43*	*Cum*
	TOTAL					**411.66**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Cross Drainage at Ch. 10.430 Km						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*9.98*	*0.92*		*9.15*	*Cum*
		1	*4.16*	*5.56*		*23.11*	*Cum*
	Middle Portion	*1*	*2.04*	*39.84*		*81.27*	*Cum*
	Right Portion	*1*	*9.98*	*0.48*		*4.79*	*Cum*
		1	*4.16*	*5.56*		*23.11*	*Cum*
	TOTAL					**141.44**	**Cum**
2	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	Left Abutment	*1*	*9.98*	*0.97*	*0.30*	*2.91*	*Cum*
		1	*6.02*	*4.49*	*0.30*	*8.12*	*Cum*
	Right Abutment	*1*	*9.98*	*0.97*	*0.30*	*2.91*	*Cum*
		1	*6.02*	*4.49*	*0.30*	*8.12*	*Cum*
	Below Pipe Section	*1*	*22.50*	*2.04*	*0.30*	*13.77*	*Cum*
		1	*22.50*	*1.07*		*24.14*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.54*	*2.50*	*0.20*	*4.54*	*Cum*
	Pipe Section	*8*	*0.30*	*1.94*	*1.94*	*9.03*	*Cum*
	Deduct Area of Pipe	*7*	*0.30*	*1.63*		*-3.42*	*Cum*
	TOTAL					**70.13**	**Cum**
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*1*	*9.68*	*0.30*	*0.30*	*0.87*	*Cum*
		1	*9.68*	*0.56*	*1.74*	*9.45*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*1*	*2.62*	*0.30*	*0.50*	*0.39*	*Cum*
		1	*2.62*	*1.07*	*5.14*	*14.43*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.36*	*0.30*	*0.40*	*1.05*	*Cum*
		2	*4.36*	*0.82*	*3.44*	*24.46*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*1*	*9.68*	*0.30*	*0.30*	*0.87*	*Cum*
		1	*9.68*	*0.56*	*1.74*	*9.45*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*1*	*2.62*	*0.30*	*0.50*	*0.39*	*Cum*
		1	*2.62*	*1.07*	*5.14*	*14.43*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.36*	*0.82*	*3.44*	*24.46*	*Cum*
		2	*4.36*	*0.30*	*0.40*	*1.05*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*1.21*	*1.628*		*-3.93*	*Cum*
	TOTAL					**97.37**	**Cum**
4	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Left Abutment	2	*9.98*		*0.30*	5.99	*Sqm*
		2		*0.97*	*0.30*	0.58	*Sqm*
		2	6.02		0.30	3.61	*Sqm*
		2		4.49	0.30	2.70	*Sqm*
	Right Abutment	2	*9.98*		*0.30*	5.99	*Sqm*
		2		*0.97*	*0.30*	0.58	*Sqm*
		2	6.02		0.30	3.61	*Sqm*
		2		4.49	0.30	2.70	*Sqm*
	200 mm Thick Left and Right Portion Well	4	4.54		0.20	3.63	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	16	0.30		1.94	9.31	*Sqm*
		14		1.94	1.94	52.69	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	2	*9.68*		*0.30*	5.81	*Sqm*
		2		0.30	0.30	0.18	*Sqm*
		2	*9.68*		*1.74*	33.70	*Sqm*
		2		0.56	1.74	1.95	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	2	2.62		0.50	2.62	*Sqm*
		2		0.30	0.50	0.30	*Sqm*
		2	2.62		5.14	26.94	*Sqm*
		2		1.07	5.14	11.01	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.36		0.40	6.97	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
		4	4.36		3.44	59.95	*Sqm*
		4		0.82	3.44	11.23	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	2	2.62		5.14	26.94	*Sqm*
		2		1.07	5.14	11.01	*Sqm*
		2	2.62		0.50	2.62	*Sqm*
		2		0.30	0.50	0.30	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	2	9.68		1.74	33.70	*Sqm*
		2		0.56	1.74	1.95	*Sqm*
		2	9.68		0.30	5.81	*Sqm*
		2		0.30	0.30	0.18	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.36		3.44	59.95	*Sqm*
		4		0.82	3.44	11.23	*Sqm*
		4	4.36		0.40	6.97	*Sqm*
		4		0.30	0.40	0.48	*Sqm*
	TOTAL					**415.68**	***Sqm***
5	Providing RCC Pipe NP4 heavy duty non pressure pipe 1200 mm dia with spigot						
	1.2 m dia pipe	*9*	*2.50*			*22.50*	*RM*
	TOTAL					**22.50**	**RM**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*97.37*	*0.0025*	*0.243*	*7850.00*	*1910.937*	*Kg*
	TOTAL					*1910.937*	*Kg*
	TOTAL					**1.91**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*9.98*	*0.97*	*5.67*	*55.01*	*Cum*
		1	*6.02*	*4.49*	*5.67*	*153.40*	*Cum*
	Middle Portion	*1*	*2.04*	*38.10*		*77.72*	*Cum*
	Right Portion	*1*	*9.98*	*0.97*	*5.70*	*55.32*	*Cum*
		1	*6.02*	*4.49*	*5.70*	*154.24*	*Cum*
	TOTAL					**495.70**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF BRICK WORK OF CANAL

S.No.	Name of Canal	Reaches (m)	Length (m)	Area (m2)	Quantity (m3)	Unit	Rates (As per Bihar SOR 2025)	Amount	Cement (MT)	Coarse Sand (Cum)
1	Konchi Dy	18300-18800	500	0.568	284.000	Cum	**5021.30**	₹ 14,26,049.20	32.72	90.88
		18800-18900	100	0.530	53.000	Cum	**5021.30**	₹ 2,66,128.90	6.11	16.96
2	Dadhpa Sub Dy	5450-6200	750	0.550	412.500	Cum	**5021.30**	₹ 20,71,286.25	47.52	132.00
3	Guraru Sub Dy	5925-6425	500	0.560	280.000	Cum	**5021.30**	₹ 14,05,964.00	32.26	89.60
4	Dighi Minor	3700-3775	75	0.540	40.500	Cum	**5021.30**	₹ 2,03,362.65	4.67	12.96
	Total				***1070.00***			***₹ 53,72,791.00***	***123.26***	***342.40***
5	**Carriage of materials**									
	Coarse Sand (60 Km lead)				342.400	Cum	**1075.00**	₹ 3,68,080.00		
	Cement (30 km lead)				123.264	MT	**742.00**	₹ 91,461.89		
	Brick (15 km lead)				535000	No.	**3.18**	₹ 17,01,300.00		
	Carriage of materials Total (In Rs.)							**₹ 21,60,841.89**		
	SUB TOTAL (In Rs.)							**₹ 75,33,632.89**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	342.40	Cum		**584.64**	200180.74	20018.07			
	Total						**₹ 20,018.07**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KONCHI DY.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	HR FOR MAHIMAPUR SUB DY.	0.180	₹ 37,904.82
2	SLR BRIDGE	0.275	₹ 1,92,354.91
3	CD WORK	0.870	₹ 80,555.32
4	SLR BRIDGE	1.150	₹ 85,620.12
5	SLR BRIDGE	1.471	₹ 28,789.30
6	SLR BRIDGE	2.190	₹ 56,530.89
7	SLR BRIDGE	2.563	₹ 74,409.71
8	FALL (1.828 M) NEW	3.213	₹ 0.00
9	SLR BRIDGE	3.310	₹ 59,629.77
10	FALL (1.372 M) / SLR BRIDGE	3.993	₹ 54,081.59
11	SLR BRIDGE	5.029	₹ 38,408.18
12	SLR BRIDGE	5.605	₹ 71,438.01
13	HR FOR DEOKULI MR (NEW)	6.350	₹ 0.00
14	HR FOR THAKUR BIGHA MR	6.500	₹ 18,843.90
15	SLR BRIDGE	6.725	₹ 23,336.61
16	FALL (0.457 M)	7.075	₹ 21,872.39
17	CD WORK	7.326	₹ 24,676.54
18	FALL (0.610 M)	7.836	₹ 25,805.44
19	SLR BRIDGE	8.691	₹ 28,176.52
20	CD WORK	9.571	₹ 24,381.60
21	CD WORK	9.906	₹ 16,824.92
22	FALL (0.610 M)	10.098	₹ 95,964.33
23	CD WORK	10.430	₹ 22,713.64
24	SUPER PASSAGE	10.659	₹ 41,932.72
25	CD WORK	11.140	₹ 22,328.12
26	DLR BRIDGE	11.159	₹ 4,362.06
27	HR FOR DADHPA DY.	11.300	₹ 43,044.36
28	CD WORK	11.595	₹ 13,741.15
29	CD WORK	12.640	₹ 19,960.78
30	SLR BRIDGE	12.673	₹ 13,256.09
31	CD WORK	13.009	₹ 11,716.95
32	SLR BRIDGE	13.038	₹ 36,674.99
33	FALL (1.830 M)(NEW)	13.777	₹ 0.00
34	HR FOR IGUNI MR	15.150	₹ 18,133.52
35	CD WORK	16.392	₹ 15,656.59
36	SLR BRIDGE	16.438	₹ 75,760.72
37	HR FOR KONCHI MR (NEW)	16.460	₹ 0.00
38	HR FOR GURARU SUB DY./ FALL (0.610 M)	16.700	₹ 35,581.58
39	FALL (1.524 M)	17.600	₹ 18,678.01
40	FALL (0.610 M) (NEW)	18.200	₹ 0.00
41	SLR BRIDGE	18.480	₹ 13,498.07
42	FALL (1.220 M)	18.654	₹ 21,204.85
43	FALL (1.220 M) (NEW)	18.895	₹ 0.00
Total In Rs.			**₹ 14,87,849.07**
Total In Lakhs.			**₹ 14.88**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF KONCHI DY.									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR HR OF MAHIMAPUR SUB DY. (Ch.-0.180 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.350	Cum	**2492.58**	23305.62			
2	5.8.7	Dismantling pucca brick or line work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	21.000	Cum	**695.20**	14599.20			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**37904.82**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR SLR BRIDGE (Ch.-0.275 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.48	Cum	**680.10**	2365.12	0.40	1.11	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	17.556	Sqm	**340.20**	5972.55	0.190	0.256	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	17.556	Sqm	**63.20**	1109.54	0.03		
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	17.460	Cum	**6914.20**	120721.93	7.20	7.51	15.02
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	32.880	Sqm	**578.60**	19024.37			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	8.877	Cum	**1075.00**	9542.72			
		Coarse Aggregates (100 Km lead)	15.016	Cum	**1398.00**	20991.81			
		Cement (30 km lead)	7.819	MT	**742.00**	5801.55			
		Brick (15 km lead)	1738.00	No.	**3.18**	5526.84			
TOTAL (In Rs.)						**192354.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	8.88	Cum	**584.64**	5189.82	518.98		
		Coarse Aggregate	15.02	Cum	**944.26**	14178.63	1417.86		
		Total					**1936.85**		
AOC FOR CD WORK (Ch.-0.870 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	250.000	Sqm	**11.80**	2951.10			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	86.250	Sqm	**340.20**	29342.25	0.931	1.259	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	86.250	Sqm	**63.20**	5451.00	0.13		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.050	Cum	**6914.20**	28002.51	1.67	1.74	3.48
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.100	Sqm	**578.60**	4686.66			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.001	Cum	**1075.00**	3225.81			
		Coarse Aggregates (100 Km lead)	3.483	Cum	**1398.00**	4869.23			
		Cement (30 km lead)	2.731	MT	**742.00**	2026.76			
		TOTAL (In Rs.)				**80555.32**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.00	Cum	**584.64**	1754.36	175.44		
		Coarse Aggregate	3.48	Cum	**944.26**	3288.86	328.89		
		Total					**504.32**		
		AOC FOR SLR BRIDGE (Ch.-1.150 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	34.350	Cum	**2492.58**	85620.12			
2	5.8.7	Dismantling pucca brick or line work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	19.800	Cum	**0.00**	0.00			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**85620.12**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-1.471 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	11.550	Cum	**2492.58**	28789.30			
2	5.8.7	Dismantling pucca brick or line work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.900	Cum	**0.00**	0.00			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**28789.30**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-2.190 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	126.500	Sqm	**340.20**	43035.30	1.366	1.847	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	126.500	Sqm	**63.20**	7994.80	0.19		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.847	Cum	**1075.00**	1985.42			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.556	MT	**742.00**	1154.50			
		TOTAL (In Rs.)				**56530.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.85	Cum	**584.64**	1079.77	107.98		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**107.98**		
		AOC FOR SLR BRIDGE (Ch.-2.563 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	220.000	Sqm	**11.80**	2596.97			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	167.700	Sqm	**340.20**	57051.54	1.811	2.448	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	167.700	Sqm	**63.20**	10598.64	0.25		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.448	Cum	**1075.00**	2632.05			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.063	MT	**742.00**	1530.51			
		TOTAL (In Rs.)				**74409.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.45	Cum	**584.64**	1431.44	143.14		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**143.14**		
		AOC FOR SLR BRIDGE (Ch.-3.310 Km)							
	1	**New Structure is proposed at this location.**							
		AOC FOR SLR BRIDGE (Ch.-3.310 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	12.69	Cum	**680.10**	8630.47	1.46	4.06	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	59.250	Sqm	**340.20**	20156.85	0.640	0.865	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	59.250	Sqm	**63.20**	3744.60	0.09		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.926	Cum	**1075.00**	5295.29			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.191	MT	**742.00**	1625.46			
		Brick (15 km lead)	6345.00	No.	**3.18**	20177.10			
		TOTAL (In Rs.)				**59629.77**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.93	Cum	**584.64**	2879.85	287.98		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**287.98**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR SLR BRIDGE + FALL (Ch.-3.993 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	280.000	Sqm	**11.80**	3305.23			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	118.575	Sqm	**340.20**	40339.22	1.281	1.731	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	118.575	Sqm	**63.20**	7493.94	0.18		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.731	Cum	**1075.00**	1861.03			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.458	MT	**742.00**	1082.17			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**54081.59**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.73	Cum	**584.64**	1012.13	101.21		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**101.21**		
AOC FOR SLR BRIDGE (Ch.-5.029 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.90	Cum	**680.10**	1970.93	0.33	0.93	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	76.670	Sqm	**340.20**	26083.13	0.828	1.119	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	76.670	Sqm	**63.20**	4845.54	0.12		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.047	Cum	**1075.00**	2200.25			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.277	MT	**742.00**	947.44			
		Brick (15 km lead)	1449.00	No.	**3.18**	4607.82			
TOTAL (In Rs.)						**38408.18**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.05	Cum	**584.64**	1196.61	119.66		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**119.66**		
AOC FOR SLR BRIDGE (Ch.-5.605 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	162.690	Sqm	**340.20**	55347.14	1.757	2.375	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	162.690	Sqm	**63.20**	10282.01	0.24		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.375	Cum	**1075.00**	2553.42			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.001	MT	**742.00**	1484.79			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**71438.01**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.38	Cum	**584.64**	1388.68	138.87		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Total					**138.87**		
		AOC FOR HR FOR DEOKULI MR. (Ch.-6.350 Km)							
1	**New HR is proposed at this location Existing structure is not present there.**								
		AOC FOR HR FOR THAKUR BIGHA MR. (Ch.-6.500 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.560	Cum	**2492.58**	18843.90			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**18843.90**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR SLR BRIDGE (Ch.-6.725 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	4.28	Cum	**680.10**	2907.43	0.49	1.37	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	27.550	Sqm	**340.20**	9372.51	0.298	0.402	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	27.550	Sqm	**63.20**	1741.16	0.04		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.770	Cum	**1075.00**	1903.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.831	MT	**742.00**	616.85			
		Brick (15 km lead)	2137.00	No.	**3.18**	6795.66			
		TOTAL (In Rs.)				**23336.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.77	Cum	**584.64**	1034.95	103.49		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**103.49**		
		AOC FOR FALL (Ch.-7.075 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	8.775	Cum	**2492.58**	21872.39			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**21872.39**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR CD WROK (Ch.-7.326 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.900	Cum	**2492.58**	24676.54			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**24676.54**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.-7.836 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	55.300	Sqm	**340.20**	18813.06	0.597	0.807	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	55.300	Sqm	**63.20**	3494.96	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.807	Cum	**1075.00**	867.93			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.680	MT	**742.00**	504.69			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**25805.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.81	Cum	**584.64**	472.03	47.20		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**47.20**		
		AOC FOR CULVERT (Ch.-8.691 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	5.80	Cum	**680.10**	3941.86	0.67	1.85	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	29.260	Sqm	**340.20**	9954.25	0.316	0.427	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	29.260	Sqm	**63.20**	1849.23	0.04		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.282	Cum	**1075.00**	2453.06			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.028	MT	**742.00**	762.47			
		Brick (15 km lead)	2898.00	No.	**3.18**	9215.64			
		TOTAL (In Rs.)				**28176.52**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.28	Cum	**584.64**	1334.10	133.41		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**133.41**		
		AOC FOR CD WROK (Ch.-9.571 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	51.975	Sqm	**340.20**	17681.90	0.561	0.759	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	51.975	Sqm	**63.20**	3284.82	0.08		
4		**Carriage of materials**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand (60 Km lead)	0.759	Cum	**1075.00**	815.75			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.639	MT	**742.00**	474.35			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**24381.60**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.76	Cum	**584.64**	443.65	44.36		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**44.36**		

		AOC FOR CD WORK (Ch.-9.906 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	6.750	Cum	**2492.58**	16824.92			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**16824.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

		AOC FOR FALL (Ch.-10.098 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	38.500	Cum	**2492.58**	95964.33			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**95964.33**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

		AOC FOR CD WORK (Ch.-10.430 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.113	Cum	**2492.58**	22713.64			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**22713.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

		AOC FOR SUPER PASSAGE (Ch.-10.659 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	95.520	Sqm	**340.20**	32495.90	1.032	1.395	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	111.520	Sqm	**63.20**	7048.06	0.17		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.395	Cum	**1075.00**	1499.19			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.199	MT	**742.00**	889.57			
		TOTAL (In Rs.)				**41932.72**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.39	Cum	**584.64**	815.33	81.53		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**81.53**		
		AOC FOR CD WORK (Ch.-11.140 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	250.000	Sqm	**11.80**	2951.10			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	45.250	Sqm	**340.20**	15394.05	0.489	0.661	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	45.250	Sqm	**63.20**	2859.80	0.07		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.661	Cum	**1075.00**	710.20			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.557	MT	**742.00**	412.97			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**22328.12**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.66	Cum	**584.64**	386.24	38.62		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**38.62**		
		AOC FOR DLR BRIDGE (Ch.-11.159 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	45.800	Sqm	**63.20**	2894.56	0.07		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.069	MT	**742.00**	50.98			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**4362.06**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR HR DADHPA DY. (KM 11.300)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	17.269	Cum	**2492.58**	43044.36			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**43044.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR CD WORK (Ch.-11.595 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	210.000	Sqm	**11.80**	2478.92			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	26.300	Sqm	**340.20**	8947.26	0.284	0.384	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	26.300	Sqm	**63.20**	1662.16	0.04		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.384	Cum	**1075.00**	412.78			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.323	MT	**742.00**	240.03			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**13741.15**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.38	Cum	**584.64**	224.49	22.45		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**22.45**		

		AOC FOR CD WORK (Ch.-12.640 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	41.100	Sqm	**340.20**	13982.22	0.444	0.600	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	41.100	Sqm	**63.20**	2597.52	0.06		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.600	Cum	**1075.00**	645.06			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.506	MT	**742.00**	375.10			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**19960.78**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.60	Cum	**584.64**	350.82	35.08		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**35.08**		

		AOC FOR SLR BRIDGE (Ch.-12.673 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.48	Cum	**680.10**	1689.37	0.29	0.79	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	12.540	Sqm	**340.20**	4266.11	0.135	0.183	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	12.540	Sqm	**63.20**	792.53	0.02		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.978	Cum	**1075.00**	1051.31			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.440	MT	**742.00**	326.77			
		Brick (15 km lead)	1242.00	No.	**3.18**	3949.56			
		TOTAL (In Rs.)				**13256.09**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.98	Cum	**584.64**	571.76	57.18		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**57.18**		

		AOC FOR CD WORK (Ch.-13.009 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	22.400	Sqm	**340.20**	7620.48	0.242	0.327	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	22.400	Sqm	**63.20**	1415.68	0.03		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.327	Cum	**1075.00**	351.57			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.276	MT	**742.00**	204.43			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**11716.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.33	Cum	**584.64**	191.20	19.12		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**19.12**		

		AOC FOR SLR BRIDGE (Ch.-13.038 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	81.510	Sqm	**340.20**	27729.70	0.880	1.190	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	81.510	Sqm	**63.20**	5151.43	0.12		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.190	Cum	**1075.00**	1279.30			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.003	MT	**742.00**	743.90			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**36674.99**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.19	Cum	**584.64**	695.75	69.57		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**69.57**		

		AOC FOR FALL (Ch.-13.777 Km)							
1	**New Structure is proposed at this location.**								
		AOC FOR HR IGUNI MINOR.(KM 15.150)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.275	Cum	**2492.58**	18133.52			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**18133.52**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

		AOC FOR CD WORK (Ch.-16.392 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.000	Sqm	**11.80**	2124.79			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	31.600	Sqm	**340.20**	10750.32	0.341	0.461	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	31.600	Sqm	**63.20**	1997.12	0.05		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.461	Cum	**1075.00**	495.96			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.389	MT	**742.00**	288.40			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**15656.59**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.46	Cum	**584.64**	269.73	26.97		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**26.97**		

		AOC FOR SLR BRIDGE (Ch.-16.438 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	250.000	Sqm	**11.80**	2951.10			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	5.616	Cum	**6914.20**	38830.15	2.32	2.41	4.83
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	39.600	Sqm	**578.60**	22912.56			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.415	Cum	**1075.00**	2596.00			
		Coarse Aggregates (100 Km lead)	4.830	Cum	**1398.00**	6752.00			
		Cement (30 km lead)	2.317	MT	**742.00**	1718.92			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**75760.72**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.41	Cum	**584.64**	1411.84	141.18		
		Coarse Aggregate	4.83	Cum	**944.26**	4560.55	456.05		
		Total					**597.24**		

		AOC FOR HR KONCHI MINOR.(KM 16.460)							
1	**New HR construct at this location Existing is not Present there.**								
		AOC FOR HR GURARU SUB DY (KM 16.700)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	14.275	Cum	**2492.58**	35581.58			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**35581.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.-17.600 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.493	Cum	**2492.58**	18678.01			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**18678.01**			

AOC FOR FALL (KM 18.200)	
1	**New Fall is Proposed at this location**

AOC FOR SLR BRIDGE (Ch.-18.480 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.70	Cum	**680.10**	1836.27	0.31	0.86	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	14.500	Sqm	**340.20**	4932.90	0.157	0.212	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	14.500	Sqm	**63.20**	916.40	0.02		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.076	Cum	**1075.00**	1156.38			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.489	MT	**742.00**	363.13			
		Brick (15 km lead)	1350.00	No.	**3.18**	4293.00			
		TOTAL (In Rs.)				**13498.07**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.08	Cum	**584.64**	628.90	62.89		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**62.89**		

AOC FOR FALL (Ch.-18.654 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.000	Sqm	**11.80**	2360.88			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	44.005	Sqm	**340.20**	14970.57	0.475	0.642	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	44.005	Sqm	**63.20**	2781.13	0.07		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.642	Cum	**1075.00**	690.66			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.541	MT	**742.00**	401.61			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**21204.85**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.64	Cum	**584.64**	375.62	37.56		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**37.56**		

AOC FOR FALL (Ch.-18.895 Km)	
1	**New Fall is Proposed at this location**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF KONCHI DISTRIBUTARY

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR HR OF MAHIMAPUR SUB DY. (Ch.-0.180 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Gate Abutment Side wall	2	0.50	0.50	2.20	*1.10*	*Cum*
		Top Beam	1	3.00	0.50	0.50	*0.75*	*Cum*
		Slab	1	5.00	5.00	0.30	*7.50*	*Cum*
		TOTAL					***9.35***	***Cum***
2	**5.8.7**	**Dismantling pucca brick or line work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall U/S	2	2.50	0.50	1.5	*3.75*	*Cum*
		Curve Portion	1	2.00	0.50	1.5	*1.50*	*Cum*
		Abutment of Bridge	2	5.00	0.50	1.5	*7.50*	*Cum*
		Wing wall D/S	2	5.50	0.50	1.5	*8.25*	*Cum*
		TOTAL					***21.00***	***Cum***
	New HR of Mahimapur sub dy reconstruct at this location.							
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-0.275 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	8.4	0.45	0.92	*3.48*	*Cum*
		TOTAL					**3.48**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	8.40		2.09	*17.56*	*Sqm*
		TOTAL					**17.56**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	8.40		2.09	*17.56*	*Sqm*
		TOTAL					**17.56**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing wall D/S	2	3.00	0.45	1.8	*4.86*	*Cum*
		D/S Floor	1	5.00	8.40	0.3	*12.60*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					***17.46***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing wall D/S	4	3.00		1.8	*21.60*	Sqm
			4		0.45	1.8	*3.24*	Sqm
		D/S Floor	2	5.00		0.3	*3.00*	Sqm
			2		8.40	0.3	*5.04*	Sqm
		TOTAL					**32.88**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.870 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**250.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing Wall U/S & D/S	4	5.00		3.45	*69.00*	*Sqm*
		Abutment U/S & D/S	2	2.50		3.45	*17.25*	*Sqm*
		TOTAL					**86.25**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing Wall U/S & D/S	4	5.00		3.45	*69.00*	*Sqm*
		Abutment U/S & D/S	2	2.50		3.45	*17.25*	*Sqm*
		TOTAL					**86.25**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Partial Barrel Portion Top	1	3.00	2.50	0.3	*2.25*	*Cum*
		Partial Barrel Portion Side wall	2	3.00	1.00	0.3	*1.80*	*Cum*
		TOTAL					***4.05***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various**						
		Partial Barrel Portion Top	2	3.00		0.3	*1.80*	Sqm
			2		2.50	0.3	*1.50*	Sqm
		Partial Barrel Portion Side wall	4	3.00		0.3	*3.60*	Sqm
			4		1.00	0.3	*1.20*	Sqm
		TOTAL					**8.10**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-1.150 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	2	3.50	0.50	2.20	*7.70*	*Cum*
		Pier	2	8.20	0.50	2.20	*18.04*	*Cum*
		Slab	1	3.50	8.20	0.30	*8.61*	*Cum*
		TOTAL					***34.35***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.8.7**	**Dismantling pucca brick or line work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall U/S	2	5.00	0.45	2.20	*9.90*	*Cum*
		Wing wall D/S	2	5.00	0.45	2.20	*9.90*	*Cum*
		TOTAL					***19.80***	***Cum***
	New SLR Bridge reconstruct at this location.							
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-1.471 Km)						
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	1	5.50	0.50	2.20	*6.05*	*Cum*
		Pier	1	5.50	0.50	2.00	*5.50*	*Cum*
		TOTAL					***11.55***	***Cum***
2	**5.8.7**	**Dismantling pucca brick or line work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall U/S	2	5.00	0.45	2.20	*9.90*	*Cum*
		TOTAL					***9.90***	***Cum***
	New SLR Bridge reconstruct at this location.							
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-2.190 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing Wall U/S & D/S	4	6.00		3.45	*82.80*	*Sqm*
		Parapet wall	2	9.50		2.30	*43.70*	*Sqm*
		TOTAL					**126.50**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing Wall U/S & D/S	4	6.00		3.45	*82.80*	*Sqm*
		Abutment U/S & D/S	2	9.50		2.30	*43.70*	*Sqm*
		TOTAL					**126.50**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-2.563 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**220.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing Wall U/S & D/S	4	3.50		3.45	*48.30*	*Sqm*
		Pier	2	4.00		4.00	*32.00*	*Sqm*
		Parapet wall	2	19.00		2.30	*87.40*	*Sqm*
		TOTAL					**167.70**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing Wall U/S & D/S	4	3.50		3.45	*48.30*	*Sqm*
		Pier	*2*	4.00		4.00	*32.00*	*Sqm*
		Abutment U/S & D/S	2	19.00		2.30	*87.40*	*Sqm*
		TOTAL					**167.70**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.213 Km)								
	New Structure is proposed at this location.							
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-3.310 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	7.50	0.45	0.92	*6.21*	*Cum*
		Wing Wall	4	3.00	0.45	1.2	*6.48*	*Cum*
		TOTAL					**12.69**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	7.50		1.45	*21.75*	*Sqm*
		Wing Wall	4	7.50		1.25	*37.50*	*Sqm*
		TOTAL					**59.25**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	7.50		1.45	*21.75*	*Sqm*
		Wing Wall	4	7.50		1.25	*37.50*	*Sqm*
		TOTAL					**59.25**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE + FALL (Ch.-3.993 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**280.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	7.50		2.09	*31.35*	*Sqm*
		Pier	1	4.50		4.85	*21.83*	*Sqm*
		Wing Wall	4	3.00		5.45	*65.40*	*Sqm*
		TOTAL					**118.58**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	7.50		2.09	*31.35*	*Sqm*
		Pier	1	4.50		4.85	*21.83*	*Sqm*
		Wing Wall	4	3.00		5.45	*65.40*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**118.58**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-5.029 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.50	0.45	0.92	*2.90*	*Cum*
		TOTAL					**2.90**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	6.50		2.09	*27.17*	*Sqm*
		Wing wall	2	5.50		2.75	*30.25*	*Sqm*
		Pier	1	5.00		3.85	*19.25*	*Sqm*
		TOTAL					**76.67**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	6.50		2.09	*27.17*	*Sqm*
		Wing wall	2	5.50		2.75	*30.25*	*Sqm*
		Pier	1	5.00		3.85	*19.25*	*Sqm*
		TOTAL					**76.67**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR HR FOR DEOKULI MR. (Ch.-5.350 Km)						
1	**New Structure is proposed at this location. Existing is Not present there.**							
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-5.605 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	8.00		2.09	*33.44*	*Sqm*
		Wing wall	4	10.00		2.75	*110.00*	*Sqm*
		Pier	1	5.00		3.85	*19.25*	*Sqm*
		TOTAL					**162.69**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	8.00		2.09	*33.44*	*Sqm*
		Wing wall	4	10.00		2.75	*110.00*	*Sqm*
		Pier	1	5.00		3.85	*19.25*	*Sqm*
		TOTAL					**162.69**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR HR FOR DEOKULI MR. (Ch.-6.350 Km)								
1		**New HR is proposed at this location Existing structure is not present there.**						
QUANTITIES OF REPAIRING WORK FOR HR FOR THAKUR BIGHA MR. (Ch.-6.500 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment connected to Fall	1	3.00	0.45	1.50	*2.03*	*Cum*
			1	3.00	0.45	1.50	*2.03*	*Cum*
		Abutment after Road	1	6.00	0.45	0.80	*2.16*	*Cum*
		Bed bar	1	6.00	0.45	0.50	*1.35*	*Cum*
		TOTAL					***7.56***	***Cum***
	New HR reconstruct at this location.							
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-6.725 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	9.5	0.45	0.5	*4.28*	*Cum*
		TOTAL					**4.28**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	9.50		1.45	*27.55*	*Sqm*
		TOTAL					**27.55**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	9.50		1.45	*27.55*	*Sqm*
		TOTAL					**27.55**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.075 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	2	3.00	0.45	1.50	*4.05*	*Cum*
		Side wall	1	7.00	0.45	1.50	*4.73*	*Cum*
		TOTAL					***8.78***	***Cum***
	New HR reconstruct at this location.							
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-7.326 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	4	3.00	0.45	1.00	*5.40*	*Cum*
		Abutment	2	5.00	0.45	1.00	*4.50*	*Cum*
		TOTAL					***9.90***	***Cum***
	New CD work reconstruct at this location.							

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.836 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Side wall	2	7.00		1.45	*20.30*	*Sqm*
		Wing wall U/S	2	6.50		1.75	*22.75*	*Sqm*
		Wing wall D/S	2	3.50		1.75	*12.25*	*Sqm*
		TOTAL					**55.30**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	7.00		1.45	*20.30*	*Sqm*
		Wing wall U/S	2	6.50		1.75	*22.75*	*Sqm*
		Wing wall D/S	2	3.50		1.75	*12.25*	*Sqm*
		TOTAL					**55.30**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-8.691 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	7	0.45	0.92	*5.80*	*Cum*
		TOTAL					**5.80**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	7.00		2.09	*29.26*	*Sqm*
		TOTAL					**29.26**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	7.00		2.09	*29.26*	*Sqm*
		TOTAL					**29.26**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-9.571 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		U/S Abutment	2	3.50		1.45	*10.15*	*Sqm*
		D/S Abutment	1	3.50		1.45	*5.08*	*Sqm*
		Wing wall U/S	4	3.50		1.75	*24.50*	*Sqm*
		Wing wall D/S	2	3.50		1.75	*12.25*	*Sqm*
		TOTAL					**51.98**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		U/S Abutment	2	3.50		1.45	*10.15*	*Sqm*
		D/S Abutment	1	3.50		1.45	*5.08*	*Sqm*
		Wing wall U/S	4	3.50		1.75	*24.50*	*Sqm*
		Wing wall D/S	2	3.50		1.75	*12.25*	*Sqm*
		TOTAL					**51.98**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE WORK (Ch.-9.906 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	4	3.00	0.45	1.00	*5.40*	*Cum*
		Abutment	2	1.50	0.45	1.00	*1.35*	*Cum*
		TOTAL					***6.75***	***Cum***
		New CD work reconstruct at this location.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-10.098 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	4	3.00	0.45	1.50	*8.10*	*Cum*
		Abutment Side walls	2	11.00	0.80	1.50	*26.40*	*Cum*
		Crest	1	4.00	1.00	1.00	*4.00*	*Cum*
							38.50	***Cum***
		Fall has been eliminated at this location.						
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE WORK (Ch.-10.430 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	4	3.00	0.45	1.50	*8.10*	*Cum*
		Abutment	1	1.50	0.45	1.50	*1.01*	*Cum*
							9.11	***Cum***
		New CD work reconstruct at this location.						
QUANTITIES OF REPAIRING WORK FOR SUPER PASSAGE (Ch.-10.659 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Barrel Side wall	2	16.00		2.09	*66.88*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.79	*21.48*	*Sqm*
		Abutment U/S & D/S	2	2.00		1.79	*7.16*	*Sqm*
		TOTAL					**95.52**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	16.00		2.09	*66.88*	*Sqm*
		Wing wall U/S & D/S	4	3.00		1.79	*21.48*	*Sqm*
		Abutment U/S & D/S	2	2.00		1.79	*7.16*	*Sqm*
		Barrel Slab top	1	16.00		1	*16.00*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**111.52**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE WORK (Ch.-11.140 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**250.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutmemt	3	3.00		2.15	*19.35*	*Sqm*
		Wing wall U/S	2	3.50		1.85	*12.95*	*Sqm*
		Wing wall D/S	2	3.50		1.85	*12.95*	*Sqm*
		TOTAL					**45.25**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutmemt	3	3.00		2.15	*19.35*	*Sqm*
		Wing wall U/S	2	3.50		1.85	*12.95*	*Sqm*
		Wing wall D/S	2	3.50		1.85	*12.95*	*Sqm*
		TOTAL					**45.25**	***Sqm***
QUANTITIES OF REPAIRING WORK DLR BRIDGE (CH-11.159 km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	2	10.00		2.29	*45.80*	*Sqm*
		TOTAL					**45.80**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR HR DADHPA DY.(KM 11.300)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall of Fall	4	3.00	0.45	1.50	*8.10*	*Cum*
		Crest	1	3.20	0.45	0.60	*0.86*	*Cum*
		D/S Floor	1	3.50	3.20	0.40	*4.48*	*Cum*
		Abutment for HR Gate	1	1.00	0.45	1.50	*0.68*	*Cum*
		Abutment for HR D/S	1	7.00	0.45	1.00	*3.15*	*Cum*
							17.27	***Cum***
		New HR reconstruct at this location.						
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE WORK (Ch.-11.595 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**210.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutmemt	2	2.00		1.85	*7.40*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Wing wall U/S	2	3.50		1.35	*9.45*	*Sqm*
		Wing wall D/S	2	3.50		1.35	*9.45*	*Sqm*
		TOTAL					**26.30**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutmemt	2	2.00		1.85	*7.40*	*Sqm*
		Wing wall U/S	2	3.50		1.35	*9.45*	*Sqm*
		Wing wall D/S	2	3.50		1.35	*9.45*	*Sqm*
		TOTAL					**26.30**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE WORK (Ch.-12.640 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutmemt	2	3.00		2.55	*15.30*	*Sqm*
		Wing wall U/S	2	3.00		2.15	*12.90*	*Sqm*
		Wing wall D/S	2	3.00		2.15	*12.90*	*Sqm*
		TOTAL					**41.10**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutmemt	2	3.00		2.55	*15.30*	*Sqm*
		Wing wall U/S	2	3.00		2.15	*12.90*	*Sqm*
		Wing wall D/S	2	3.00		2.15	*12.90*	*Sqm*
		TOTAL					**41.10**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-12.673 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3	0.45	0.92	*2.48*	*Cum*
		TOTAL					**2.48**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.00		2.09	*12.54*	*Sqm*
		TOTAL					**12.54**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.00		2.09	*12.54*	*Sqm*
		TOTAL					**12.54**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE WORK (Ch.-13.009 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutmemt	2	2.00		1.55	*6.20*	*Sqm*
		Wing wall U/S	2	3.00		1.35	*8.10*	*Sqm*
		Wing wall D/S	2	3.00		1.35	*8.10*	*Sqm*
		TOTAL					**22.40**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutmemt	2	2.00		1.55	*6.20*	*Sqm*
		Wing wall U/S	2	3.00		1.35	*8.10*	*Sqm*
		Wing wall D/S	2	3.00		1.35	*8.10*	*Sqm*
		TOTAL					**22.40**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-13.038 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutmemt	2	4.50		1.5	*13.50*	*Sqm*
		Parapet Wall	2	7.00		2.19	*30.66*	*Sqm*
		Pier	1	4.50		4.4	*19.80*	*Sqm*
		Wing wall U/S	2	3.50		1.35	*9.45*	*Sqm*
		Wing wall D/S	2	3.00		1.35	*8.10*	*Sqm*
		TOTAL					**81.51**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutmemt	2	4.50		1.5	*13.50*	*Sqm*
		Parapet Wall	2	7.00		2.19	*30.66*	*Sqm*
		Pier	1	4.50		4.4	*19.80*	*Sqm*
		Wing wall U/S	2	3.50		1.35	*9.45*	*Sqm*
		Wing wall D/S	2	3.00		1.35	*8.10*	*Sqm*
		TOTAL					**81.51**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-13.777 Km)						
1		**New Structure is proposed at this location.**						
		QUANTITIES OF REPAIRING WORK FOR HR IGUNI MR (KM 15.150)						
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Floor	1	3.00	2.50	0.40	*3.00*	*Cum*
		Abutment for HR Gate	1	3.00	0.45	1.50	*2.03*	*Cum*
		Abutment for HR D/S	1	5.00	0.45	1.00	*2.25*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
							7.28	***Cum***
		New HR reconstruct at this location.						
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE WORK (Ch.-16.392 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutmemt	2	2.00		2.35	*9.40*	*Sqm*
		Wing wall U/S	2	3.00		1.85	*11.10*	*Sqm*
		Wing wall D/S	2	3.00		1.85	*11.10*	*Sqm*
		TOTAL					**31.60**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutmemt	2	2.00		2.35	*9.40*	*Sqm*
		Wing wall U/S	2	3.00		1.85	*11.10*	*Sqm*
		Wing wall D/S	2	3.00		1.85	*11.10*	*Sqm*
		TOTAL					**31.60**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-16.438 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**250.00**	**Sqm**
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing wall	2	6.00	0.30	1.5	*5.40*	*Cum*
		Parapet Damaged Portion	2	1.20	0.30	0.3	*0.22*	*Cum*
		TOTAL					***5.62***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing wall	4	6.00		1.5	*36.00*	Sqm
			4		0.30	1.5	*1.80*	Sqm
		Parapet Damaged Portion	4	1.20		0.3	*1.44*	Sqm
			4		0.30	0.3	*0.36*	Sqm
		TOTAL					**39.60**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR HR KONCHI MINOR.(KM 16.460)								
New HR construct at this location Existing is not Present there.								
QUANTITIES OF REPAIRING WORK FOR HR GURARU SUB DY (KM 16.700)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Floor	1	5.00	5.00	0.40	*10.00*	*Cum*
		Abutment for HR Gate	1	3.00	0.45	1.50	*2.03*	*Cum*
		Abutment for HR D/S	1	5.00	0.45	1.00	*2.25*	*Cum*
							14.28	***Cum***
	New HR reconstruct at this location.							
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-17.600 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Abutment	1	5.50	0.45	1.5	*3.71*	*Cum*
		Well Portion	1	1.60	0.45	1.5	*1.08*	*Cum*
		Well Wing wall	2	2.00	0.45	1.5	*2.70*	*Cum*
		TOTAL					***7.49***	***Cum***
		New Fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-18.200 Km)								
1	**New Fall is Proposed at this location**							
QUANTITIES OF REPAIRING WORK FOR SLR BRIDGE (Ch.-18.480 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall	2	5.00	0.45	0.6	*2.70*	*Cum*
		TOTAL					**2.70**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall	2	5.00		1.45	*14.50*	*Sqm*
		TOTAL					**14.50**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	2	5.00		1.45	*14.50*	*Sqm*
		TOTAL					**14.50**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-18.654 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutmemt U/S	2	2.00		2.35	*9.40*	*Sqm*
		Well Portion	1	1.22		2.65	*3.25*	*Sqm*
		Wing wall U/S	2	3.20		2.45	*15.68*	*Sqm*
		Wing wall D/S	2	3.20		2.45	*15.68*	*Sqm*
		TOTAL					**44.01**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutmemt U/S	2	2.00		2.35	*9.40*	*Sqm*
		Well Portion	1	1.22		2.65	*3.25*	*Sqm*
		Wing wall U/S	2	3.20		2.45	*15.68*	*Sqm*
		Wing wall D/S	2	3.20		2.45	*15.68*	*Sqm*
		TOTAL					**44.01**	***Sqm***

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-18.895 Km)	
1	**New Fall is Proposed at this location**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
ABSTRACT OF COST FOR OUTLET

Sr. No.	Qty	STRUCTURE			Amount in Rs.
1	1 No.	Outlet			₹ 1,27,744.47
	Total Outlets in Konchi Dy.		73	nos.	₹ 93,25,346.13
				Sub-Total	₹ 93,25,346.13
				Seigniorage charges	₹ 80,312.63
				Total (in Rs. Lakhs)	**₹ 94.06**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 73 nos. outlet, Total Seigniorage charges					**80312.63**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*	*9.56*		*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
5	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	5.1.25	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	5.1.39	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Taking Output :- 28.32 cum					
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	12	Carriage cost per metre M^3 = Tr/Q				195.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	4	Average haulage path (distance) in one cycle (D) in km				5.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Total				₹ 6,297.50	
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
22	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
23	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
24	**5.6.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.4	**900/ 1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.5	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
25	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
26	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
27	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
28	**5.8.7**	Dismantling pucca brick or line work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Semi Skilled Mazdoor	1.00	nos	440.00	₹ 440.00	SII-18
		Unskilled mazdoor	3.00	nos	424.00	₹ 1,272.00	SI-1
					total	₹ 1,712.00	
		Add Overhead charge & C.P @ 15 %				₹ 256.80	
						₹ 1,968.80	
		Rate per Cum			**Say, Rs**	**₹ 695.20**	**Per M^3**
29	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES				
Sl. No.	**Reference**	**Particular**	**Unit**	**Rate (in Rs.)**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
	5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
	5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
	5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
	5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
	5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
	5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**

13	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
		TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
		TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
		TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
		TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
		TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
		TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**

20	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61
24	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**

33	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61
38	**5.6.2.2**	Labour for laying, fitting and fixing NP3 pipe with collars in line level and grade as well providing approved jointing materials and joints properly filled to make them water proof all complete as per specification and direction of E/I.	**RM**	**711.27**
39	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**13.08**	Weepholes	**No.**	152.60
43	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:			
1	**M-004**	Coarse Sand	**Cum**	584.64

2	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**M-001**	Boulder	**Cum**	694.61
4	**M-11 9(ii)**	Brick	**Cum**	4891
5	**M-006**	Fine Sand	**Cum**	145.87
6	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**M-181**	Structural Steel	**MT**	55116.67