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 (Nabinagar)

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-Nabinagar Division
(Total Cost – Rs. 47.85 Crores)

Summary of Cost

Sr. No.	Name of Canal	Cost (Rs. in Cr.)
1	Naur Sub Dy.	5.85
2	Baria Mr.	1.76
3	Ruir Branch Canal	32.43
4	Kusha Mr.	2.76
5	Kuthari Sub Dy.	5.05
	Total	**47.85**

Nabinagar Division – Naur Sub Dy.
(Total Cost – Rs. 5.85 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (NAUR SUB DY.)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	Naur Sub Dy.	1	Job	8617204.18	0.00	₹ 86,17,204.18	AOC Earthwork Naur Sub Dy.	14
	Phulwaria Minor	1	Job	10814248.13	0.00	₹ 1,08,14,248.13	AOC Earthwork Phulwaria minor	15
	Murat Bigha Minor	1	Job	4529963.44	0.00	₹ 45,29,963.44	AOC Earthwork Murat bigha minor	16
2	Head Regulator							
	Phulwaria Minor	1	No.	2252710.18	16938.99	₹ 22,69,649.16	HR (AOC) Phulwaria Minor	26
	Murat Bigha Minor	1	No.	1845285.72	13365.79	₹ 18,58,651.51	HR (AOC) Murat Bigha Minor	27
3	Falls							
	Naur Sub Dy. :							
	0.305 m Fall at Ch. 1.500 Km	1	No.	1167611.58	10284.61	₹ 11,77,896.19	Fall (AOC) Naur Sub Dy.	39
	1.220 m Fall at Ch. 3.700 Km	1	No.	1428798.90	13142.22	₹ 14,41,941.12		40
	1.220 m Fall at Ch. 4.950 Km	1	No.	1181100.07	10184.19	₹ 11,91,284.26		41
	0.914 m Fall at Ch. 5.500 Km	1	No.	895552.19	7675.01	₹ 9,03,227.20		42
	0.610 m Fall at Ch. 6.700 Km	1	No.	705842.28	6000.33	₹ 7,11,842.61		43
	0.610 m Fall at Ch. 9.000 Km	1	No.	519433.54	4364.46	₹ 5,23,798.00		44
	Phulwaria Minor :							
	1.524 m Fall at Ch. 1.030 Km	1	No.	1678584.80	14714.14	₹ 16,93,298.94	Fall (AOC) Phulwaria Minor	45
	0.305 m Fall at Ch. 6.000 Km	1	No.	461004.13	7706.60	₹ 4,68,710.73		46
	0.914 m Fall at Ch. 6.431 Km	1	No.	508443.25	4246.70	₹ 5,12,689.95		47
	Murat Bigha Minor :							
	0.457 m Fall at Ch. 0.000 Km	1	No.	503978.28	4246.70	₹ 5,08,224.98	Fall (AOC) Murat Bigha minor	48
	1.220 m Fall at Ch. 0.975 Km	1	No.	834874.44	7146.50	₹ 8,42,020.94		49
4	*Brick Work At Tail Portion*	1	No.	5177591.29	13757.69	₹ 51,91,348.99	Brick Sec	84
5	*Repair of Structures*							
	Naur Sub Dy.	21	No.	1276573.184	9591.38	₹ 12,86,164.56	Abstract (Repair St.) Naur Sub Dy.	85
	Phulwaria Minor	18	No.	485731.222	4575.56	₹ 4,90,306.79	Abstract (Repair St.) Phulwaria minor	86
	Murat Bigha Minor	11	No.	379097.7941	2542.61	₹ 3,81,640.40	Abstract (Repair St.) Murat bigha minor	87
	Approach Road	10	No.	521018.55	62028.25	₹ 52,72,213.75	Approach Road AOC	137
6	Outlets							
	Naur Sub Dy.	26	No.	127744.47	1100.17	₹ 33,49,960.66	Outlet-AOC	140
	Phulwaria Minor	25	No.	127744.47	1100.17	₹ 32,21,116.02		140
	Murat Bigha Minor	9	No.	127744.47	1100.17	₹ 11,59,601.77		140
7	Kilometer Stone	21	No.	3853.40	0.00	₹ 80,921.40	Rates '!F61	160
	TOTAL (In Rs.)					**₹ 5,84,97,925.66**		
	TOTAL (In Lacs)					**₹ 584.98**		

	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)		1.037	0.015		
9	Cement Punning		0.0015			

DETAIL QUANTITIES OF EARTHWORK

NAUR SUB DY. - KM 0.000 TO KM 9.500

		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	2.153	1.077	107.650	1.860	0.930	93.000
200	100	0.882	1.518	151.750	2.748	2.304	230.400
300	100	1.209	1.046	104.550	2.905	2.827	282.650
400	100	0.525	0.867	86.700	3.741	3.323	332.300
500	100	0.383	0.454	45.400	3.870	3.806	380.550
600	100	0.233	0.308	30.800	2.985	3.428	342.750
700	100	4.450	2.342	234.150	1.598	2.292	229.150
800	100	3.885	4.168	416.750	2.673	2.136	213.550
900	100	2.486	3.186	318.550	3.131	2.902	290.200
1000	100	2.322	2.404	240.400	2.887	3.009	300.900
1100	100	2.200	2.261	226.100	1.473	2.180	218.000
1200	100	3.414	2.807	280.700	1.819	1.646	164.600
1300	100	1.920	2.667	266.700	4.953	3.386	338.600
1400	100	2.564	2.242	224.200	2.582	3.768	376.750
1500	100	2.667	2.616	261.550	2.518	2.550	255.000
1600	100	5.331	3.999	399.900	3.174	2.846	284.600
1700	100	1.133	3.232	323.200	4.493	3.834	383.350
1800	100	0.486	0.810	80.950	3.020	3.757	375.650
1900	100	0.913	0.700	69.950	2.882	2.951	295.100
2000	100	0.570	0.742	74.150	5.015	3.949	394.850
2100	100	0.594	0.582	58.200	3.879	4.447	444.700
2200	100	1.474	1.034	103.400	3.273	3.576	357.600
2300	100	1.850	1.662	166.200	5.054	4.164	416.350
2400	100	1.548	1.699	169.900	1.393	3.224	322.350
2500	100	2.714	2.131	213.100	1.498	1.446	144.550
2600	100	0.981	1.848	184.750	3.310	2.404	240.400
2700	100	0.977	0.979	97.900	3.152	3.231	323.100
2800	100	1.599	1.288	128.800	1.784	2.468	246.800
2900	100	2.775	2.187	218.700	0.541	1.163	116.250
3000	100	6.102	4.439	443.850	2.152	1.347	134.650
3100	100	1.968	4.035	403.500	2.298	2.225	222.500
3200	100	0.910	1.439	143.900	3.725	3.012	301.150
3300	100	2.405	1.658	165.750	2.608	3.167	316.650
3400	100	5.129	3.767	376.700	1.215	1.912	191.150
3500	100	0.182	2.656	265.550	3.379	2.297	229.700
3600	100	1.062	0.622	62.200	3.287	3.333	333.300
3700	100	5.697	3.380	337.950	0.966	2.127	212.650
3800	100	1.359	3.528	352.800	1.611	1.289	128.850
3900	100	1.158	1.259	125.850	2.290	1.951	195.050
4000	100	0.770	0.964	96.400	2.035	2.163	216.250
4100	100	0.529	0.650	64.950	2.579	2.307	230.700
4200	100	0.630	0.580	57.950	1.430	2.005	200.450
4300	100	1.060	0.845	84.500	0.520	0.975	97.500
4400	100	9.956	5.508	550.800	2.067	1.294	129.350
4500	100	1.576	5.766	576.600	1.541	1.804	180.400
4600	100	1.156	1.366	136.600	1.952	1.747	174.650
4700	100	3.048	2.102	210.200	1.424	1.688	168.800

		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
4800	100	3.818	3.433	343.300	1.558	1.491	149.100
4900	100	0.149	1.984	198.350	2.174	1.866	186.600
5000	100	1.712	0.931	93.050	1.023	1.599	159.850
5100	100	0.956	1.334	133.400	0.974	0.999	99.850
5200	100	0.186	0.571	57.100	2.247	1.611	161.050
5300	100	0.083	0.135	13.450	3.615	2.931	293.100
5400	100	0.291	0.187	18.700	2.580	3.098	309.750
5500	100	3.797	2.044	204.400	0.522	1.551	155.100
5600	100	0.198	1.998	199.750	2.955	1.739	173.850
5700	100	0.117	0.158	15.750	2.326	2.641	264.050
5800	100	0.072	0.095	9.450	2.139	2.233	223.250
5900	100	0.000	0.036	3.600	3.272	2.706	270.550
6000	100	3.649	1.825	182.450	2.179	2.726	272.550
6100	100	2.296	2.973	297.250	1.550	1.865	186.450
6200	100	1.479	1.888	188.750	1.185	1.368	136.750
6300	100	0.919	1.199	119.900	0.898	1.042	104.150
6400	100	0.493	0.706	70.600	2.924	1.911	191.100
6500	100	0.351	0.422	42.200	2.928	2.926	292.600
6600	100	0.049	0.200	20.000	4.460	3.694	369.400
6700	100	1.708	0.879	87.850	1.407	2.934	293.350
6800	100	1.034	1.371	137.100	1.808	1.608	160.750
6900	100	0.755	0.895	89.450	2.857	2.333	233.250
7000	100	1.226	0.991	99.050	1.953	2.405	240.500
7100	100	0.639	0.933	93.250	1.812	1.883	188.250
7200	100	0.346	0.493	49.250	2.068	1.940	194.000
7300	100	0.608	0.477	47.700	0.805	1.437	143.650
7400	100	0.329	0.469	46.850	1.180	0.993	99.250
7500	100	0.264	0.297	29.650	1.924	1.552	155.200
7600	100	1.176	0.720	72.000	1.474	1.699	169.900
7700	100	2.564	1.870	187.000	0.978	1.226	122.600
7800	100	5.982	4.273	427.300	2.123	1.551	155.050
7900	100	4.951	5.467	546.650	1.288	1.706	170.550
8000	100	4.526	4.739	473.850	0.942	1.115	111.500
8100	100	0.733	2.630	262.950	1.417	1.180	117.950
8200	100	0.254	0.494	49.350	2.198	1.808	180.750
8300	100	0.130	0.192	19.200	2.165	2.182	218.150
8400	100	0.000	0.065	6.500	3.719	2.942	294.200
8500	100	0.000	0.000	0.000	5.374	4.547	454.650
8600	100	0.002	0.001	0.100	5.811	5.593	559.250
8700	100	0.283	0.143	14.250	1.063	3.437	343.700
8800	100	0.000	0.142	14.150	3.033	2.048	204.800
8900	100	0.000	0.000	0.000	4.192	3.613	361.250
9000	100	0.650	0.325	32.500	2.143	3.168	316.750
9100	100	0.769	0.710	70.950	2.625	2.384	238.400
9200	100	0.248	0.509	50.850	4.177	3.401	340.100
9300	100	0.065	0.157	15.650	3.920	4.049	404.850
9400	100	0.956	0.511	51.050	0.873	2.397	239.650
9500	100	0.011	0.484	48.350	4.429	2.651	265.100
Total				**14975.350**			**23034.250**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**14975.350**

		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
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							23034.250
NET QUANTITY OF EARTHWORK IN FILLING							8058.90

		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
PHULWARIA MINOR.							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.000	0.000	0.000	6.130	3.065	306.500
200	100	1.089	0.545	54.450	1.992	4.061	406.100
300	100	0.282	0.686	68.550	3.034	2.513	251.300
400	100	0.020	0.151	15.100	5.029	4.032	403.150
500	100	1.108	0.564	56.400	2.045	3.537	353.700
600	100	0.143	0.626	62.550	1.529	1.787	178.700
700	100	0.412	0.278	27.750	0.386	0.958	95.750
800	100	2.213	1.313	131.250	2.100	1.243	124.300
900	100	0.847	1.530	153.000	2.091	2.096	209.550
1000	100	0.000	0.424	42.350	9.616	5.854	585.350
1100	100	3.218	1.609	160.900	1.323	5.470	546.950
1200	100	1.988	2.603	260.300	1.351	1.337	133.700
1300	100	0.387	1.188	118.750	2.995	2.173	217.300
1400	100	0.449	0.418	41.800	2.148	2.572	257.150
1500	100	0.161	0.305	30.500	3.461	2.805	280.450
1600	100	0.162	0.162	16.150	3.393	3.427	342.700
1700	100	0.000	0.081	8.100	5.236	4.315	431.450
1800	100	0.000	0.000	0.000	4.224	4.730	473.000
1900	100	0.000	0.000	0.000	7.526	5.875	587.500
2000	100	0.000	0.000	0.000	6.629	7.078	707.750
2100	100	0.000	0.000	0.000	5.991	6.310	631.000
2200	100	0.000	0.000	0.000	5.681	5.836	583.600
2300	100	0.000	0.000	0.000	5.371	5.526	552.600
2400	100	0.142	0.071	7.100	3.378	4.375	437.450
2500	100	0.269	0.206	20.550	5.369	4.374	437.350
2600	100	0.170	0.220	21.950	4.230	4.800	479.950
2700	100	0.285	0.228	22.750	2.779	3.505	350.450
2800	100	0.407	0.346	34.600	1.955	2.367	236.700
2900	100	0.066	0.237	23.650	3.557	2.756	275.600
3000	100	0.000	0.033	3.300	5.957	4.757	475.700
3100	100	0.000	0.000	0.000	6.058	6.008	600.750
3200	100	0.064	0.032	3.200	4.429	5.244	524.350
3300	100	1.103	0.584	58.350	4.014	4.222	422.150
3400	100	0.402	0.753	75.250	3.234	3.624	362.400
3500	100	0.000	0.201	20.100	5.867	4.551	455.050
3600	100	0.456	0.228	22.800	5.246	5.557	555.650
3700	100	3.327	1.892	189.150	3.558	4.402	440.200
3800	100	3.174	3.251	325.050	2.529	3.044	304.350
3900	100	2.057	2.616	261.550	1.393	1.961	196.100
4000	100	1.364	1.711	171.050	0.873	1.133	113.300
4100	100	0.448	0.906	90.600	1.603	1.238	123.800
4200	100	0.317	0.383	38.250	2.119	1.861	186.100
4300	100	0.248	0.283	28.250	2.411	2.265	226.500
4400	100	0.116	0.182	18.200	2.339	2.375	237.500
4500	100	0.142	0.129	12.900	1.230	1.785	178.450
4600	100	1.103	0.623	62.250	1.720	1.475	147.500
4700	100	1.240	1.172	117.150	2.021	1.871	187.050
4800	100	1.540	1.390	139.000	1.194	1.608	160.750

		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
4900	100	1.843	1.692	169.150	0.967	1.081	108.050
5000	100	1.519	1.681	168.100	2.276	1.622	162.150
5100	100	1.894	1.707	170.650	0.806	1.541	154.100
5200	100	1.843	1.869	186.850	1.245	1.026	102.550
5300	100	2.593	2.218	221.800	1.858	1.552	155.150
5400	100	0.095	1.344	134.400	3.641	2.750	274.950
5500	100	0.000	0.048	4.750	4.250	3.946	394.550
5600	100	0.000	0.000	0.000	6.140	5.195	519.500
5700	100	1.164	0.582	58.200	0.621	3.381	338.050
5800	100	0.442	0.803	80.300	2.367	1.494	149.400
5900	100	0.145	0.294	29.350	5.109	3.738	373.800
6000	100	0.198	0.172	17.150	4.325	4.717	471.700
6100	100	0.000	0.099	9.900	8.700	6.513	651.250
6200	100	0.950	0.475	47.500	1.525	5.113	511.250
6300	100	0.395	0.673	67.250	3.233	2.379	237.900
6400	100	0.000	0.198	19.750	8.411	5.822	582.200
6500	100	0.963	0.482	48.150	1.622	5.017	501.650
6600	100	0.057	0.510	51.000	5.551	3.587	358.650
6650	50	0.000	0.029	1.425	8.351	6.951	347.550
Total				**4500.575**			**23169.100**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**4500.575**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**23169.100**
NET QUANTITY OF EARTHWORK IN FILLING							**18668.53**

		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
MURAT BIGHA MINOR							
0		0.000	0	0	0.000	0	0.000
100	100	0.312	0.156	15.600	4.972	2.486	248.600
200	100	0.275	0.294	29.350	5.258	5.115	511.500
300	100	0.074	0.175	17.450	5.825	5.542	554.150
400	100	0.001	0.038	3.750	6.997	6.411	641.100
500	100	0.088	0.045	4.450	5.598	6.298	629.750
600	100	0.000	0.044	4.400	4.688	5.143	514.300
700	100	0.000	0.000	0.000	3.629	4.159	415.850
800	100	0.204	0.102	10.200	2.857	3.243	324.300
900	100	1.021	0.613	61.250	1.941	2.399	239.900
1000	100	0.920	0.971	97.050	2.659	2.300	230.000
1100	100	1.261	1.091	109.050	1.163	1.911	191.100
1200	100	0.032	0.647	64.650	4.647	2.905	290.500
1300	100	0.000	0.016	1.600	2.065	3.356	335.600
1400	100	0.969	0.485	48.450	3.235	2.650	265.000
1500	100	0.222	0.596	59.550	6.604	4.920	491.950
1600	100	0.384	0.303	30.300	6.854	6.729	672.900
1700	100	1.219	0.802	80.150	3.071	4.963	496.250
1800	100	0.841	1.030	103.000	3.205	3.138	313.800
1900	100	0.463	0.652	65.200	2.606	2.906	290.550
2000	100	0.505	0.484	48.400	1.838	2.222	222.200
2100	100	0.352	0.429	42.850	2.086	1.962	196.200
2200	100	0.074	0.213	21.300	3.609	2.848	284.750
2300	100	0.104	0.089	8.900	3.028	3.319	331.850
2400	100	0.270	0.187	18.700	3.133	3.081	308.050
2500	100	0.514	0.392	39.200	3.089	3.111	311.100
2600	100	0.913	0.714	71.350	2.229	2.659	265.900
2650	50	0.373	0.643	32.150	3.517	2.873	143.650
Total				**1088.300**			**9720.800**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1088.300**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**9720.800**
NET QUANTITY OF EARTHWORK IN FILLING							**8632.50**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
NAUR SUB DY. OFFTAKING FROM 32.77 KM OF RMC				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 3.700	3700	5.57	20609.00	Sqm
3.700 - 4.650	950	3.30	3135.00	Sqm
4.650 - 5.400	750	2.74	2055.00	Sqm
5.400 - 6.150	750	2.57	1927.50	Sqm
6.150 - 7.250	1100	2.31	2541.00	Sqm
7.250 - 7.500	250	2.10	525.00	Sqm
7.500 - 8.450	950	1.69	1605.50	Sqm
8.450 - 9.000	550	1.52	836.00	Sqm
9.000 - 9.150	150	1.35	202.50	Sqm
9.150 - 9.544	394	1.04	409.76	Sqm
	TOTAL		**33846.26**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m**	**Quantity**	
0.00 - 3.700	3700	5.57	0.15	3091.35	Cum
3.700 - 4.650	950	3.30	0.15	470.25	Cum
4.650 - 5.400	750	2.74	0.15	308.25	Cum
5.400 - 6.150	750	2.57	0.15	289.13	Cum
6.150 - 7.250	1100	2.31	0.15	381.15	Cum
7.250 - 7.500	250	2.10	0.15	78.75	Cum
7.500 - 8.450	950	1.69	0.15	240.83	Cum
8.450 - 9.000	550	1.52	0.15	125.40	Cum
9.000 - 9.150	150	1.35	0.15	30.38	Cum
9.150 - 9.544	394	1.04	0.15	61.46	Cum
	TOTAL			**5076.94**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
PHULWARIA MINOR				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 2.450	2450	4.02	9849.00	Sqm
2.450 - 3.650	1200	3.66	4392.00	Sqm
3.650 - 4.500	850	3.26	2771.00	Sqm
4.500 - 5.500	1000	2.14	2140.00	Sqm
5.500 - 6.000	500	2.14	1070.00	Sqm
6.000 - 6.550	550	1.88	1034.00	Sqm
6.550 - 6.689	139	1.56	216.84	Sqm
	TOTAL		**21472.84**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m**	**Quantity**	
0.00 - 2.450	2450	4.02	0.15	1477.35	Cum
2.450 - 3.650	1200	3.66	0.15	658.80	Cum
3.650 - 4.500	850	3.26	0.15	415.65	Cum
4.500 - 5.500	1000	2.14	0.15	321.00	Cum
5.500 - 6.000	500	2.14	0.15	160.50	Cum
6.000 - 6.550	550	1.88	0.15	155.10	Cum
6.550 - 6.689	139	1.56	0.15	32.53	Cum
	TOTAL			**3220.93**	**Cum**

MURAT BIGHA MINOR					
JUNGLE CLEARANCE QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**		
0.00 - 0.300	300	2.42	726.00		Sqm
0.300 - 0.850	550	2.12	1166.00		Sqm
0.850 - 1.100	250	1.87	467.50		Sqm
1.100 - 1.300	200	1.53	306.00		Sqm
1.300 - 1.500	200	1.37	274.00		Sqm
1.500 - 2.450	950	1.05	997.50		Sqm
	TOTAL		**3937.00**		**Sqm**
LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m**	**Quantity**	
0.00 - 0.300	300	2.42	0.15	108.90	Cum
0.300 - 0.850	550	2.12	0.15	174.90	Cum
0.850 - 1.100	250	1.87	0.15	70.13	Cum
1.100 - 1.300	200	1.53	0.15	45.90	Cum
1.300 - 1.500	200	1.37	0.15	41.10	Cum
1.500 - 2.450	950	1.05	0.15	149.63	Cum
	TOTAL			**590.55**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR NAUR SUB 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.	33846.26	Sqm	**11.80**	399534.4507
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	14975.35	Cum	**156.50**	2343642.275
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	5990.14	Cum	**17.22**	103135.3201
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.	8058.90	Cum	**165.12**	1330653.01
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)	2417.67	Cum	**174.89**	422826.31
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2014.73	Cum	**217.92**	439048.87
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3626.51	Cum	**319.14**	1157362.81
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.				
			5076.94	Cum	**196.10**	995587.74
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.	23034.25	Cum	**61.88**	1425413.40
TOTAL COST OF EARTHWORK (in Rs.)						**8617204.18**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**86.172**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR PHULWARIA 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.	21472.84	Sqm	**11.80**	253473.7762
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	4500.58	Cum	**156.50**	704339.9875
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1800.23	Cum	**17.22**	30995.48545
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.	18668.53	Cum	**165.12**	3082471.44
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)	5600.56	Cum	**174.89**	979481.50
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	4667.13	Cum	**217.92**	1017061.24
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	8400.84	Cum	**319.14**	2681042.88
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.				
			3220.93	Cum	**196.10**	631623.59
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.	23169.10	Cum	**61.88**	1433758.23
TOTAL COST OF EARTHWORK (in Rs.)						**10814248.13**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**108.142**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR MURAT BIGHA 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.	3937.00	Sqm	**11.80**	46473.88315
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	1088.30	Cum	**156.50**	170318.95
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	435.32	Cum	**17.22**	7495.128249
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.	8632.50	Cum	**165.12**	1425363.53
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)	2589.75	Cum	**174.89**	452921.38
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2158.13	Cum	**217.92**	470298.60
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3884.63	Cum	**319.14**	1239739.22
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.				
			590.55	Cum	**196.10**	115806.86
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.	9720.80	Cum	**61.88**	601545.90
TOTAL COST OF EARTHWORK (in Rs.)						**4529963.44**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**45.300**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR NAUR SUB 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	***33846.26***	***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	14975.350	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	5990.14	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	8058.900	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	2417.67	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2014.73	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3626.51	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	5076.94	Cum

S.No.	Items	No.	Quantity	Unit
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	23034.25	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR PHULWARIA 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	***21472.84***	***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	4500.575	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1800.23	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	18668.525	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	5600.56	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	4667.13	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	8400.84	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	3220.93	Cum

S.No.	Items	No.	Quantity	Unit
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	23169.10	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR MURAT BIGHA 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	***3937.00***	***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	1088.300	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	435.32	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	8632.500	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	2589.75	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2158.13	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3884.63	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	590.55	Cum

S.No.	Items	No.	Quantity	Unit
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	9720.80	Cum

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF PHULWARIA MR.				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate excluding embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.150	0.500	**2.65**
	(H) is height of gate in m = clear vent height in m+	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	**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	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**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		**2.87**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF MURAT BIGHA MR.				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate excluding embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.350	0.500	**1.85**
	(H) is height of gate in m = clear vent height in m+	1.587	0.200	**1.79**
	(h) is head of water above sill of gate in m	1.587	0.3	**1.887**
	Weight of lift gate including embedded parts	**0.67**		**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	0.67	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.887	400	754.8
	Columns with bracings/Anchors/Stiffeners	**0.7548**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.887	400	754.8
	Beams with cross beams/stiffeners	**0.7548**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.5096	10%	0.15096
	Railing/ Chequered plate/Ladder etc	**0.15096**		**T**
Total Weight of One Gate		**2.63**		**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 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 HR FOR PHULWARIA MR OFFTAKING FROM RD-3+700 KM (RT.) AT NAUR SUB 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)**
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.	187.752	Cum	**195.20**	36649.10			
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.	22.37	Cum	**6381.70**	142727.33	7.25	10.06	20.13
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.	113.59	Cum	**6914.20**	785391.49	46.86	48.84	97.69
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.	20.71	Cum	**8151.40**	168804.20	11.74	8.08	16.36
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.	1.63	MT	**73574.90**	119748.30			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.87	MT	**160035.11**	459819.95			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	329.19	Sqm	**578.60**	190469.32			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	4.19	Cum	**694.61**	2906.94			
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.	4.19	Cum	**1237.00**	5176.85			
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)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	Cum	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	36.89	Sqm	**149.30**	5507.04			
16	**Carriage of materials**							
	Coarse Sand (30 Km lead)	66.985	Cum	**1075.00**	72008.68			
	Coarse Aggregates (60 Km lead)	134.837	Cum	**1398.00**	188501.74			
	Cement (30 km lead)	65.844	MT	**742.00**	48856.54			
	Boulder (60 Km lead)	4.19	Cum	**1159.00**	4850.42			
	Steel (30 Km lead)	4.50	MT	**742.00**	3339.60			
	TOTAL (In Rs.)				**2252710.18**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	66.98	Cum	**584.64**	39162.01	3916.20		
	Coarse Aggregate	134.84	Cum	**944.26**	127320.93	12732.09		
	Boulders	4.19	Cum	**694.61**	2906.94	290.69		
	Total					16938.99		
	For 1 nos. HR, Total Seigniorage charges					**16938.99**		

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)
	ABSTRACT OF COST HR FOR MURAT BIGHA MINOR OFFTAKING FROM RD-4+500 KM (L.) AT PHULWARIA MR							
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.	154.038	Cum	**195.20**	30068.17			
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.	17.85	Cum	**6381.70**	113939.62	5.78	8.03	16.07
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.	86.11	Cum	**6914.20**	595381.27	35.52	37.03	74.05
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.	16.52	Cum	**8151.40**	134650.27	9.37	6.44	13.05
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.	1.25	MT	**73574.90**	92148.37			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.63	MT	**160035.11**	420598.86			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	294.45	Sqm	**578.60**	170370.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	7.92	Cum	**694.61**	5501.31			
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.	7.92	Cum	**1237.00**	9797.04			
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)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	Cum	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	31.45	Sqm	**149.30**	4695.74			
16	**Carriage of materials**							
	Coarse Sand (30 Km lead)	51.504	Cum	**1075.00**	55366.70			
	Coarse Aggregates (60 Km lead)	103.833	Cum	**1398.00**	145158.52			
	Cement (30 km lead)	50.671	MT	**742.00**	37598.00			
	Boulder (60 Km lead)	7.92	Cum	**1159.00**	9179.28			
	Steel (30 Km lead)	3.88	MT	**742.00**	2879.41			
	TOTAL (In Rs.)				**1845285.72**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	51.50	Cum	**584.64**	30111.24	3011.12		
	Coarse Aggregate	103.83	Cum	**944.26**	98045.34	9804.53		
	Boulders	7.92	Cum	**694.61**	5501.31	550.13		
	Total					13365.79		
	For 1 nos. HR, Total Seigniorage charges					**13365.79**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF HR FOR PHULWARIA MR OFFTAKING FROM RD-3+700 KM (RT.) AT NAUR SUB DY							
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*	*1.17*	*1.81*	*3.190*	*13.483*	*Cum*
	Section B-B	*2*	*5.25*	*1.99*	*2.690*	*56.321*	*Cum*
	Section C-C	*2*	*0.56*	*1.81*	*2.690*	*5.465*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.12*	*1.44*	*2.889*	*13.014*	*Cum*
	Left Bank Sec a to d	1	3.90	3.32	2.480	*32.039*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.53*	*1.10*	*2.540*	*2.939*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.89*	*2.17*	*2.540*	*31.797*	*Cum*
	Floor						
	U/S key	*1*	*1.6875*	*3.8495*	*0.850*	*5.522*	*Cum*
	Floor	*1*	*4.11*	*3.8495*	*0.650*	*10.284*	*Cum*
		1	*0.419*	*2.15*	*0.450*	*0.270*	*Cum*
		1	*0.72*	*2.15*	*0.350*	*0.310*	*Cum*
		2	*0.363*	*2.15*	*0.300*	*0.468*	*Cum*
		1	*3*	*2.15*	*0.950*	*3.225*	*Cum*
		1	*1.05*	*2.15*	*0.200*	*0.452*	*Cum*
		2	*0.184*	*2.15*	*0.200*	*0.790*	*Cum*
		1	*1.44*	*2.15*	*0.650*	*1.548*	*Cum*
		1	*0.5765*	*2.15*	*0.850*	*0.868*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.000*	*2.150*	*0.600*	*2.580*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.150*	*0.850*	*1.200*	*2.193*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*1.550*	*0.900*	*4.185*	*Cum*
						187.75	**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*	*5.009*	*0.150*	*0.47*	*Cum*
		1	*2.284*	*3.309*	*0.150*	*1.13*	*Cum*
		1	*1.275*	*2.150*	*0.150*	*0.41*	*Cum*
		1	*0.782*	*2.150*	*0.150*	*0.25*	*Cum*
		1	*3.088*	*2.150*	*0.150*	*1.00*	*Cum*
		1	*1.106*	*2.150*	*0.150*	*0.36*	*Cum*
		1	*0.528*	*2.150*	*0.150*	*0.17*	*Cum*
		1	*0.744*	*2.150*	*0.150*	*0.24*	*Cum*
		1	*0.555*	*2.150*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.165*	*1.814*	*0.300*	*1.27*	*Cum*
	Section B-B	*2*	*5.250*	*1.994*	*0.300*	*6.28*	*Cum*
	Section C-C	*2*	*0.560*	*1.814*	*0.300*	*0.61*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.120*	*1.444*	*0.300*	*1.35*	*Cum*
	Left Bank Sec a to d	*1*	*3.896*	*3.316*	*0.150*	*1.94*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	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*	*2.886*	*2.169*	*0.300*	*3.76*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.150*	*0.850*	*0.300*	*0.55*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.150*	*0.450*	*0.900*	*0.87*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*11*	*0.600*	*0.600*	*0.300*	*1.19*	*Cum*
	TOTAL					**22.37**	**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 A-A	*2*	*1.17*	*0.82*	*0.50*	*0.96*	*Cum*
		2	*1.17*	*1.12*	*0.99*	*2.58*	*Cum*
		2	*1.17*	*1.41*	*1.40*	*4.61*	*Cum*
	Section B-B	*2*	*5.25*	*1.18*	*1.29*	*16.04*	*Cum*
		2	*5.25*	*1.59*	*1.10*	*18.41*	*Cum*
	Section C-C	*2*	*0.56*	*1.12*	*0.99*	*1.24*	*Cum*
		2	*0.56*	*1.41*	*1.40*	*2.22*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.12*	*0.45*	*0.50*	*0.70*	*Cum*
		1	*3.12*	*0.75*	*0.69*	*1.61*	*Cum*
		1	*3.12*	*1.04*	*1.40*	*4.56*	*Cum*
	Left Bank						
	Section a-a	*1*		3.254	*0.80*	*2.60*	*Sqm*
		1		*0.60*	*0.04*	*0.02*	*Sqm*
		1		*1.57*	*1.49*	*2.33*	*Sqm*
						4.96	***Sqm***
	Section b-b	*1*		*3.25*	*0.80*	*2.60*	*Sqm*
		1		*0.60*	*0.04*	*0.02*	*Sqm*
		1		*1.27*	*1.49*	*1.89*	*Sqm*
						4.52	***Sqm***
	Section c-c	*1*		*3.25*	*0.80*	*2.60*	*Sqm*
		1		*0.60*	*0.04*	*0.02*	*Sqm*
		1		*1.27*	*1.49*	*1.89*	*Sqm*
						4.52	***Sqm***
	Section d-d	*1*		*3.25*	*0.80*	*2.60*	*Sqm*
		1		*0.60*	*0.04*	*0.02*	*Sqm*
		1		*0.48*	*1.49*	*0.72*	*Sqm*
						3.34	***Sqm***
	Bottom Key	*1*	*3.90*	*1.69*	*0.60*	*3.94*	*Cum*
	Top Stem Area	*1*	*3.90*	*4.33*		*16.88*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.53*	*0.70*	*0.90*	*0.66*	*Cum*
		2	*0.53*	*0.53*	*0.84*	*0.46*	*Cum*
		2	*0.53*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.89*	*1.79*	*0.90*	*9.32*	*Cum*
		2	*2.89*	*1.37*	*0.84*	*6.64*	*Cum*
		2	*2.89*	*0.76*	*0.50*	*2.18*	*Cum*
	Floor						
	U/S key	*1*	*1.69*	*3.85*	*0.70*	*4.55*	*Cum*
	Floor	*1*	*4.11*	*3.85*	*0.50*	*7.91*	*Cum*
		1	*0.42*	*2.15*	*0.30*	*0.27*	*Cum*
		1	*0.72*	*2.15*	*0.20*	*0.31*	*Cum*
		2	*0.36*	*2.15*	*0.30*	*0.47*	*Cum*
		1	*3.00*	*2.15*	*0.50*	*3.23*	*Cum*
		1	*1.05*	*2.15*	*0.20*	*0.45*	*Cum*
		2	*0.18*	*2.15*		*0.79*	*Cum*
		1	*1.44*	*2.15*	*0.50*	*1.55*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S key	*1*	*0.58*	*2.15*	*0.70*	*0.87*	*Cum*
	TOTAL					**113.59**	**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*	*4.11*	*3.85*	*0.20*	*3.16*	*Cum*
		1	*0.67*	*2.15*	*0.20*	*0.29*	*Cum*
		1	*3.08*	*2.15*	*0.20*	*1.32*	*Cum*
		1	*0.95*	*2.15*	*0.20*	*0.41*	*Cum*
		1	*1.44*	*2.15*	*0.20*	*0.62*	*Cum*
	Top Slab	*1*	*5.25*	*2.95*	*0.33*	*5.06*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.95*	*0.08*	*0.94*	*Cum*
	Dirt wall	*2*	*5.81*	0.82	*0.50*	*4.76*	*Cum*
		2	*5.81*	*0.40*	*0.43*	*1.98*	*Cum*
	Parapet	*2*	*3.79*	*0.45*	*0.18*	*0.59*	*Cum*
		2	*3.79*	*0.35*	*0.25*	*0.67*	*Cum*
		2	*3.79*	*0.22*	*0.55*	*0.91*	*Cum*
	TOTAL					**20.71**	**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*	*3.410*	*29*		*1.578*	*156.062*	*Kg*
a2	*10*	*5.650*	*15*		*0.616*	*52.245*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.330*	*18*		*0.616*	*36.951*	*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*	*2.501*	*48*		*0.888*	*106.567*	*Kg*
x2	*16*	*1.265*	*48*		*1.578*	*95.825*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*47.15*	*0.25%*	*0.12*	*7850*	*925.28*	*Kg*
	TOTAL Weight of steel (in kg)					1627.57	Kg
	TOTAL Weight of Steel (in Tonne)					**1.63**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.87		**2.87**	**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*	*1.17*		*0.50*	*2.33*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.17*		*0.99*	*4.61*	*Sqm*
		4		*1.12*	*0.99*	*4.42*	*Sqm*
		4	*1.17*		*1.40*	*6.52*	*Sqm*
		4		*1.41*	*1.40*	*7.92*	*Sqm*
	Section B-B	*4*	*5.25*		*1.29*	*27.09*	*Sqm*
		4		*1.18*	*1.29*	*6.11*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	5.25		1.10	23.10	Sqm
		4		1.59	1.10	7.01	Sqm
	Section C-C	4	0.56		0.99	2.22	Sqm
		4		1.12	0.99	4.42	Sqm
		4	0.56		1.40	3.14	Sqm
		4		1.41	1.40	7.92	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.12		0.50	3.12	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.12		0.69	4.30	Sqm
		2		0.75	0.69	1.03	Sqm
		2	3.12		1.40	8.73	Sqm
		2		1.04	1.40	2.92	Sqm
	Left Bank						
	Bottom Key	2	3.90		0.60	4.68	Sqm
		2		1.69	0.60	2.02	Sqm
	Section a-a	2	1.30		0.8	2.08	Sqm
		2		3.254	0.8	5.21	Sqm
		2	1.30		0.04	0.10	Sqm
		2		0.6	0.04	0.05	Sqm
		2	1.30		1.49	3.87	Sqm
		2		1.567	1.49	4.67	Sqm
	Section b-b	2	1.30		0.8	2.08	Sqm
		2		3.254	0.8	5.21	Sqm
		2	1.30		0.04	0.10	Sqm
		2		0.6	0.04	0.05	Sqm
		2	1.30		1.49	3.87	Sqm
		2		1.267	1.49	3.78	Sqm
	Section c-c	2	1.30		0.8	2.08	Sqm
		2		3.254	0.8	5.21	Sqm
		2	1.30		0.04	0.10	Sqm
		2		0.6	0.04	0.05	Sqm
		2	1.30		1.49	3.87	Sqm
		2		1.267	1.49	3.78	Sqm
	Section d-d	2	1.30		0.80	2.08	Sqm
		2		3.25	0.8	5.21	Sqm
		2	1.30		0.04	0.10	Sqm
		2		0.60	0.04	0.05	Sqm
		2	1.30		1.49	3.87	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		0.84	1.77	Sqm
		4		0.53	0.84	1.76	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	10.39	Sqm
		4		1.79	0.90	6.46	Sqm
		4	2.89		0.84	9.70	Sqm
		4		1.37	0.84	4.60	Sqm
		4	2.89		0.50	5.77	Sqm
		4		0.76	0.50	1.51	Sqm
	Floor						
	U/S key	2	1.69		0.70	2.36	Sqm
		2		3.85	0.70	5.39	Sqm
	Floor	2	4.11		0.50	4.11	Sqm
		2		3.85	0.50	3.85	Sqm
		2	0.42		0.30	0.25	Sqm
		2		2.15	0.30	1.29	Sqm
		4	0.72		0.20	0.58	Sqm
		4		2.15	0.20	1.72	Sqm
		2	0.36		0.30	0.22	Sqm
		2		2.15	0.30	1.29	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.00*		*0.50*	*3.00*	*Sqm*
		2		*2.15*	*0.50*	*2.15*	*Sqm*
		2	*1.05*		*0.20*	*0.42*	*Sqm*
		2		*2.15*	*0.2*	*0.86*	*Sqm*
		2	*1.44*		*0.50*	*1.44*	*Sqm*
		2		*2.15*	*0.5*	*2.15*	*Sqm*
	D/S key	*2*	*0.58*		*0.70*	*0.81*	*Sqm*
		2		*2.15*	*0.70*	*3.01*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.15*		*0.30*	*1.29*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.15*		*0.90*	*3.87*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.95*	*0.33*	*1.93*	*Sqm*
	Dirt wall	*4*	*5.81*		*0.50*	*11.62*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.81*		*0.43*	*9.88*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.79*		*0.18*	*2.65*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.79*		*0.25*	*3.79*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.79*		*0.55*	*8.34*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**329.19**	**Sqm**
8	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*	*1.55*	*0.90*	*4.19*	***Cum***
	TOTAL					**4.19**	**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. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.15*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.15*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	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**
12	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**
13	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	*1.17*	*1.27*		*2.959*	*Cum*
	Section B-B	2	*5.25*	*1.92*		*20.160*	*Cum*
	Section C-C	2	*0.56*	*1.62*		*1.812*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.12*	*1.17*		*3.647*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.53*	*0.77*		*0.810*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.89*	*1.30*		*7.498*	*Cum*
	TOTAL					**36.89**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR MURAT BIGHA MINOR OFFTAKING FROM RD-4+500 KM (L.) AT PHULWARIA MR						
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*	*2.01*	*1.60*	*3.397*	*21.768*	*Cum*
	Section B-B	*2*	*5.25*	*1.69*	*2.280*	*40.411*	*Cum*
	Section C-C	*2*	*0.50*	*1.51*	*2.780*	*4.192*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.93*	*1.63*	*3.718*	*17.714*	*Cum*
	Left Bank Sec a to d	*1*	*3.14*	*2.61*	*1.980*	*16.237*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.493*	*1.10*	*2.180*	*2.364*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.63*	*1.89*	*2.180*	*21.615*	*Cum*
	Floor						
	U/S key	*1*	*1.2975*	*2.713*	*0.850*	*2.992*	*Cum*
	Floor	*1*	*3.33*	*2.713*	*0.650*	*5.872*	*Cum*
		1	*0.618*	*1.35*	*0.650*	*0.542*	*Cum*
		1	*1.118*	*1.35*	*0.407*	*0.614*	*Cum*
		1	*0.423*	*1.35*	*0.150*	*0.570*	*Cum*
		1	*2.528*	*1.35*	*0.800*	*2.730*	*Cum*
		1	*0.304*	*1.35*	*0.000*	*0.410*	*Cum*
		1	*1.268*	*1.35*	*0.350*	*1.712*	*Cum*
		1	*0.135*	*1.35*	*0.000*	*0.182*	*Cum*
		1	*1.308*	*1.35*	*0.650*	*1.148*	*Cum*
		1	*0.800*	*1.35*	*0.950*	*1.026*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.000*	*2.200*	*0.600*	*2.640*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.350*	*0.850*	*1.200*	*1.377*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.200*	*4.000*	*0.900*	*7.920*	*Cum*
						154.04	**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	*0.618*	*3.208*	*0.150*	*0.30*	*Cum*
		1	*1.560*	*1.845*	*0.150*	*0.43*	*Cum*
		1	*1.280*	*1.350*	*0.150*	*0.26*	*Cum*
		1	*2.028*	*1.350*	*0.150*	*0.41*	*Cum*
		1	*2.588*	*1.350*	*0.150*	*0.52*	*Cum*
		1	*1.447*	*1.350*	*0.150*	*0.29*	*Cum*
		1	*0.083*	*1.350*	*0.150*	*0.02*	*Cum*
		1	*0.903*	*1.350*	*0.150*	*0.18*	*Cum*
		1	*0.692*	*1.350*	*0.150*	*0.14*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*2.005*	*1.598*	*0.300*	*1.92*	*Cum*
	Section B-B	*2*	*5.250*	*1.688*	*0.300*	*5.32*	*Cum*
	Section C-C	*2*	*0.500*	*1.508*	*0.300*	*0.45*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.927*	*1.628*	*0.300*	*1.43*	*Cum*
	Left Bank Sec a to d	*1*	*3.142*	*2.610*	*0.150*	*1.23*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.493*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.630*	*1.885*	*0.300*	*2.97*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.350*	*0.850*	*0.300*	*0.34*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall Stem D/S Portion	*1*	*1.350*	*0.450*	*0.900*	*0.55*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*7*	*0.600*	*0.600*	*0.300*	*0.76*	*Cum*
	TOTAL					**17.85**	**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*	*2.01*	*0.82*	*0.50*	*1.64*	*Cum*
		2	*2.01*	*1.01*	*0.63*	*2.55*	*Cum*
		2	*2.01*	*1.20*	*1.97*	*9.45*	*Cum*
	Section B-B	*2*	*5.25*	*1.05*	*0.78*	*8.63*	*Cum*
		2	*5.25*	*1.29*	*1.20*	*16.23*	*Cum*
	Section C-C	*2*	*0.50*	*0.96*	*0.98*	*0.94*	*Cum*
		2	*0.50*	*1.11*	*1.50*	*1.66*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.93*	*0.45*	*0.50*	*0.66*	*Cum*
		1	*2.93*	*0.64*	*0.95*	*1.78*	*Cum*
		1	*2.93*	*0.83*	*1.97*	*4.77*	*Cum*
	Left Bank						
	Section a-a	*1*		2.475	*0.50*	*1.24*	*Sqm*
		1		*2.33*	*0.20*	*0.47*	*Sqm*
		1		*1.33*	*1.13*	*1.50*	*Sqm*
						3.20	***Sqm***
	Section b-b	*1*		*2.48*	*0.50*	*1.24*	*Sqm*
		1		*2.10*	*0.20*	*0.42*	*Sqm*
		1		*1.29*	*1.13*	*1.46*	*Sqm*
						3.12	***Sqm***
	Section c-c	*1*		*2.48*	*0.50*	*1.24*	*Sqm*
		1		*1.68*	*0.20*	*0.34*	*Sqm*
		1		*1.08*	*1.13*	*1.22*	*Sqm*
						2.80	***Sqm***
	Section d-d	*1*		*2.48*	*0.50*	*1.24*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.13*	*0.54*	*Sqm*
						1.88	***Sqm***
	Bottom Key	*1*	*3.14*	*1.30*	*0.70*	*2.85*	*Cum*
	Top Stem Area	*1*	*3.14*	*2.75*		*8.63*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*0.90*	*0.62*	*Cum*
		2	*0.49*	*0.53*	*0.48*	*0.25*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.63*	*1.49*	*0.90*	*7.03*	*Cum*
		2	*2.63*	*1.21*	*0.48*	*3.04*	*Cum*
		2	*2.63*	*0.74*	*0.50*	*1.94*	*Cum*
	Floor						
	U/S key	*1*	*1.30*	*2.71*	*0.70*	*2.46*	*Cum*
	Floor	*1*	*3.33*	*2.71*	*0.50*	*4.52*	*Cum*
		1	*0.62*	*1.35*	*0.50*	*0.42*	*Cum*
		1	*1.12*	*1.35*	*0.26*	*0.39*	*Cum*
		1	*0.42*	*1.35*		*0.57*	*Cum*
		1	*2.53*	*1.35*	*0.65*	*2.22*	*Cum*
		1	*0.30*	*1.35*		*0.41*	*Cum*
		1	*1.27*	*1.35*	*0.20*	*0.34*	*Cum*
		1	*0.14*	*1.35*		*0.18*	*Cum*
		1	*1.31*	*1.35*	*0.50*	*0.88*	*Cum*
	D/S key	*1*	*0.80*	*1.35*	*0.80*	*0.86*	*Cum*
	TOTAL					**86.11**	**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*	*3.45*	*2.71*	*0.20*	*1.87*	*Cum*
		1	*1.69*	*1.35*	*0.20*	*0.46*	*Cum*
		1	*3.08*	*1.35*	*0.20*	*0.83*	*Cum*
		1	*0.95*	*1.35*	*0.20*	*0.26*	*Cum*
		1	*1.31*	*1.35*	*0.20*	*0.35*	*Cum*
	Top Slab	*1*	*5.25*	*2.15*	*0.33*	*3.69*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.15*	*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*	*2.99*	*0.45*	*0.18*	*0.47*	*Cum*
		2	*2.99*	*0.35*	*0.25*	*0.53*	*Cum*
		2	*2.99*	*0.22*	*0.55*	*0.72*	*Cum*
	TOTAL					**16.52**	**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*	*2.980*	*29*		*1.578*	*136.383*	*Kg*
a2	*10*	*5.650*	*13*		*0.616*	*45.279*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.900*	*9*		*0.616*	*16.090*	*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*	*2.501*	*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*
	0.25 % Skin Reinforcement for Transition walls	*31.74*	*0.25%*	*0.08*	*7850*	*622.96*	*Kg*
	TOTAL Weight of steel (in kg)					1252.44	Kg
	TOTAL Weight of Steel (in Tonne)					**1.25**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.63		**2.63**	**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*	*2.01*		*0.50*	*4.01*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*2.01*		*0.63*	*5.05*	*Sqm*
		4		*1.01*	*0.63*	*2.54*	*Sqm*
		4	*2.01*		*1.97*	*15.78*	*Sqm*
		4		*1.20*	*1.97*	*9.43*	*Sqm*
	Section B-B	*4*	*5.25*		*0.78*	*16.38*	*Sqm*
		4		*1.05*	*0.78*	*3.29*	*Sqm*
		4	*5.25*		*1.20*	*25.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.29	1.20	6.18	Sqm
	Section C-C	4	0.50		0.98	1.96	Sqm
		4		0.96	0.98	3.78	Sqm
		4	0.50		1.50	3.00	Sqm
		4		1.11	1.50	6.65	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	2.93		0.50	2.93	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.93		0.95	5.57	Sqm
		2		0.64	0.95	1.22	Sqm
		2	2.93		1.97	11.51	Sqm
		2		0.83	1.97	3.26	Sqm
	Left Bank						
	Bottom Key	2	3.14		0.70	4.40	Sqm
		2		1.30	0.70	1.82	Sqm
	Section a-a	2	1.05		0.5	1.05	Sqm
		2		2.475	0.5	2.48	Sqm
		2	1.05		0.2	0.42	Sqm
		2		2.325	0.2	0.93	Sqm
		2	1.05		1.13	2.37	Sqm
		2		1.3275	1.13	3.00	Sqm
	Section b-b	2	1.05		0.5	1.05	Sqm
		2		2.475	0.5	2.48	Sqm
		2	1.05		0.2	0.42	Sqm
		2		2.1	0.2	0.84	Sqm
		2	1.05		1.13	2.37	Sqm
		2		1.29	1.13	2.92	Sqm
	Section c-c	2	1.05		0.5	1.05	Sqm
		2		2.475	0.5	2.48	Sqm
		2	1.05		0.2	0.42	Sqm
		2		1.682	0.2	0.67	Sqm
		2	1.05		1.13	2.37	Sqm
		2		1.081	1.13	2.44	Sqm
	Section d-d	2	1.05		0.50	1.05	Sqm
		2		2.48	0.5	2.48	Sqm
		2	1.05		0.20	0.42	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.05		1.13	2.37	Sqm
		2		0.48	1.13	1.08	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.49		0.90	1.77	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.49		0.48	0.95	Sqm
		4		0.53	0.48	1.01	Sqm
		4	0.49		0.50	0.99	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.63		0.90	9.47	Sqm
		4		1.49	0.90	5.35	Sqm
		4	2.63		0.48	5.05	Sqm
		4		1.21	0.48	2.31	Sqm
		4	2.63		0.50	5.26	Sqm
		4		0.74	0.50	1.48	Sqm
	Floor						
	U/S key	2	1.30		0.70	1.82	Sqm
		2		2.71	0.70	3.80	Sqm
	Floor	2	3.33		0.50	3.33	Sqm
		2		2.71	0.50	2.71	Sqm
		2	0.62		0.50	0.62	Sqm
		2		1.35	0.50	1.35	Sqm
		2	1.12		0.26	0.57	Sqm
		2		1.35	0.26	0.69	Sqm
		2	0.42		0.00	0.85	Sqm
		2		1.35	0.00	2.70	Sqm
		2	2.53		0.65	3.29	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.35*	*0.65*	*1.76*	*Sqm*
		2	*0.30*		*0.00*	*0.61*	*Sqm*
		2		*1.35*	*0*	*2.70*	*Sqm*
		2	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*1.35*	*0.5*	*1.35*	*Sqm*
		2	**0.14**			*0.27*	*Sqm*
		2		*1.35*		*2.70*	*Sqm*
		2	**1.31**		*0.50*	*1.31*	*Sqm*
		2		*1.35*	*0.50*	*1.35*	*Sqm*
	D/S key	*2*	*0.80*		*0.80*	*1.28*	*Sqm*
		2		*1.35*	*0.80*	*2.16*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.35*		*0.30*	*0.81*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.35*		*0.90*	*2.43*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.15*	*0.33*	*1.40*	*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*	*2.99*		*0.18*	*2.09*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*2.99*		*0.25*	*2.99*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*2.99*		*0.55*	*6.58*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**294.45**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*2.20*	*4.00*	*0.90*	*7.92*	***Cum***
	TOTAL					**7.92**	**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. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.35*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.35*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. **(RCD 14.9)**	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (14.17 PWD NH SOR CHHATISGARH 2021)**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 14.18 ii)**	2	5.25			**10.50**	**RM**
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 (WRD Part B 7.1.31)						
	Abutment						
	Section A-A	*2*	*2.01*	*2.16*		*8.650*	*Cum*
	Section B-B	*2*	*5.25*	*1.23*		*12.915*	*Cum*
	Section C-C	*2*	*0.50*	*1.05*		*1.048*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*2.93*	*0.93*		*2.707*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.63*		*0.625*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.63*	*1.05*		*5.507*	*Cum*
	TOTAL					**31.45**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR NAUR SUB 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 0.305 METER AT CH. 1.500 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.	101.999	Cum	**195.20**	19910.21			
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.	18.98	Cum	**6381.70**	121106.80	6.15	8.54	17.08
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.	74.23	Cum	**6914.20**	513212.02	30.62	31.92	63.83
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.	1.04	Cum	**8151.40**	8438.17	0.59	0.40	0.82
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.	1.77	MT	**73574.90**	130403.86			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	237.10	Sqm	**578.60**	137187.55			
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.	28.58	Sqm	**680.10**	19439.98			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.57	Cum	**694.61**	1781.67			
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.	2.57	Cum	**1237.00**	3172.91			
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.	2.57	Cum	**1377.70**	3533.80			
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.	2.57	Cum	**516.50**	1324.82			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.49	Sqm	**63.20**	916.00			
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	2.43	Cum	**149.30**	362.62			
15	**Carriage of materials**							
	Coarse Sand (30 Km lead)	40.861	Cum	**1075.00**	43925.10			
	Coarse Aggregates (60 Km lead)	81.731	Cum	**1398.00**	114260.58			
	Cement (30 km lead)	37.354	MT	**742.00**	27716.45			
	Boulder (60 Km lead)	2.57	Cum	**1159.00**	2972.84			
	Brick (30 km lead)	1715.00	No.	**3.18**	5453.70			
	Steel (30 km lead)	1.772	MT	**742.00**	1315.12			
TOTAL (In Rs.)					**1167611.58**			
TOTAL (In Rs.) For NAUR SUB DY.					**1167611.58**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	40.86	Cum	**584.64**	23888.71	2388.87		
	Coarse Aggregate	81.73	Cum	**944.26**	77175.75	7717.57		
	Boulders	2.57	Cum	**694.61**	1781.67	178.17		
	Total					#########		

DETAILS OF QUANTITIES OF SHARDA TYPE FALL (1.220 M) FOR NAUR SUB DY AT RD 3.700 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.	175.894	Cum	**195.20**	34334.58			
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.	16.29	Cum	**6381.70**	103983.07	5.28	7.33	14.66
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.	95.73	Cum	**6914.20**	661890.96	39.49	41.16	82.33
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.	0.93	Cum	**8151.40**	7572.24	0.53	0.36	0.73
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.	2.25	MT	**73574.90**	165868.95			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	260.05	Sqm	**578.60**	150464.40			
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.	16.81	Sqm	**680.10**	11430.78			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	14.15	Cum	**694.61**	9827.34			
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.	14.15	Cum	**1237.00**	17501.08			
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.	0.80	Cum	**1377.70**	1097.34			
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.	0.80	Cum	**516.50**	411.39			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.84	Sqm	**63.20**	937.95			
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	47.96	Cum	**149.30**	7161.00			
15	**Carriage of materials**							
	Coarse Sand (30 Km lead)	48.858	Cum	**1075.00**	52522.49			
	Coarse Aggregates (60 Km lead)	98.522	Cum	**1398.00**	137733.82			
	Cement (30 km lead)	45.294	MT	**742.00**	33608.34			
	Boulder (60 Km lead)	14.15	Cum	**1159.00**	16397.53			
	Brick (30 km lead)	1008.00	No.	**3.18**	3205.44			
	Steel (30 km lead)	2.254	MT	**742.00**	1672.78			
	TOTAL (In Rs.)				**1428798.90**			
	TOTAL (In Rs.) For NAUR SUB DY.				**1428798.90**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	48.86	Cum	**584.64**	28564.42	2856.44		
	Coarse Aggregate	98.52	Cum	**944.26**	93030.43	9303.04		
	Boulders	14.15	Cum	**694.61**	9827.34	982.73		
	Total					13142.22		
	For 1 nos. fall, Total Seigniorage charges					**13142.22**		

SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.950 KM								
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.	159.468	Cum	**195.20**	31128.08			
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.	14.23	Cum	**6381.70**	90821.71	4.61	6.40	12.81
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.	79.79	Cum	**6914.20**	551655.82	32.91	34.31	68.62
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.	0.85	Cum	**8151.40**	6956.61	0.48	0.33	0.67
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.	1.90	MT	**73574.90**	139722.90			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	242.48	Sqm	**578.60**	140300.81			
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.	18.69	Sqm	**680.10**	12707.67			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.47	Cum	**694.61**	322.99			
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.	0.47	Cum	**1237.00**	575.21			
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.	0.47	Cum	**1377.70**	640.63			
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.	0.47	Cum	**516.50**	240.17			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.77	Sqm	**63.20**	870.55			
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	9.17	Cum	**149.30**	1368.69			
15	**Carriage of materials**							
	Coarse Sand (30 Km lead)	41.045	Cum	**1075.00**	44123.37			
	Coarse Aggregates (60 Km lead)	82.099	Cum	**1398.00**	114773.74			
	Cement (30 km lead)	38.007	MT	**742.00**	28200.91			
	Steel (30 km lead)	1.899	MT	**742.00**	1409.10			
	Boulder (60 Km lead)	0.47	Cum	**1159.00**	538.94			
	Brick (30 km lead)	1121.00	No.	**3.18**	3564.78			
	TOTAL (In Rs.)				**1181100.07**			
	TOTAL (In Rs.) For NAUR SUB DY.				**1181100.07**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	41.04	Cum	**584.64**	23996.55	2399.65		
	Coarse Aggregate	82.10	Cum	**944.26**	77522.35	7752.24		
	Boulders	0.47	Cum	**694.61**	322.99	32.30		
	Total					10184.19		
	For 1 nos. fall, Total Seigniorage charges					**10184.19**		

SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 5.500 KM								
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.	108.850	Cum	**195.20**	21247.57			
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.	13.15	Cum	**6381.70**	83905.66	4.26	5.92	11.83
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.	57.44	Cum	**6914.20**	397171.71	23.70	24.70	49.40
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**	6347.70	0.44	0.30	0.62
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.	1.37	MT	**73574.90**	100879.97			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	196.88	Sqm	**578.60**	113911.92			
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.	18.11	Sqm	**680.10**	12316.61			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.39	Cum	**694.61**	270.90			
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.	0.39	Cum	**1237.00**	482.43			
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.	0.39	Cum	**1377.70**	537.30			
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.	0.39	Cum	**516.50**	201.44			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.55	Sqm	**63.20**	793.19			
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	4.09	Cum	**149.30**	610.38			
15	**Carriage of materials**							
	Coarse Sand (30 Km lead)	30.921	Cum	**1075.00**	33239.74			
	Coarse Aggregates (60 Km lead)	61.849	Cum	**1398.00**	86465.12			
	Cement (30 km lead)	28.397	MT	**742.00**	21070.31			
	Steel (30 km lead)	1.371	MT	**742.00**	1017.37			
	Boulder (60 Km lead)	0.39	Cum	**1159.00**	452.01			
	Brick (30 km lead)	1086.00	No.	**3.18**	3453.48			
	TOTAL (In Rs.)				**895552.19**			
	TOTAL (In Rs.) For NAUR SUB DY.				**895552.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	30.92	Cum	**584.64**	18077.47	1807.75		
	Coarse Aggregate	61.85	Cum	**944.26**	58401.68	5840.17		
	Boulders	0.39	Cum	**694.61**	270.90	27.09		
	Total					7675.01		
	For 1 nos. fall, Total Seigniorage charges					**7675.01**		

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 6.700 KM								
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.	71.779	Cum	**195.20**	14011.30			
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.	11.10	Cum	**6381.70**	70840.73	3.60	5.00	9.99
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.	44.01	Cum	**6914.20**	304323.68	18.16	18.93	37.85
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.	0.71	Cum	**8151.40**	5754.56	0.40	0.28	0.56
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.	1.05	MT	**73574.90**	77486.30			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	168.10	Sqm	**578.60**	97263.78			
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.	13.73	Sqm	**680.10**	9339.13			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.22	Cum	**694.61**	154.20			
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.	0.22	Cum	**1237.00**	274.61			
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.	0.22	Cum	**1377.70**	305.85			
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.	0.22	Cum	**516.50**	114.66			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.94	Sqm	**63.20**	754.40			
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	1.81	Cum	**149.30**	269.75			
15	**Carriage of materials**							
	Coarse Sand (30 Km lead)	24.197	Cum	**1075.00**	26011.50			
	Coarse Aggregates (60 Km lead)	48.401	Cum	**1398.00**	67663.97			
	Cement (30 km lead)	22.153	MT	**742.00**	16437.36			
	Steel (30 km lead)	1.053	MT	**742.00**	781.45			
	Boulder (60 Km lead)	0.22	Cum	**1159.00**	257.30			
	Brick (30 km lead)	824.00	No.	**3.18**	2620.32			
	TOTAL (In Rs.)				**705842.28**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	24.20	Cum	**584.64**	14146.39	1414.64		
	Coarse Aggregate	48.40	Cum	**944.26**	45702.71	4570.27		
	Boulders	0.22	Cum	**694.61**	154.20	15.42		
	Total					6000.33		
	For 1 nos. fall, Total Seigniorage charges					**6000.33**		

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 9.000								
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.	52.414	Cum	**195.20**	10231.19			
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.	8.56	Cum	**6381.70**	54635.67	2.77	3.85	7.71
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.	31.50	Cum	**6914.20**	217788.26	12.99	13.54	27.09
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**	4726.75	0.33	0.23	0.46
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.	0.76	MT	**73574.90**	55582.17			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	130.50	Sqm	**578.60**	75505.21			
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.	8.92	Sqm	**680.10**	6066.49			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.08	Cum	**694.61**	54.18			
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**	96.49			
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.	0.08	Cum	**1377.70**	107.46			
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**	40.29			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.95	Sqm	**63.20**	629.15			
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	1.68	Cum	**149.30**	250.79			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.623	Cum	**1075.00**	18944.91			
	Coarse Aggregates (60 Km lead)	35.252	Cum	**1398.00**	49282.50			
	Cement (30 km lead)	16.096	MT	**742.00**	11943.13			
	Steel (30 km lead)	0.755	MT	**742.00**	560.54			
	Boulder (60 Km lead)	0.08	Cum	**1159.00**	90.40			
	Brick (30 km lead)	536.00	No.	**3.21**	1720.56			
	TOTAL (In Rs.)				**519433.54**			
	TOTAL (In Rs.) For NAUR SUB DY.				**519433.54**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	17.62	Cum	**584.64**	10303.21	1030.32		
	Coarse Aggregate	35.25	Cum	**944.26**	33287.19	3328.72		
	Boulders	0.08	Cum	**694.61**	54.18	5.42		
	Total					4364.46		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR PHULWARIA MINOR								
SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 1.030								
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.	255.897	Cum	**195.20**	49951.13			
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.	17.22	Cum	**6381.70**	109909.58	5.58	7.75	15.50
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.	118.42	Cum	**6914.20**	818807.53	48.85	50.92	101.84
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.	1.09	Cum	**8151.40**	8920.53	0.62	0.43	0.86
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.	2.81	MT	**73574.90**	207088.20			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	304.25	Sqm	**578.60**	176040.28			
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.	15.99	Sqm	**680.10**	10874.80			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.40	Cum	**694.61**	968.98			
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.	1.40	Cum	**1237.00**	1725.62			
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.	1.40	Cum	**1377.70**	1921.89			
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.	1.40	Cum	**516.50**	720.52			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.15	Sqm	**63.20**	894.10			
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	21.19	Cum	**149.30**	3164.32			
15	**Carriage of materials**							
	Coarse Sand (30 Km lead)	59.099	Cum	**1075.00**	63531.76			
	Coarse Aggregates (60 Km lead)	118.210	Cum	**1398.00**	165256.99			
	Cement (30 km lead)	55.051	MT	**742.00**	40847.51			
	Steel (30 km lead)	2.815	MT	**742.00**	2088.48			
	Boulder (60 Km lead)	1.40	Cum	**1159.00**	1616.81			
	Brick (30 km lead)	959.00	No.	**3.21**	3078.39			
	TOTAL (In Rs.)				**1678584.80**			
	TOTAL (In Rs.)				**1678584.80**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	59.10	Cum	**584.64**	34551.82	3455.18		
	Coarse Aggregate	118.21	Cum	**944.26**	111620.57	11162.06		
	Boulders	1.40	Cum	**694.61**	968.98	96.90		
	Total					14714.14		
	For 1 nos. fall, Total Seigniorage charges					**14714.14**		

SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 6.000 KM								
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.	40.562	Cum	**195.20**	7917.73			
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.	7.84	Cum	**6381.70**	50044.36	2.54	3.53	7.06
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.	27.47	Cum	**6914.20**	189961.01	11.33	11.81	23.63
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.	0.52	Cum	**8151.40**	4224.59	0.29	0.20	0.41
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.	0.66	MT	**73574.90**	48501.96			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	120.38	Sqm	**578.60**	69651.64			
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.	8.14	Sqm	**680.10**	5533.29			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.12	Cum	**694.61**	83.35			
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.	0.12	Cum	**1237.00**	148.44			
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.	0.12	Cum	**1377.70**	165.32			
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.	0.12	Cum	**516.50**	61.98			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.93	Sqm	**63.20**	564.08			
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	0.52	Cum	**149.30**	77.53			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.545	Cum	**1075.00**	16710.65			
	Coarse Aggregates (60 Km lead)	31.095	Cum	**1398.00**	43470.49			
	Cement (30 km lead)	14.168	MT	**742.00**	10512.40			
	Steel (30 km lead)	0.659	MT	**742.00**	489.14			
	Boulder (60 Km lead)	0.12	Cum	**1159.00**	139.08			
	Brick (30 km lead)	489.00	No.	**3.21**	1569.69			
	TOTAL (In Rs.)				**461004.13**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	15.54	Cum	**584.64**	9088.11	908.81		
	Coarse Aggregate	31.09	Cum	**944.26**	29361.55	2936.15		
	Boulders	0.12	Cum	**694.61**	83.35	8.34		
	Total					3853.30		
	For 2 nos. fall, Total Seigniorage charges					**7706.60**		

SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 6.431 KM								
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.	53.644	Cum	**195.20**	10471.25			
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.	8.43	Cum	**6381.70**	53773.48	2.73	3.79	7.58
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.	30.31	Cum	**6914.20**	209575.68	12.50	13.03	26.07
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.	0.56	Cum	**8151.40**	4538.94	0.32	0.22	0.44
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.	0.79	MT	**73574.90**	57890.20			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	125.92	Sqm	**578.60**	72859.94			
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.	8.06	Sqm	**680.10**	5481.61			
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.	8.71	Sqm	**63.20**	550.26			
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	1.52	Cum	**149.30**	226.59			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.043	Cum	**1075.00**	18320.84			
	Coarse Aggregates (60 Km lead)	34.091	Cum	**1398.00**	47659.02			
	Cement (30 km lead)	15.549	MT	**742.00**	11537.40			
	Steel (30 km lead)	0.787	MT	**742.00**	583.82			
	Boulder (60 Km lead)	0.45	Cum	**1159.00**	521.55			
	Brick (30 km lead)	484.00	No.	**3.21**	1553.64			
	TOTAL (In Rs.)				**508443.25**			
	TOTAL (In Rs.) For PHULWARIA MINOR				**508443.25**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	17.04	Cum	**584.64**	9963.81	996.38		
	Coarse Aggregate	34.09	Cum	**944.26**	32190.63	3219.06		
	Boulders	0.45	Cum	**694.61**	312.57	31.26		
	Total					4246.70		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR MURAT BIGHA MINOR

SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.000 KM

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.	53.644	Cum	**195.20**	10471.25			
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.	8.43	Cum	**6381.70**	53773.48	2.73	3.79	7.58
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.	30.31	Cum	**6914.20**	209575.68	12.50	13.03	26.07
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.	0.56	Cum	**8151.40**	4538.94	0.32	0.22	0.44
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.	0.73	MT	**73574.90**	53484.19			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	125.92	Sqm	**578.60**	72859.94			
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.	8.06	Sqm	**680.10**	5481.61			
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.	8.71	Sqm	**63.20**	550.26			
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	1.52	Cum	**149.30**	226.59			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.043	Cum	**1075.00**	18320.84			
	Coarse Aggregates (60 Km lead)	34.091	Cum	**1398.00**	47659.02			
	Cement (30 km lead)	15.549	MT	**742.00**	11537.40			
	Steel (30 km lead)	0.727	MT	**742.00**	539.39			
	Boulder (60 Km lead)	0.45	Cum	**1159.00**	521.55			
	Brick (30 km lead)	484.00	No.	**3.18**	1539.12			
	TOTAL (In Rs.)				**503978.28**			
	TOTAL (In Rs.) For MURAT BIGHA MINOR				***503978.28***			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	17.04	Cum	**584.64**	9963.81	996.38		
	Coarse Aggregate	34.09	Cum	**944.26**	32190.63	3219.06		
	Boulders	0.45	Cum	**694.61**	312.57	31.26		
	Total					4246.70		
	For 1 no. fall, Total Seigniorage charges					**4246.70**		

SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 0.975 KM								
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.	106.953	Cum	**195.20**	20877.14			
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.	9.64	Cum	**6381.70**	61492.90	3.12	4.34	8.67
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.	56.42	Cum	**6914.20**	390102.40	23.27	24.26	48.52
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.	0.68	Cum	**8151.40**	5514.91	0.38	0.26	0.53
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.	1.34	MT	**73574.90**	98931.39			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	184.96	Sqm	**578.60**	107020.11			
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.	5.89	Sqm	**680.10**	4003.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.12	Cum	**694.61**	81.27			
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.	0.12	Cum	**1237.00**	144.73			
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.	0.12	Cum	**1377.70**	161.19			
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.	0.12	Cum	**516.50**	60.43			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.34	Sqm	**63.20**	716.57			
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	4.93	Cum	**149.30**	735.48			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	28.861	Cum	**1075.00**	31025.34			
	Coarse Aggregates (60 Km lead)	57.728	Cum	**1398.00**	80704.19			
	Cement (30 km lead)	26.779	MT	**742.00**	19870.06			
	Steel (30 km lead)	1.345	MT	**742.00**	997.72			
	Boulder (60 Km lead)	0.12	Cum	**1159.00**	135.60			
	Brick (30 km lead)	353.00	No.	**3.18**	1122.54			
	TOTAL (In Rs.)				**834874.44**			
	TOTAL (In Rs.) For MURAT BIGHA MINOR				**834874.44**			
	Seigniorage @10%			**Rate**	**Amount in Rs**	**10%**		
	Coarse Sand	28.86	Cum	**584.64**	16873.17	1687.32		
	Coarse Aggregate	57.73	Cum	**944.26**	54510.54	5451.05		
	Boulders	0.12	Cum	**694.61**	81.27	8.13		
	Total					7146.50		
	For 1 no. fall, Total Seigniorage charges					**7146.50**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NAUR SUB DY.							
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 1.500 KM							
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.						
		1	102.00			**102.00**	**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*	*0.542*	*3.45*	*0.15*	*0.28*	*Cum*
		1	*0.783*	*3.45*	*0.15*	*0.41*	*Cum*
		1	*4.468*	*3.45*	*0.15*	*2.31*	*Cum*
		1	*0.282*	*3.45*	*0.15*	*0.15*	*Cum*
		1	*0.546*	*3.45*	*0.15*	*0.28*	*Cum*
		1	*0.782*	*3.45*	*0.15*	*0.40*	*Cum*
		1	*0.542*	*3.45*	*0.15*	*0.28*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.76*	*1.62*	*0.15*	*0.85*	*Cum*
	Section 2-2	*2*	*2.35*	*1.44*	*0.15*	*1.02*	*Cum*
	Section 3-3	*2*	*0.94*	*1.32*	*0.15*	*0.37*	*Cum*
	Section 5-5	*2*	*6.07*	*1.77*	*0.15*	*3.23*	*Cum*
	Section 6-6	*2*	*3.97*	*1.32*	*0.15*	*1.57*	*Cum*
	Toe Wall D/S Portion	*1*	*12.70*	*0.75*	*0.30*	*2.86*	*Cum*
	Toe Wall D/S Portion	*1*	*12.40*	*0.45*	*0.60*	*3.35*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.60*	*0.15*	*0.54*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	TOTAL					**18.98**	**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*	*1.53*	*0.45*	*0.45*	*0.62*	*Cum*
		2	*1.53*	*0.89*	*1.46*	*3.95*	*Cum*
		2	*1.53*	*1.47*	*0.50*	*2.26*	*Cum*
	Section 2-2	*2*	*2.35*	*0.45*	*0.45*	*0.95*	*Cum*
		2	*2.35*	*0.80*	*1.15*	*4.30*	*Cum*
		2	*2.35*	*1.29*	*0.50*	*3.03*	*Cum*
	Section 3-3	*2*	*1.17*	*0.45*	*0.45*	*0.47*	*Cum*
		2	*1.17*	*0.74*	*0.95*	*1.63*	*Cum*
		2	*1.17*	*1.17*	*0.50*	*1.36*	*Cum*
	Section 5-5	*2*	*6.02*	*0.45*	*0.45*	*2.44*	*Cum*
		2	*6.02*	*0.89*	*1.46*	*15.54*	*Cum*
		2	*6.02*	*1.47*	*0.50*	*8.87*	*Cum*
	Section 6-6	*2*	*3.89*	*0.45*	*0.45*	*1.58*	*Cum*
		2	*3.89*	*0.74*	*0.95*	*5.43*	*Cum*
		2	*3.89*	*1.17*	*0.50*	*4.55*	*Cum*
	Floor	*1*	*0.63*	*3.45*	*0.70*	*1.51*	*Cum*
		1	*4.90*	*3.45*	*0.50*	*8.45*	*Cum*
		1	*0.50*	*3.45*	*0.20*	*0.34*	*Cum*
		1	*0.20*	*3.45*	*0.40*	*0.28*	*Cum*
		1	*1.90*	*3.45*	*0.50*	*3.28*	*Cum*
		1	*0.63*	*3.45*	*0.70*	*1.51*	*Cum*
	Crest	*1*	*0.72*	*3.45*	*0.76*	*1.88*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**74.23**	**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*	*3.45*	*0.15*	*0.31*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*16.10*	*0.45*	*0.05*	*0.36*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.10*	*0.45*	*0.05*	*0.36*	*Sqm*
	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	**75.26**	**0.30%**	**0.23**	**7850**	**1772.40**	**Kg**
	Total Weight in Metric Tonne					**1.77**	**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*	*1.53*		*0.45*	*2.76*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.53*		*1.46*	*8.91*	*Sqm*
		4		*0.89*	*1.46*	*5.16*	*Sqm*
		4	*1.53*		*0.50*	*3.06*	*Sqm*
		4		*1.47*	*0.50*	*2.95*	*Sqm*
	Section 2-2	*4*	*2.35*		*0.45*	*4.23*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.35*		*1.15*	*10.81*	*Sqm*
		4		*0.80*	*1.15*	*3.66*	*Sqm*
		4	*2.35*		*0.50*	*4.70*	*Sqm*
		4		*1.29*	*0.50*	*2.58*	*Sqm*
	Section 3-3	*4*	*1.17*		*0.45*	*2.10*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.17*		*0.95*	*4.43*	*Sqm*
		4		*0.74*	*0.95*	*2.79*	*Sqm*
		4	*1.17*		*0.50*	*2.33*	*Sqm*
		4		*1.17*	*0.50*	*2.34*	*Sqm*
	Section 5-5	*4*	*6.02*		*0.45*	*10.84*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*6.02*		*1.46*	*35.06*	*Sqm*
		4		*0.89*	*1.46*	*5.16*	*Sqm*
		4	*6.02*		*0.50*	*12.05*	*Sqm*
		4		*1.47*	*0.50*	*2.95*	*Sqm*
	Section 6-6	*4*	*3.89*		*0.45*	*7.00*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.89*		*0.95*	*14.78*	*Sqm*
		4		*0.74*	*0.95*	*2.79*	*Sqm*
		4	*3.89*		*0.50*	*7.78*	*Sqm*
		4		*1.17*	*0.50*	*2.34*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.45*	*0.70*	*4.83*	*Sqm*
		2	*4.90*		*0.50*	*4.90*	*Sqm*
		2		*3.45*	*0.50*	*3.45*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*3.45*	*0.20*	*1.38*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*3.45*	*0.40*	*2.76*	*Sqm*
		2	*1.90*		*0.50*	*1.90*	*Sqm*
		2		*3.45*	*0.50*	*3.45*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*3.45*	*0.70*	*4.83*	*Sqm*
	Crest	*2*	*0.718*		*0.759*	*1.09*	*Sqm*
		2		*3.45*	*0.759*	*5.24*	*Sqm*
	Toe Wall D/S Portion	*2*	*12.70*		*0.30*	*7.62*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*12.40*		*0.60*	*14.88*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.15*	*1.80*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**237.10**	**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*	*4.76*		*28.58*	*Sqm*
	TOTAL					**28.58**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.00*	*2.85*	*0.30*	**2.57**	**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*	*2.85*	*0.15*	**2.57**	**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*	*16.10*	*0.45*		*7.25*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.10*	*0.45*		*7.25*	*Sqm*
	TOTAL					**14.49**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		2.43		2.43	**Cum**
	TOTAL					**2.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.950 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.						
		1	159.47			**159.47**	**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*	*0.543*	*1.22*	*0.15*	*0.10*	*Cum*
		1	*0.503*	*1.22*	*0.15*	*0.09*	*Cum*
		1	*6.043*	*1.22*	*0.15*	*1.11*	*Cum*
		1	*0.566*	*1.22*	*0.15*	*0.10*	*Cum*
		1	*0.622*	*1.22*	*0.15*	*0.11*	*Cum*
		1	*1.397*	*1.22*	*0.15*	*0.26*	*Cum*
		1	*0.543*	*1.22*	*0.15*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.41*	*2.01*	*0.15*	*0.85*	*Cum*
	Section 2-2	*2*	*3.50*	*1.28*	*0.15*	*1.34*	*Cum*
	Section 3-3	*2*	*2.20*	*1.16*	*0.15*	*0.76*	*Cum*
	Section 5-5	*2*	*4.65*	*2.16*	*0.15*	*3.01*	*Cum*
	Section 6-6	*2*	*2.52*	*1.16*	*0.15*	*0.88*	*Cum*
	Toe Wall D/S Portion	*1*	*8.58*	*0.75*	*0.30*	*1.93*	*Cum*
	Toe Wall D/S Portion	*1*	*8.28*	*0.45*	*0.60*	*2.24*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
	TOTAL					**14.23**	**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*	*1.18*	*0.45*	*0.45*	*0.48*	*Cum*
		2	*1.18*	*1.08*	*2.10*	*5.37*	*Cum*
		2	*1.18*	*1.86*	*0.75*	*3.30*	*Cum*
	Section 2-2	*2*	*3.50*	*0.45*	*0.45*	*1.42*	*Cum*
		2	*3.50*	*0.71*	*0.88*	*4.40*	*Cum*
		2	*3.50*	*1.13*	*0.75*	*5.92*	*Cum*
	Section 3-3	*2*	*1.85*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.85*	*0.65*	*0.68*	*1.64*	*Cum*
		2	*1.85*	*1.01*	*0.55*	*2.05*	*Cum*
	Section 5-5	*2*	*4.61*	*0.45*	*0.45*	*1.87*	*Cum*
		2	*4.61*	*1.08*	*2.10*	*20.90*	*Cum*
		2	*4.61*	*1.86*	*0.75*	*12.85*	*Cum*
	Section 6-6	*2*	*3.03*	*0.45*	*0.45*	*1.23*	*Cum*
		2	*3.03*	*0.65*	*0.68*	*2.69*	*Cum*
		2	*3.03*	*1.01*	*0.55*	*3.36*	*Cum*
	Floor	*1*	*0.56*	*1.22*	*0.45*	*0.31*	*Cum*
		1	*6.50*	*1.22*	*0.75*	*5.95*	*Cum*
		1	*0.45*	*1.22*	*0.40*	*0.22*	*Cum*
		1	*0.20*	*1.22*	*0.45*	*0.11*	*Cum*
		1	*2.30*	*1.22*	*0.55*	*1.54*	*Cum*
		1	*0.76*	*1.22*	*1.25*	*1.16*	*Cum*
	Crest	*1*	*1.16*	*1.22*	*1.61*	*2.27*	*Cum*
	TOTAL					**79.79**	**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*	*0.90*	*1.22*	*0.15*	*0.16*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.31*	*0.45*	*0.05*	*0.34*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.31*	*0.45*	*0.05*	*0.34*	*Sqm*
	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	**80.64**	**0.30%**	**0.24**	**7850**	**1899.06**	**Kg**
	Total Weight in Metric Tonne					**1.90**	**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*	*1.18*		*0.45*	*2.13*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.18*		*2.10*	*9.95*	*Sqm*
		4		*1.08*	*2.10*	*9.07*	*Sqm*
		4	*1.18*		*0.75*	*3.55*	*Sqm*
		4		*1.86*	*0.75*	*5.58*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.45*	*6.30*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.50*		*0.88*	*12.32*	*Sqm*
		4		*0.71*	*0.88*	*2.51*	*Sqm*
		4	*3.50*		*0.75*	*10.50*	*Sqm*
		4		*1.13*	*0.75*	*3.38*	*Sqm*
	Section 3-3	*4*	*1.85*		*0.45*	*3.32*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.85*		*0.68*	*5.02*	*Sqm*
		4		*0.65*	*0.68*	*1.78*	*Sqm*
		4	*1.85*		*0.55*	*4.06*	*Sqm*
		4		*1.01*	*0.55*	*2.22*	*Sqm*
	Section 5-5	*4*	*4.61*		*0.45*	*8.29*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.61*		*2.10*	*38.70*	*Sqm*
		4		*1.08*	*2.10*	*9.07*	*Sqm*
		4	*4.61*		*0.75*	*13.82*	*Sqm*
		4		*1.86*	*0.75*	*5.58*	*Sqm*
	Section 6-6	*4*	*3.03*		*0.45*	*5.45*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.03*		*0.68*	*8.23*	*Sqm*
		4		*0.65*	*0.68*	*1.78*	*Sqm*
		4	*3.03*		*0.55*	*6.66*	*Sqm*
		4		*1.01*	*0.55*	*2.22*	*Sqm*
	Floor	*2*	*0.56*		*0.45*	*0.51*	*Sqm*
		2		*1.22*	*0.45*	*1.10*	*Sqm*
		2	*6.50*		*0.75*	*9.75*	*Sqm*
		2		*1.22*	*0.75*	*1.83*	*Sqm*
		2	*0.45*		*0.40*	*0.36*	*Sqm*
		2		*1.22*	*0.40*	*0.98*	*Sqm*
		2	*0.20*		*0.45*	*0.18*	*Sqm*
		2		*1.22*	*0.45*	*1.10*	*Sqm*
		2	*2.30*		*0.55*	*2.53*	*Sqm*
		2		*1.22*	*0.55*	*1.34*	*Sqm*
		2	*0.76*		*1.25*	*1.91*	*Sqm*
		2		*1.22*	*1.25*	*3.05*	*Sqm*
	Crest	*2*	*1.1595*		*1.608*	*3.73*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.22*	*1.608*	*3.92*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.58*		*0.30*	*5.15*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.28*		*0.60*	*9.94*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**242.48**	**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*	*2.50*	*3.74*		*18.69*	*Sqm*
	TOTAL					**18.69**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*0.62*	*0.30*	**0.47**	**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	*2.50*	*0.62*	*0.15*	**0.47**	**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*	*15.31*	*0.45*		*6.89*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.31*	*0.45*		*6.89*	*Sqm*
	TOTAL					**13.77**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		9.17		9.17	Cum
	TOTAL					**9.17**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 5.500 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.						
		1	108.85			**108.85**	**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*	*0.543*	*1.12*	*0.15*	*0.09*	*Cum*
		1	*0.727*	*1.12*	*0.15*	*0.12*	*Cum*
		1	*5.143*	*1.12*	*0.15*	*0.86*	*Cum*
		1	*0.354*	*1.12*	*0.15*	*0.06*	*Cum*
		1	*0.197*	*1.12*	*0.15*	*0.03*	*Cum*
		1	*1.118*	*1.12*	*0.15*	*0.19*	*Cum*
		1	*0.543*	*1.12*	*0.15*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.34*	*1.81*	*0.15*	*0.73*	*Cum*
	Section 2-2	*2*	*3.00*	*1.26*	*0.15*	*1.13*	*Cum*
	Section 3-3	*2*	*1.70*	*1.14*	*0.15*	*0.58*	*Cum*
	Section 5-5	*2*	*4.54*	*1.96*	*0.15*	*2.67*	*Cum*
	Section 6-6	*2*	*3.58*	*1.14*	*0.15*	*1.22*	*Cum*
	Toe Wall D/S Portion	*1*	*8.27*	*0.75*	*0.30*	*1.86*	*Cum*
	Toe Wall D/S Portion	*1*	*7.97*	*0.45*	*0.60*	*2.15*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
	TOTAL					**13.15**	**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*	*1.12*	*0.45*	*0.45*	*0.45*	*Cum*
		2	*1.12*	*0.98*	*1.76*	*3.86*	*Cum*
		2	*1.12*	*1.66*	*0.55*	*2.04*	*Cum*
	Section 2-2	*2*	*3.00*	*0.45*	*0.45*	*1.22*	*Cum*
		2	*3.00*	*0.71*	*0.85*	*3.60*	*Cum*
		2	*3.00*	*1.11*	*0.55*	*3.66*	*Cum*
	Section 3-3	*2*	*1.36*	*0.45*	*0.45*	*0.55*	*Cum*
		2	*1.36*	*0.65*	*0.65*	*1.14*	*Cum*
		2	*1.36*	*0.99*	*0.50*	*1.34*	*Cum*
	Section 5-5	*2*	*4.50*	*0.45*	*0.45*	*1.82*	*Cum*
		2	*4.50*	*0.98*	*1.76*	*15.54*	*Cum*
		2	*4.50*	*1.66*	*0.55*	*8.21*	*Cum*
	Section 6-6	*2*	*2.93*	*0.45*	*0.45*	*1.19*	*Cum*
		2	*2.93*	*0.65*	*0.65*	*2.46*	*Cum*
		2	*2.93*	*0.99*	*0.50*	*2.90*	*Cum*
	Floor	*1*	*0.61*	*1.12*	*0.65*	*0.45*	*Cum*
		1	*5.50*	*1.12*	*0.55*	*3.39*	*Cum*
		1	*0.57*	*1.12*	*0.25*	*0.16*	*Cum*
		1	*0.20*	*1.12*	*0.40*	*0.09*	*Cum*
		1	*1.80*	*1.12*	*0.50*	*1.01*	*Cum*
		1	*0.70*	*1.12*	*1.00*	*0.78*	*Cum*
	Crest	*1*	*1.11*	*1.12*	*1.29*	*1.59*	*Cum*
	TOTAL					**57.44**	**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*	*0.90*	*1.12*	*0.15*	*0.15*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.95*	*0.45*	*0.05*	*0.31*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.95*	*0.45*	*0.05*	*0.31*	*Sqm*
	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	**58.22**	**0.30%**	**0.17**	**7850**	**1371.12**	**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*	*1.12*		*0.45*	*2.01*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.12*		*1.76*	*7.89*	*Sqm*
		4		*0.98*	*1.76*	*6.91*	*Sqm*
		4	*1.12*		*0.55*	*2.46*	*Sqm*
		4		*1.66*	*0.55*	*3.65*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.45*	*5.40*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.00*		*0.85*	*10.20*	*Sqm*
		4		*0.71*	*0.85*	*2.40*	*Sqm*
		4	*3.00*		*0.55*	*6.60*	*Sqm*
		4		*1.11*	*0.55*	*2.44*	*Sqm*
	Section 3-3	*4*	*1.36*		*0.45*	*2.44*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.36*		*0.65*	*3.52*	*Sqm*
		4		*0.65*	*0.65*	*1.68*	*Sqm*
		4	*1.36*		*0.50*	*2.71*	*Sqm*
		4		*0.99*	*0.50*	*1.98*	*Sqm*
	Section 5-5	*4*	*4.50*		*0.45*	*8.10*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.50*		*1.76*	*31.76*	*Sqm*
		4		*0.98*	*1.76*	*6.91*	*Sqm*
		4	*4.50*		*0.55*	*9.90*	*Sqm*
		4		*1.66*	*0.55*	*3.65*	*Sqm*
	Section 6-6	*4*	*2.93*		*0.45*	*5.27*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.93*		*0.65*	*7.62*	*Sqm*
		4		*0.65*	*0.65*	*1.68*	*Sqm*
		4	*2.93*		*0.50*	*5.86*	*Sqm*
		4		*0.99*	*0.50*	*1.98*	*Sqm*
	Floor	*2*	*0.61*		*0.65*	*0.80*	*Sqm*
		2		*1.12*	*0.65*	*1.46*	*Sqm*
		2	*5.50*		*0.55*	*6.05*	*Sqm*
		2		*1.12*	*0.55*	*1.23*	*Sqm*
		2	*0.57*		*0.25*	*0.29*	*Sqm*
		2		*1.12*	*0.25*	*0.56*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.12*	*0.40*	*0.90*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*1.12*	*0.50*	*1.12*	*Sqm*
		2	*0.70*		*1.00*	*1.40*	*Sqm*
		2		*1.12*	*1.00*	*2.24*	*Sqm*
	Crest	*2*	*1.106*		*1.285*	*2.84*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.12*	*1.285*	*2.88*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.27*		*0.30*	*4.96*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.97*		*0.60*	*9.56*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**196.88**	**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*	*2.50*	*3.62*		*18.11*	*Sqm*
	TOTAL					**18.11**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*0.52*	*0.30*	**0.39**	**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*	*0.52*	*0.15*	**0.39**	**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*	*13.95*	*0.45*		*6.28*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.95*	*0.45*		*6.28*	*Sqm*
	TOTAL					**12.55**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		4.09		4.09	Cum
	TOTAL					**4.09**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 6.700 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.						
		1	71.78			**71.78**	**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*	*0.542*	*0.97*	*0.15*	*0.08*	*Cum*
		1	*0.783*	*0.97*	*0.15*	*0.11*	*Cum*
		1	*4.468*	*0.97*	*0.15*	*0.65*	*Cum*
		1	*0.282*	*0.97*	*0.15*	*0.04*	*Cum*
		1	*0.446*	*0.97*	*0.15*	*0.06*	*Cum*
		1	*0.782*	*0.97*	*0.15*	*0.11*	*Cum*
		1	*0.542*	*0.97*	*0.15*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.36*	*1.45*	*0.15*	*1.02*	*Cum*
	Section 2-2	*2*	*1.90*	*1.23*	*0.15*	*0.70*	*Cum*
	Section 3-3	*2*	*1.05*	*1.11*	*0.15*	*0.35*	*Cum*
	Section 5-5	*2*	*4.37*	*1.60*	*0.15*	*2.09*	*Cum*
	Section 6-6	*2*	*2.85*	*1.11*	*0.15*	*0.95*	*Cum*
	Toe Wall D/S Portion	*1*	*7.77*	*0.75*	*0.30*	*1.75*	*Cum*
	Toe Wall D/S Portion	*1*	*7.47*	*0.45*	*0.60*	*2.02*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**11.10**	**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*	*2.14*	*0.45*	*0.45*	*0.86*	*Cum*
		2	*2.14*	*0.80*	*1.41*	*4.80*	*Cum*
		2	*2.14*	*1.30*	*0.50*	*2.77*	*Cum*
	Section 2-2	*2*	*1.90*	*0.45*	*0.45*	*0.77*	*Cum*
		2	*1.90*	*0.69*	*0.80*	*2.10*	*Cum*
		2	*1.90*	*1.08*	*0.50*	*2.05*	*Cum*
	Section 3-3	*2*	*1.27*	*0.45*	*0.45*	*0.51*	*Cum*
		2	*1.27*	*0.63*	*0.60*	*0.96*	*Cum*
		2	*1.27*	*0.96*	*0.50*	*1.22*	*Cum*
	Section 5-5	*2*	*4.33*	*0.45*	*0.45*	*1.75*	*Cum*
		2	*4.33*	*0.80*	*1.41*	*9.74*	*Cum*
		2	*4.33*	*1.30*	*0.50*	*5.61*	*Cum*
	Section 6-6	*2*	*2.77*	*0.45*	*0.45*	*1.12*	*Cum*
		2	*2.77*	*0.63*	*0.60*	*2.09*	*Cum*
		2	*2.77*	*0.96*	*0.50*	*2.66*	*Cum*
	Floor	*1*	*0.63*	*0.97*	*0.70*	*0.42*	*Cum*
		1	*5.00*	*0.97*	*0.50*	*2.43*	*Cum*
		1	*0.50*	*0.97*	*0.20*	*0.10*	*Cum*
		1	*0.20*	*0.97*	*0.40*	*0.08*	*Cum*
		1	*1.80*	*0.97*	*0.50*	*0.87*	*Cum*
		1	*0.63*	*0.97*	*0.70*	*0.42*	*Cum*
	Crest	*1*	*0.90*	*0.97*	*0.76*	*0.66*	*Cum*
	TOTAL					**44.01**	**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*	*0.75*	*0.97*	*0.15*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.26*	*0.45*	*0.05*	*0.30*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.26*	*0.45*	*0.05*	*0.30*	*Sqm*
	TOTAL					**0.71**	**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	**44.72**	**0.30%**	**0.13**	**7850**	**1053.16**	**Kg**
	Total Weight in Metric Tonne					**1.05**	**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*	*2.14*		*0.45*	*3.84*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.14*		*1.41*	*12.04*	*Sqm*
		4		*0.80*	*1.41*	*4.50*	*Sqm*
		4	*2.14*		*0.50*	*4.27*	*Sqm*
		4		*1.30*	*0.50*	*2.59*	*Sqm*
	Section 2-2	*4*	*1.90*		*0.45*	*3.42*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.90*		*0.80*	*6.08*	*Sqm*
		4		*0.69*	*0.80*	*2.21*	*Sqm*
		4	*1.90*		*0.50*	*3.80*	*Sqm*
		4		*1.08*	*0.50*	*2.16*	*Sqm*
	Section 3-3	*4*	*1.27*		*0.45*	*2.29*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.27*		*0.60*	*3.05*	*Sqm*
		4		*0.63*	*0.60*	*1.51*	*Sqm*
		4	*1.27*		*0.50*	*2.54*	*Sqm*
		4		*0.96*	*0.50*	*1.92*	*Sqm*
	Section 5-5	*4*	*4.33*		*0.45*	*7.79*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.33*		*1.41*	*24.42*	*Sqm*
		4		*0.80*	*1.41*	*4.50*	*Sqm*
		4	*4.33*		*0.50*	*8.66*	*Sqm*
		4		*1.30*	*0.50*	*2.59*	*Sqm*
	Section 6-6	*4*	*2.77*		*0.45*	*4.99*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.77*		*0.60*	*6.65*	*Sqm*
		4		*0.63*	*0.60*	*1.51*	*Sqm*
		4	*2.77*		*0.50*	*5.54*	*Sqm*
		4		*0.96*	*0.50*	*1.92*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.97*	*0.70*	*1.36*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*0.97*	*0.50*	*0.97*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.97*	*0.20*	*0.39*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.97*	*0.40*	*0.78*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*0.97*	*0.50*	*0.97*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.97*	*0.70*	*1.36*	*Sqm*
	Crest	*2*	*0.9015*		*0.759*	*1.37*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.97*	*0.759*	*1.47*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.77*		*0.30*	*4.66*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.47*		*0.60*	*8.96*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**168.10**	**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*	*3.43*		*13.73*	*Sqm*
	TOTAL					**13.73**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.37*	*0.30*	**0.22**	**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	*2.00*	*0.37*	*0.15*	**0.22**	**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*	*13.26*	*0.45*		*5.97*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.26*	*0.45*		*5.97*	*Sqm*
	TOTAL					**11.94**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.81		1.81	Cum
	TOTAL					**1.81**	**Cum**
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 9.000						
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.						
		1		52.41		**52.41**	**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*	*0.542*	*0.73*	*0.15*	*0.06*	*Cum*
		1	*0.783*	*0.73*	*0.15*	*0.09*	*Cum*
		1	*4.068*	*0.73*	*0.15*	*0.45*	*Cum*
		1	*0.282*	*0.73*	*0.15*	*0.03*	*Cum*
		1	*0.947*	*0.73*	*0.15*	*0.10*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.782*	*0.73*	*0.15*	*0.09*	*Cum*
		1	*0.542*	*0.73*	*0.15*	*0.06*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.25*	*1.45*	*0.15*	*0.98*	*Cum*
	Section 2-2	*2*	*1.90*	*1.06*	*0.15*	*0.60*	*Cum*
	Section 3-3	*2*	*1.13*	*0.94*	*0.15*	*0.32*	*Cum*
	Section 5-5	*2*	*3.18*	*1.60*	*0.15*	*1.53*	*Cum*
	Section 6-6	*2*	*1.92*	*0.94*	*0.15*	*0.54*	*Cum*
	Toe Wall D/S Portion	*1*	*5.50*	*0.75*	*0.30*	*1.24*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.45*	*0.60*	*1.40*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**8.56**	**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*	*2.21*	*0.45*	*0.45*	*0.89*	*Cum*
		2	*2.21*	*0.80*	*1.17*	*4.14*	*Cum*
		2	*2.21*	*1.30*	*0.50*	*2.88*	*Cum*
	Section 2-2	*2*	*1.90*	*0.45*	*0.45*	*0.77*	*Cum*
		2	*1.90*	*0.60*	*0.51*	*1.17*	*Cum*
		2	*1.90*	*0.91*	*0.50*	*1.72*	*Cum*
	Section 3-3	*2*	*1.36*	*0.45*	*0.45*	*0.55*	*Cum*
		2	*1.36*	*0.54*	*0.31*	*0.46*	*Cum*
		2	*1.36*	*0.79*	*0.50*	*1.07*	*Cum*
	Section 5-5	*2*	*3.14*	*0.45*	*0.45*	*1.27*	*Cum*
		2	*3.14*	*0.80*	*1.17*	*5.88*	*Cum*
		2	*3.14*	*1.30*	*0.50*	*4.09*	*Cum*
	Section 6-6	*2*	*1.84*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.84*	*0.54*	*0.31*	*0.62*	*Cum*
		2	*1.84*	*0.79*	*0.50*	*1.45*	*Cum*
	Floor	*1*	*0.63*	*0.73*	*0.70*	*0.32*	*Cum*
		1	*4.50*	*0.73*	*0.50*	*1.64*	*Cum*
		1	*0.50*	*0.73*	*0.20*	*0.07*	*Cum*
		1	*0.20*	*0.73*	*0.40*	*0.06*	*Cum*
		1	*2.30*	*0.73*	*0.50*	*0.84*	*Cum*
		1	*0.63*	*0.73*	*0.70*	*0.32*	*Cum*
	Crest	*1*	*0.88*	*0.73*	*0.85*	*0.55*	*Cum*
	TOTAL					**31.50**	**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*	*0.75*	*0.73*	*0.15*	*0.08*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.06*	*0.45*	*0.05*	*0.25*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.06*	*0.45*	*0.05*	*0.25*	*Sqm*
	TOTAL					**0.58**	**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	**32.08**	**0.30%**	**0.10**	**7850**	**755.45**	**Kg**
	Total Weight in Metric Tonne					**0.76**	**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*	*2.21*		*0.45*	*3.98*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.21*		*1.17*	*10.34*	*Sqm*
		4		*0.80*	*1.17*	*3.75*	*Sqm*
		4	*2.21*		*0.50*	*4.42*	*Sqm*
		4		*1.30*	*0.50*	*2.60*	*Sqm*
	Section 2-2	*4*	*1.90*		*0.45*	*3.42*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.90*		*0.51*	*3.88*	*Sqm*
		4		*0.60*	*0.51*	*1.23*	*Sqm*
		4	*1.90*		*0.50*	*3.80*	*Sqm*
		4		*0.91*	*0.50*	*1.81*	*Sqm*
	Section 3-3	*4*	*1.36*		*0.45*	*2.44*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.36*		*0.31*	*1.68*	*Sqm*
		4		*0.54*	*0.31*	*0.67*	*Sqm*
		4	*1.36*		*0.50*	*2.71*	*Sqm*
		4		*0.79*	*0.50*	*1.57*	*Sqm*
	Section 5-5	*4*	*3.14*		*0.45*	*5.65*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.14*		*1.17*	*14.69*	*Sqm*
		4		*0.80*	*1.17*	*3.75*	*Sqm*
		4	*3.14*		*0.50*	*6.28*	*Sqm*
		4		*1.30*	*0.50*	*2.60*	*Sqm*
	Section 6-6	*4*	*1.84*		*0.45*	*3.32*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.84*		*0.31*	*2.28*	*Sqm*
		4		*0.54*	*0.31*	*0.67*	*Sqm*
		4	*1.84*		*0.50*	*3.68*	*Sqm*
		4		*0.79*	*0.50*	*1.57*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.73*	*0.70*	*1.02*	*Sqm*
		2	*4.50*		*0.50*	*4.50*	*Sqm*
		2		*0.73*	*0.50*	*0.73*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.73*	*0.20*	*0.29*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.73*	*0.40*	*0.58*	*Sqm*
		2	*2.30*		*0.50*	*2.30*	*Sqm*
		2		*0.73*	*0.50*	*0.73*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.73*	*0.70*	*1.02*	*Sqm*
	Crest	*2*	*0.883*		*0.849*	*1.50*	*Sqm*
		2		*0.73*	*0.849*	*1.24*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.50*		*0.30*	*3.30*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.60*	*6.24*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**130.50**	**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*	*2.23*		*8.92*	*Sqm*
	TOTAL					**8.92**	**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*	*2.00*	*0.13*	*0.30*	**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	*2.00*	*0.13*	*0.15*	**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*	*11.06*	*0.45*		*4.98*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.06*	*0.45*		*4.98*	*Sqm*
	TOTAL					**9.95**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.68		1.68	Cum
	TOTAL					**1.68**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR PHULWARIA MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 1.030						
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.						
		1		255.90		**255.90**	**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*	*0.542*	*2.15*	*0.15*	*0.17*	*Cum*
		1	*0.783*	*2.15*	*0.15*	*0.25*	*Cum*
		1	*0.865*	*2.15*	*0.15*	*0.28*	*Cum*
		1	*0.425*	*2.15*	*0.15*	*0.14*	*Cum*
		1	*6.053*	*2.15*	*0.15*	*1.95*	*Cum*
		1	*0.495*	*2.15*	*0.15*	*0.16*	*Cum*
		1	*2.102*	*2.15*	*0.15*	*0.68*	*Cum*
		1	*0.142*	*2.15*	*0.15*	*0.05*	*Cum*
		1	*0.570*	*2.15*	*0.15*	*0.18*	*Cum*
		1	*1.622*	*2.15*	*0.15*	*0.52*	*Cum*
		1	*0.542*	*2.15*	*0.15*	*0.17*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*3.61*	*2.29*	*0.15*	*2.48*	*Cum*
	Section 2-2	*2*	*2.45*	*1.37*	*0.15*	*1.01*	*Cum*
	Section 3-3	*2*	*3.37*	*1.25*	*0.15*	*1.27*	*Cum*
	Section 5-5	*2*	*2.79*	*2.44*	*0.15*	*2.04*	*Cum*
	Section 6-6	*2*	*1.93*	*1.25*	*0.15*	*0.73*	*Cum*
	Toe Wall D/S Portion	*1*	*7.27*	*0.75*	*0.30*	*1.64*	*Cum*
	Toe Wall D/S Portion	*1*	*6.97*	*0.45*	*0.60*	*1.88*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.60*	*0.15*	*0.54*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	TOTAL					**17.22**	**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*	*3.57*	*0.45*	*0.45*	*1.45*	*Cum*
		2	*3.57*	*1.22*	*2.56*	*22.32*	*Cum*
		2	*3.57*	*2.14*	*0.80*	*12.21*	*Cum*
	Section 2-2	*2*	*2.45*	*0.45*	*0.45*	*0.99*	*Cum*
		2	*2.45*	*0.76*	*1.04*	*3.88*	*Cum*
		2	*2.45*	*1.22*	*0.80*	*4.80*	*Cum*
	Section 3-3	*2*	*3.60*	*0.45*	*0.45*	*1.46*	*Cum*
		2	*3.60*	*0.70*	*0.84*	*4.24*	*Cum*
		2	*3.60*	*1.10*	*0.60*	*4.77*	*Cum*
	Section 5-5	*2*	*2.97*	*0.45*	*0.45*	*1.20*	*Cum*
		2	*2.97*	*1.22*	*2.56*	*18.55*	*Cum*
		2	*2.97*	*2.14*	*0.80*	*10.15*	*Cum*
	Section 6-6	*2*	*1.86*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.86*	*0.70*	*0.84*	*2.19*	*Cum*
		2	*1.86*	*1.10*	*0.55*	*2.26*	*Cum*
	Floor	*1*	*0.63*	*2.15*	*0.70*	*0.94*	*Cum*
		1	*8.00*	*2.15*	*0.50*	*8.60*	*Cum*
		1	*6.23*	*2.15*	*0.30*	*4.02*	*Cum*
		1	*0.22*	*2.15*	*0.35*	*0.17*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*2.15*	*0.55*	*0.24*	*Cum*
		1	*2.30*	*2.15*	*0.65*	*3.21*	*Cum*
		1	*0.20*	*2.15*	*0.60*	*0.26*	*Cum*
		1	*1.90*	*2.15*	*0.55*	*2.25*	*Cum*
		1	*0.81*	*2.15*	*1.45*	*2.53*	*Cum*
	Crest	*1*	*1.22*	*2.15*	*1.91*	*5.00*	*Cum*
	TOTAL					**118.42**	**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*	*2.15*	*0.20*	*0.39*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.72*	*0.45*	*0.05*	*0.35*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.72*	*0.45*	*0.05*	*0.35*	*Sqm*
	TOTAL					**1.09**	**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	**119.52**	**0.30%**	**0.36**	**7850**	**2814.66**	**Kg**
	Total Weight in Metric Tonne					**2.81**	**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*	*3.57*		*0.45*	*6.42*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.57*		*2.56*	*36.60*	*Sqm*
		4		*1.22*	*2.56*	*12.51*	*Sqm*
		4	*3.57*		*0.80*	*11.42*	*Sqm*
		4		*2.14*	*0.80*	*6.84*	*Sqm*
	Section 2-2	*4*	*2.45*		*0.45*	*4.41*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.45*		*1.04*	*10.19*	*Sqm*
		4		*0.76*	*1.04*	*3.17*	*Sqm*
		4	*2.45*		*0.80*	*7.84*	*Sqm*
		4		*1.22*	*0.80*	*3.92*	*Sqm*
	Section 3-3	*4*	*3.60*		*0.45*	*6.48*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.60*		*0.84*	*12.09*	*Sqm*
		4		*0.70*	*0.84*	*2.36*	*Sqm*
		4	*3.60*		*0.60*	*8.64*	*Sqm*
		4		*1.10*	*0.60*	*2.65*	*Sqm*
	Section 5-5	*4*	*2.97*		*0.45*	*5.34*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.97*		*2.56*	*30.41*	*Sqm*
		4		*1.22*	*2.56*	*12.51*	*Sqm*
		4	*2.97*		*0.80*	*9.49*	*Sqm*
		4		*2.14*	*0.80*	*6.84*	*Sqm*
	Section 6-6	*4*	*1.86*		*0.45*	*3.34*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.86*		*0.84*	*6.24*	*Sqm*
		4		*0.70*	*0.84*	*2.36*	*Sqm*
		4	*1.86*		*0.55*	*4.09*	*Sqm*
		4		*1.10*	*0.55*	*2.43*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*2.15*	*0.70*	*3.01*	*Sqm*
		2	*8.00*		*0.50*	*8.00*	*Sqm*
		2		*2.15*	*0.50*	*2.15*	*Sqm*
		2	*6.23*		*0.30*	*3.74*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.15*	*0.30*	*1.29*	*Sqm*
		2	*0.22*		*0.35*	*0.16*	*Sqm*
		2		*2.15*	*0.35*	*1.51*	*Sqm*
		2	*0.20*		*0.55*	*0.22*	*Sqm*
		2		*2.15*	*0.55*	*2.37*	*Sqm*
		2	*2.30*		*0.65*	*2.99*	*Sqm*
		2		*2.15*	*0.65*	*2.80*	*Sqm*
		2	*0.20*		*0.60*	*0.24*	*Sqm*
		2		*2.15*	*0.60*	*2.58*	*Sqm*
		2	*1.90*		*0.55*	*2.09*	*Sqm*
		2		*2.15*	*0.55*	*2.37*	*Sqm*
		2	*0.81*		*1.45*	*2.36*	*Sqm*
		2		*2.15*	*1.45*	*6.24*	*Sqm*
	Crest	*2*	*1.218*		*1.909*	*4.65*	*Sqm*
		2		*2.15*	*1.909*	*8.21*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.27*		*0.30*	*4.36*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.97*		*0.60*	*8.36*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.15*	*1.80*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**304.25**	**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*	*2.67*		*15.99*	*Sqm*
	TOTAL					**15.99**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.00*	*1.55*	*0.30*	**1.40**	**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*	*1.55*	*0.15*	**1.40**	**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*	*15.72*	*0.45*		*7.07*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.72*	*0.45*		*7.07*	*Sqm*
	TOTAL					**14.15**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		21.19		21.19	**Cum**
	TOTAL					**21.19**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.305 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.						
		1		40.56		**40.56**	**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*	*0.542*	*0.80*	*0.15*	*0.07*	*Cum*
		1	*0.783*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*3.568*	*0.80*	*0.15*	*0.43*	*Cum*
		1	*0.282*	*0.80*	*0.15*	*0.03*	*Cum*
		1	*0.946*	*0.80*	*0.15*	*0.11*	*Cum*
		1	*0.782*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*0.542*	*0.80*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.77*	*1.38*	*0.15*	*0.73*	*Cum*
	Section 2-2	*2*	*1.85*	*1.16*	*0.15*	*0.65*	*Cum*
	Section 3-3	*2*	*1.48*	*1.04*	*0.15*	*0.46*	*Cum*
	Section 5-5	*2*	*2.66*	*1.53*	*0.15*	*1.22*	*Cum*
	Section 6-6	*2*	*1.51*	*1.04*	*0.15*	*0.47*	*Cum*
	Toe Wall D/S Portion	*1*	*4.87*	*0.75*	*0.30*	*1.10*	*Cum*
	Toe Wall D/S Portion	*1*	*4.57*	*0.45*	*0.60*	*1.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**7.84**	**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*	*1.54*	*0.45*	*0.45*	*0.62*	*Cum*
		2	*1.54*	*0.77*	*1.06*	*2.49*	*Cum*
		2	*1.54*	*1.23*	*0.50*	*1.90*	*Cum*
	Section 2-2	*2*	*1.85*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.85*	*0.66*	*0.69*	*1.68*	*Cum*
		2	*1.85*	*1.01*	*0.50*	*1.88*	*Cum*
	Section 3-3	*2*	*1.70*	*0.45*	*0.45*	*0.69*	*Cum*
		2	*1.70*	*0.60*	*0.49*	*1.00*	*Cum*
		2	*1.70*	*0.89*	*0.50*	*1.52*	*Cum*
	Section 5-5	*2*	*2.62*	*0.45*	*0.45*	*1.06*	*Cum*
		2	*2.62*	*0.77*	*1.06*	*4.23*	*Cum*
		2	*2.62*	*1.23*	*0.50*	*3.22*	*Cum*
	Section 6-6	*2*	*1.44*	*0.45*	*0.45*	*0.58*	*Cum*
		2	*1.44*	*0.60*	*0.49*	*0.84*	*Cum*
		2	*1.44*	*0.89*	*0.50*	*1.29*	*Cum*
	Floor	*1*	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
		1	*4.00*	*0.80*	*0.50*	*1.60*	*Cum*
		1	*0.50*	*0.80*	*0.20*	*0.08*	*Cum*
		1	*0.20*	*0.80*	*0.40*	*0.06*	*Cum*
		1	*2.30*	*0.80*	*0.50*	*0.92*	*Cum*
		1	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
	Crest	*1*	*0.70*	*0.80*	*0.64*	*0.36*	*Cum*
	TOTAL					**27.47**	**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*	*0.80*	*0.15*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.92*	*0.45*	*0.05*	*0.22*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.92*	*0.45*	*0.05*	*0.22*	*Sqm*
	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	**27.99**	**0.30%**	**0.08**	**7850**	**659.22**	**Kg**
	Total Weight in Metric Tonne					**0.66**	**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*	*1.54*		*0.45*	*2.78*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.54*		*1.06*	*6.51*	*Sqm*
		4		*0.77*	*1.06*	*3.23*	*Sqm*
		4	*1.54*		*0.50*	*3.08*	*Sqm*
		4		*1.23*	*0.50*	*2.47*	*Sqm*
	Section 2-2	*4*	*1.85*		*0.45*	*3.33*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.85*		*0.69*	*5.11*	*Sqm*
		4		*0.66*	*0.69*	*1.81*	*Sqm*
		4	*1.85*		*0.50*	*3.70*	*Sqm*
		4		*1.01*	*0.50*	*2.03*	*Sqm*
	Section 3-3	*4*	*1.70*		*0.45*	*3.07*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.70*		*0.49*	*3.34*	*Sqm*
		4		*0.60*	*0.49*	*1.17*	*Sqm*
		4	*1.70*		*0.50*	*3.41*	*Sqm*
		4		*0.89*	*0.50*	*1.79*	*Sqm*
	Section 5-5	*4*	*2.62*		*0.45*	*4.71*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.62*		*1.06*	*11.04*	*Sqm*
		4		*0.77*	*1.06*	*3.23*	*Sqm*
		4	*2.62*		*0.50*	*5.23*	*Sqm*
		4		*1.23*	*0.50*	*2.47*	*Sqm*
	Section 6-6	*4*	*1.44*		*0.45*	*2.59*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.44*		*0.49*	*2.82*	*Sqm*
		4		*0.60*	*0.49*	*1.17*	*Sqm*
		4	*1.44*		*0.50*	*2.88*	*Sqm*
		4		*0.89*	*0.50*	*1.79*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
		2	*4.00*		*0.50*	*4.00*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.80*	*0.20*	*0.32*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.80*	*0.40*	*0.64*	*Sqm*
		2	*2.30*		*0.50*	*2.30*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
	Crest	*2*	*0.6985*		*0.64*	*0.89*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.8*	*0.64*	*1.02*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.87*		*0.30*	*2.92*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.57*		*0.60*	*5.48*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**120.38**	**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*	*2.03*		*8.14*	*Sqm*
	TOTAL					**8.14**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.20*	*0.30*	**0.12**	**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*	*0.20*	*0.15*	**0.12**	**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*	*0.45*		*4.46*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.92*	*0.45*		*4.46*	*Sqm*
	TOTAL					**8.93**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		0.52		0.52	Cum
	TOTAL					**0.52**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 6.431 KM						
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.						
		1		53.64		**53.64**	**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*	*0.543*	*0.80*	*0.15*	*0.07*	*Cum*
		1	*0.787*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*5.567*	*0.80*	*0.15*	*0.67*	*Cum*
		1	*0.283*	*0.80*	*0.15*	*0.03*	*Cum*
		1	*0.367*	*0.80*	*0.15*	*0.04*	*Cum*
		1	*0.895*	*0.80*	*0.15*	*0.11*	*Cum*
		1	*0.543*	*0.80*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.85*	*1.71*	*0.15*	*0.44*	*Cum*
	Section 2-2	*2*	*3.50*	*1.16*	*0.15*	*1.22*	*Cum*
	Section 3-3	*2*	*1.20*	*1.04*	*0.15*	*0.38*	*Cum*
	Section 5-5	*2*	*2.51*	*1.86*	*0.15*	*1.40*	*Cum*
	Section 6-6	*2*	*0.99*	*1.04*	*0.15*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*4.87*	*0.75*	*0.30*	*1.10*	*Cum*
	Toe Wall D/S Portion	*1*	*4.57*	*0.45*	*0.60*	*1.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**8.24**	**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*	*0.62*	*0.45*	*0.45*	*0.25*	*Cum*
		2	*0.62*	*0.93*	*1.60*	*1.86*	*Cum*
		2	*0.62*	*1.56*	*0.50*	*0.97*	*Cum*
	Section 2-2	*2*	*3.50*	*0.45*	*0.45*	*1.42*	*Cum*
		2	*3.50*	*0.66*	*0.69*	*3.17*	*Cum*
		2	*3.50*	*1.01*	*0.50*	*3.55*	*Cum*
	Section 3-3	*2*	*0.90*	*0.45*	*0.45*	*0.37*	*Cum*
		2	*0.90*	*0.60*	*0.49*	*0.53*	*Cum*
		2	*0.90*	*0.89*	*0.50*	*0.81*	*Cum*
	Section 5-5	*2*	*2.47*	*0.45*	*0.45*	*1.00*	*Cum*
		2	*2.47*	*0.93*	*1.60*	*7.38*	*Cum*
		2	*2.47*	*1.56*	*0.50*	*3.86*	*Cum*
	Section 6-6	*2*	*1.44*	*0.45*	*0.45*	*0.58*	*Cum*
		2	*1.44*	*0.60*	*0.49*	*0.84*	*Cum*
		2	*1.44*	*0.89*	*0.50*	*1.29*	*Cum*
	Floor	*1*	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
		1	*6.00*	*0.80*	*0.50*	*2.40*	*Cum*
		1	*0.50*	*0.80*	*0.20*	*0.08*	*Cum*
		1	*0.20*	*0.80*	*0.40*	*0.06*	*Cum*
		1	*1.80*	*0.80*	*0.50*	*0.72*	*Cum*
		1	*0.65*	*0.80*	*0.80*	*0.42*	*Cum*
	Crest	*1*	*0.99*	*0.80*	*1.21*	*0.96*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**32.87**	**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*	*0.80*	*0.15*	*0.10*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.84*	*0.45*	*0.05*	*0.22*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.84*	*0.45*	*0.05*	*0.22*	*Sqm*
	TOTAL					**0.54**	**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	**33.41**	**0.30%**	**0.10**	**7850**	**786.82**	**Kg**
	Total Weight in Metric Tonne					**0.79**	**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*	*0.62*		*0.45*	*1.12*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.62*		*1.60*	*4.00*	*Sqm*
		4		*0.93*	*1.60*	*5.98*	*Sqm*
		4	*0.62*		*0.50*	*1.25*	*Sqm*
		4		*1.56*	*0.50*	*3.13*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.45*	*6.30*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.50*		*0.69*	*9.66*	*Sqm*
		4		*0.66*	*0.69*	*1.81*	*Sqm*
		4	*3.50*		*0.50*	*7.00*	*Sqm*
		4		*1.01*	*0.50*	*2.03*	*Sqm*
	Section 3-3	*4*	*0.90*		*0.45*	*1.63*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.90*		*0.49*	*1.77*	*Sqm*
		4		*0.60*	*0.49*	*1.17*	*Sqm*
		4	*0.90*		*0.50*	*1.81*	*Sqm*
		4		*0.89*	*0.50*	*1.79*	*Sqm*
	Section 5-5	*4*	*2.47*		*0.45*	*4.45*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.47*		*1.60*	*15.84*	*Sqm*
		4		*0.93*	*1.60*	*5.98*	*Sqm*
		4	*2.47*		*0.50*	*4.94*	*Sqm*
		4		*1.56*	*0.50*	*3.13*	*Sqm*
	Section 6-6	*4*	*1.44*		*0.45*	*2.59*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.44*		*0.49*	*2.82*	*Sqm*
		4		*0.60*	*0.49*	*1.17*	*Sqm*
		4	*1.44*		*0.50*	*2.88*	*Sqm*
		4		*0.89*	*0.50*	*1.79*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
		2	*6.00*		*0.50*	*6.00*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.80*	*0.20*	*0.32*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.80*	*0.40*	*0.64*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.65*		*0.80*	*1.04*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.80*	*0.80*	*1.28*	*Sqm*
	Crest	*2*	*0.994*		*1.213*	*2.41*	*Sqm*
		2		*0.8*	*1.213*	*1.94*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.87*		*0.30*	*2.92*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.57*		*0.60*	*5.48*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**135.91**	**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*	*2.03*		*8.14*	*Sqm*
	TOTAL					**8.14**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.20*	*0.30*	**0.12**	**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*	*0.20*	*0.15*	**0.12**	**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*	*9.84*	*0.45*		*4.43*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.84*	*0.45*		*4.43*	*Sqm*
	TOTAL					**8.86**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		5.45		5.45	Cum
	TOTAL					**5.45**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR MURAT BIGHA MINOR						
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.000 KM						
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.						
		1		53.64		**53.64**	**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*	*0.542*	*1.35*	*0.15*	*0.11*	*Cum*
		1	*0.783*	*1.35*	*0.15*	*0.16*	*Cum*
		1	*3.818*	*1.35*	*0.15*	*0.77*	*Cum*
		1	*0.282*	*1.35*	*0.15*	*0.06*	*Cum*
		1	*0.947*	*1.35*	*0.15*	*0.19*	*Cum*
		1	*0.782*	*1.35*	*0.15*	*0.16*	*Cum*
		1	*0.542*	*1.35*	*0.15*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.65*	*1.43*	*0.15*	*0.71*	*Cum*
	Section 2-2	*2*	*1.85*	*1.16*	*0.15*	*0.64*	*Cum*
	Section 3-3	*2*	*1.48*	*0.78*	*0.15*	*0.35*	*Cum*
	Section 5-5	*2*	*2.42*	*1.58*	*0.15*	*1.15*	*Cum*
	Section 6-6	*2*	*1.50*	*0.78*	*0.15*	*0.35*	*Cum*
	Toe Wall D/S Portion	*1*	*5.39*	*0.75*	*0.30*	*1.21*	*Cum*
	Toe Wall D/S Portion	*1*	*5.09*	*0.45*	*0.60*	*1.37*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**8.43**	**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*	*1.53*	*0.45*	*0.45*	*0.62*	*Cum*
		2	*1.53*	*0.79*	*1.14*	*2.76*	*Cum*
		2	*1.53*	*1.28*	*0.50*	*1.96*	*Cum*
	Section 2-2	*2*	*1.85*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.85*	*0.65*	*0.68*	*1.65*	*Cum*
		2	*1.85*	*1.01*	*0.50*	*1.86*	*Cum*
	Section 3-3	*2*	*1.71*	*0.45*	*0.45*	*0.69*	*Cum*
		2	*1.71*	*0.59*	*0.48*	*0.97*	*Cum*
		2	*1.71*	*0.89*	*0.50*	*1.51*	*Cum*
	Section 5-5	*2*	*2.38*	*0.45*	*0.45*	*0.96*	*Cum*
		2	*2.38*	*0.79*	*1.14*	*4.28*	*Cum*
		2	*2.38*	*1.28*	*0.50*	*3.05*	*Cum*
	Section 6-6	*2*	*1.43*	*0.45*	*0.45*	*0.58*	*Cum*
		2	*1.43*	*0.59*	*0.48*	*0.81*	*Cum*
		2	*1.43*	*0.89*	*0.50*	*1.27*	*Cum*
	Floor	*1*	*0.63*	*1.35*	*0.70*	*0.59*	*Cum*
		1	*4.25*	*1.35*	*0.50*	*2.87*	*Cum*
		1	*0.50*	*1.35*	*0.20*	*0.13*	*Cum*
		1	*0.20*	*1.35*	*0.40*	*0.11*	*Cum*
		1	*2.30*	*1.35*	*0.50*	*1.55*	*Cum*
		1	*0.63*	*1.35*	*0.70*	*0.59*	*Cum*
	Crest	*1*	*0.72*	*1.35*	*0.76*	*0.73*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**30.31**	**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 Crest	*1*	*0.60*	*1.35*	*0.15*	*0.12*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.67*	*0.45*	*0.05*	*0.22*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.67*	*0.45*	*0.05*	*0.22*	*Sqm*
	TOTAL					**0.56**	**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		
	Taking Skin reinforcement @0.3% of M-20	**30.87**	**0.30%**	**0.09**	**7850**	**726.94**	**Kg**
	Total Weight in Metric Tonne					**0.73**	**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*	*1.53*		*0.45*	*2.76*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.53*		*1.14*	*6.97*	*Sqm*
		4		*0.79*	*1.14*	*3.60*	*Sqm*
		4	*1.53*		*0.50*	*3.06*	*Sqm*
		4		*1.28*	*0.50*	*2.57*	*Sqm*
	Section 2-2	*4*	*1.85*		*0.45*	*3.33*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.85*		*0.68*	*5.03*	*Sqm*
		4		*0.65*	*0.68*	*1.78*	*Sqm*
		4	*1.85*		*0.50*	*3.70*	*Sqm*
		4		*1.01*	*0.50*	*2.02*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.45*	*3.07*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.71*		*0.48*	*3.28*	*Sqm*
		4		*0.59*	*0.48*	*1.14*	*Sqm*
		4	*1.71*		*0.50*	*3.41*	*Sqm*
		4		*0.89*	*0.50*	*1.78*	*Sqm*
	Section 5-5	*4*	*2.38*		*0.45*	*4.28*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.38*		*1.14*	*10.82*	*Sqm*
		4		*0.79*	*1.14*	*3.60*	*Sqm*
		4	*2.38*		*0.50*	*4.76*	*Sqm*
		4		*1.28*	*0.50*	*2.57*	*Sqm*
	Section 6-6	*4*	*1.43*		*0.45*	*2.57*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.43*		*0.48*	*2.74*	*Sqm*
		4		*0.59*	*0.48*	*1.14*	*Sqm*
		4	*1.43*		*0.50*	*2.85*	*Sqm*
		4		*0.89*	*0.50*	*1.78*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.35*	*0.70*	*1.89*	*Sqm*
		2	*4.25*		*0.50*	*4.25*	*Sqm*
		2		*1.35*	*0.50*	*1.35*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*1.35*	*0.20*	*0.54*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.35*	*0.40*	*1.08*	*Sqm*
		2	*2.30*		*0.50*	*2.30*	*Sqm*
		2		*1.35*	*0.50*	*1.35*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.35*	*0.70*	*1.89*	*Sqm*
	Crest	*2*	*0.7175*		*0.755*	*1.08*	*Sqm*
		2		*1.35*	*0.755*	*2.04*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.39*		*0.30*	*3.23*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.09*		*0.60*	*6.11*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**125.92**	**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*	*2.02*		*8.06*	*Sqm*
	TOTAL					**8.06**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.75*	*0.30*	**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	*2.00*	*0.75*	*0.15*	**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*	*9.67*	*0.45*		*4.35*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.67*	*0.45*		*4.35*	*Sqm*
	TOTAL					**8.71**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.52		1.52	Cum
	TOTAL					**1.52**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 0.975 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.						
		1	106.95			**106.95**	**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*	*0.542*	*0.86*	*0.15*	*0.07*	*Cum*
		1	*0.559*	*0.86*	*0.15*	*0.07*	*Cum*
		1	*5.518*	*0.86*	*0.15*	*0.71*	*Cum*
		1	*0.495*	*0.86*	*0.15*	*0.06*	*Cum*
		1	*0.952*	*0.86*	*0.15*	*0.12*	*Cum*
		1	*0.070*	*0.86*	*0.15*	*0.01*	*Cum*
		1	*1.445*	*0.86*	*0.15*	*0.19*	*Cum*
		1	*0.782*	*0.86*	*0.15*	*0.10*	*Cum*
		1	*0.542*	*0.86*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*3.14*	*1.87*	*0.15*	*1.76*	*Cum*
	Section 2-2	*2*	*1.80*	*1.14*	*0.15*	*0.62*	*Cum*
	Section 3-3	*2*	*2.99*	*1.02*	*0.15*	*0.91*	*Cum*
	Section 5-5	*2*	*2.27*	*2.02*	*0.15*	*1.38*	*Cum*
	Section 6-6	*2*	*1.47*	*1.02*	*0.15*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*4.81*	*0.75*	*0.30*	*1.08*	*Cum*
	Toe Wall D/S Portion	*1*	*4.51*	*0.45*	*0.60*	*1.22*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**9.64**	**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*	*3.02*	*0.45*	*0.45*	*1.22*	*Cum*
		2	*3.02*	*1.01*	*1.87*	*11.43*	*Cum*
		2	*3.02*	*1.87*	*0.70*	*7.92*	*Cum*
	Section 2-2	*2*	*1.80*	*0.45*	*0.45*	*0.73*	*Cum*
		2	*1.80*	*0.65*	*0.65*	*1.51*	*Cum*
		2	*1.80*	*0.99*	*0.70*	*2.49*	*Cum*
	Section 3-3	*2*	*3.22*	*0.45*	*0.45*	*1.30*	*Cum*
		2	*3.22*	*0.59*	*0.45*	*1.69*	*Cum*
		2	*3.22*	*0.87*	*0.55*	*3.08*	*Cum*
	Section 5-5	*2*	*2.22*	*0.45*	*0.45*	*0.90*	*Cum*
		2	*2.22*	*1.01*	*1.87*	*8.41*	*Cum*
		2	*2.22*	*1.87*	*0.70*	*5.83*	*Cum*
	Section 6-6	*2*	*1.39*	*0.45*	*0.45*	*0.56*	*Cum*
		2	*1.39*	*0.59*	*0.45*	*0.73*	*Cum*
		2	*1.39*	*0.87*	*0.55*	*1.33*	*Cum*
	Floor	*1*	*0.58*	*0.86*	*0.60*	*0.30*	*Cum*
		1	*6.00*	*0.86*	*0.70*	*3.61*	*Cum*
		1	*0.42*	*0.86*	*0.35*	*0.13*	*Cum*
		1	*0.20*	*0.86*	*0.45*	*0.08*	*Cum*
		1	*1.35*	*0.86*	*0.55*	*0.64*	*Cum*
		1	*0.05*	*0.86*	*0.53*	*0.02*	*Cum*
		1	*2.40*	*0.86*	*0.50*	*1.03*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.63*	*0.86*	*0.70*	*0.38*	*Cum*
	Crest	*1*	*0.85*	*0.86*	*1.49*	*1.09*	*Cum*
	TOTAL					**56.42**	**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*	*0.86*	*0.15*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.60*	*0.45*	*0.05*	*0.28*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.60*	*0.45*	*0.05*	*0.28*	*Sqm*
	TOTAL					**0.68**	**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	**57.10**	**0.30%**	**0.17**	**7850**	**1344.64**	**Kg**
	Total Weight in Metric Tonne					**1.34**	**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*	*3.02*		*0.45*	*5.44*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.02*		*1.87*	*22.62*	*Sqm*
		4		*1.01*	*1.87*	*7.56*	*Sqm*
		4	*3.02*		*0.70*	*8.47*	*Sqm*
		4		*1.87*	*0.70*	*5.24*	*Sqm*
	Section 2-2	*4*	*1.80*		*0.45*	*3.24*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.80*		*0.65*	*4.68*	*Sqm*
		4		*0.65*	*0.65*	*1.68*	*Sqm*
		4	*1.80*		*0.70*	*5.04*	*Sqm*
		4		*0.99*	*0.70*	*2.77*	*Sqm*
	Section 3-3	*4*	*3.22*		*0.45*	*5.79*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.22*		*0.45*	*5.79*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*3.22*		*0.55*	*7.07*	*Sqm*
		4		*0.87*	*0.55*	*1.91*	*Sqm*
	Section 5-5	*4*	*2.22*		*0.45*	*4.00*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.22*		*1.87*	*16.64*	*Sqm*
		4		*1.01*	*1.87*	*7.56*	*Sqm*
		4	*2.22*		*0.70*	*6.23*	*Sqm*
		4		*1.87*	*0.70*	*5.24*	*Sqm*
	Section 6-6	*4*	*1.39*		*0.45*	*2.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.39*		*0.45*	*2.50*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*1.39*		*0.55*	*3.06*	*Sqm*
		4		*0.87*	*0.55*	*1.91*	*Sqm*
	Floor	*2*	*0.58*		*0.60*	*0.69*	*Sqm*
		2		*0.86*	*0.60*	*1.03*	*Sqm*
		2	*6.00*		*0.70*	*8.40*	*Sqm*
		2		*0.86*	*0.70*	*1.20*	*Sqm*
		2	*0.42*		*0.35*	*0.30*	*Sqm*
		2		*0.86*	*0.35*	*0.60*	*Sqm*
		2	*0.20*		*0.45*	*0.18*	*Sqm*
		2		*0.86*	*0.45*	*0.77*	*Sqm*
		2	*1.35*		*0.55*	*1.49*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.86*	*0.55*	*0.95*	*Sqm*
		2	*0.05*		*0.53*	*0.05*	*Sqm*
		2		*0.86*	*0.53*	*0.90*	*Sqm*
		2	*2.40*		*0.50*	*2.40*	*Sqm*
		2		*0.86*	*0.50*	*0.86*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.86*	*0.70*	*1.20*	*Sqm*
	Crest	*2*	*0.85*		*1.489*	*2.53*	*Sqm*
		2		*0.86*	*1.489*	*2.56*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.81*		*0.30*	*2.89*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.51*		*0.60*	*5.41*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**184.96**	**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*	*1.96*		*5.89*	*Sqm*
	TOTAL					**5.89**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.26*	*0.30*	**0.12**	**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*	*0.26*	*0.15*	**0.12**	**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*	*12.60*	*0.45*		*5.67*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.60*	*0.45*		*5.67*	*Sqm*
	TOTAL					**11.34**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		4.93		4.93	Cum
	TOTAL					**4.93**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL (1.220 M) FOR NAUR SUB DY AT RD 3.700 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*	*3.44*	*2.171*	*2.719*	*40.612*	*Cum*
	Section 2-2	*2*	*3.50*	*1.278*	*2.719*	*24.324*	*Cum*
	Section 3-3	*2*	*2.20*	*1.158*	*2.519*	*12.835*	*Cum*
	Section 5-5	*1*	*7.59*	*2.321*	*2.719*	*47.899*	*Cum*
	Section 6-6	*2*	*2.52*	*1.158*	*2.519*	*14.713*	*Cum*
	Floor	*1*	*0.63*	*1.780*	*0.850*	*0.946*	*Cum*
		1	*1.79*	*1.780*	*0.650*	*2.076*	*Cum*
		1	*0.58*	*1.780*	*0.300*	*0.307*	*Cum*
		1	*4.71*	*1.780*	*0.800*	*6.701*	*Cum*
		1	*0.35*	*1.780*	*0.724*	*0.451*	*Cum*
		1	*0.40*	*1.780*	*0.350*	*0.249*	*Cum*
		1	*2.30*	*1.780*	*0.650*	*2.661*	*Cum*
		1	*0.75*	*1.780*	*1.350*	*1.802*	*Cum*
	Toe Wall D/S Portion	*1*	*9.14*	*0.750*	*0.900*	*6.170*	*Cum*
	Boulder Pitching in U/S Portion	*1*	*8.60*	*3.450*	*0.450*	*13.352*	*Cum*
	Boulder Pitching in D/S Portion	*1*	*2.25*	*1.180*	*0.300*	*0.797*	*Cum*
						175.89	**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*	*1.780*	*0.150*	*0.14*	*Cum*
		1	*0.78*	*1.780*	*0.150*	*0.21*	*Cum*
		1	*0.69*	*1.780*	*0.150*	*0.18*	*Cum*
		1	*0.21*	*1.780*	*0.150*	*0.06*	*Cum*
		1	*5.23*	*1.780*	*0.150*	*1.40*	*Cum*
		1	*0.49*	*1.780*	*0.150*	*0.13*	*Cum*
		1	*0.55*	*1.780*	*0.150*	*0.15*	*Cum*
		1	*1.34*	*1.780*	*0.150*	*0.36*	*Cum*
		1	*0.54*	*1.780*	*0.150*	*0.14*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*3.44*	*2.171*	*0.150*	*2.24*	*Cum*
	Section 2-2	*2*	*3.50*	*1.278*	*0.150*	*1.34*	*Cum*
	Section 3-3	*2*	*2.20*	*1.158*	*0.150*	*0.76*	*Cum*
	Section 5-5	*1*	*7.59*	*2.321*	*0.150*	*2.64*	*Cum*
	Section 6-6	*2*	*2.52*	*1.158*	*0.150*	*0.88*	*Cum*
	Toe Wall D/S Portion	*1*	*9.14*	*0.750*	*0.300*	*2.06*	*Cum*
	Toe Wall D/S Portion	*1*	*8.84*	*0.450*	*0.600*	*2.39*	*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					**16.29**	**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*	*3.37*	*0.450*	*0.450*	*1.36*	*Cum*
		2	*3.37*	*1.161*	*2.369*	*18.50*	*Cum*
		2	*3.37*	*2.021*	*0.650*	*8.84*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.714*	*0.880*	*4.40*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	3.50	1.128	0.650	5.13	Cum
	Section 3-3	2	1.85	0.450	0.450	0.75	Cum
		2	1.85	0.654	0.680	1.64	Cum
		2	1.85	1.008	0.500	1.86	Cum
	Section 5-5	1	7.59	0.450	0.450	1.54	Cum
		1	7.59	1.161	2.369	20.87	Cum
		1	7.59	2.021	0.500	7.67	Cum
	Section 6-6	2	3.03	0.450	0.450	1.23	Cum
		2	3.03	0.654	0.680	2.69	Cum
		2	3.03	1.008	0.500	3.05	Cum
	Floor	1	0.63	1.780	0.700	0.78	Cum
		1	1.79	1.780	0.500	1.60	Cum
		1	0.58	1.780	0.150	0.15	Cum
		1	4.71	1.780	0.650	5.44	Cum
		1	0.35	1.780	0.574	0.36	Cum
		1	0.40	1.780	0.200	0.14	Cum
		1	2.30	1.780	0.500	2.05	Cum
		1	0.75	1.780	1.200	1.60	Cum
	Crest	1	0.95	1.780	1.569	2.66	Cum
	TOTAL					**95.73**	**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	0.70	1.780	0.150	0.19	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	16.49	0.450	0.050	0.37	Cum
	On Abutment Top (Right Side)	1	16.49	0.450	0.050	0.37	Cum
	TOTAL					**0.93**	**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 @0.30% of M-20	**95.73**	**0.0030**	**0.287**	**7850.0**	**2254.42**	**Kg**
	Total Weight in Metric Tonne					**2.25**	**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	3.37		0.450	6.06	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.37		2.369	31.89	Sqm
		4		1.161	2.369	11.00	Sqm
		4	3.37		0.650	8.75	Sqm
		4		2.021	0.650	5.25	Sqm
	Section 2-2	4	3.50		0.450	6.30	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.50		0.880	12.32	Sqm
		4		0.714	0.880	2.51	Sqm
		4	3.50		0.650	9.10	Sqm
		4		1.128	0.650	2.93	Sqm
	Section 3-3	4	1.85		0.450	3.32	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.85		0.680	5.02	Sqm
		4		0.654	0.680	1.78	Sqm
		4	1.85		0.500	3.69	Sqm
		4		1.008	0.500	2.02	Sqm
	Section 5-5	2	7.59		0.450	6.83	Sqm
		2		0.450	0.450	0.41	Sqm
		2	7.59		2.369	35.96	Sqm
		2		1.161	2.369	5.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*7.59*		*0.500*	*7.59*	*Sqm*
		2		*2.021*	*0.500*	*2.02*	*Sqm*
	Section 6-6	*4*	*3.03*		*0.450*	*5.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.03*		*0.680*	*8.23*	*Sqm*
		4		*0.654*	*0.680*	*1.78*	*Sqm*
		4	*3.03*		*0.500*	*6.05*	*Sqm*
		4		*1.008*	*0.500*	*2.02*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.780*	*0.700*	*2.49*	*Sqm*
		2	*1.79*		*0.500*	*1.79*	*Sqm*
		2		*1.780*	*0.500*	*1.78*	*Sqm*
		2	*0.58*		*0.150*	*0.17*	*Sqm*
		2		*1.780*	*0.150*	*0.53*	*Sqm*
		2	*4.71*		*0.650*	*6.12*	*Sqm*
		2		*1.780*	*0.650*	*2.31*	*Sqm*
		2	*0.350*		*0.574*	*0.40*	*Sqm*
		2		*1.780*	*0.574*	*2.04*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*1.780*	*0.200*	*0.71*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.780*	*0.500*	*1.78*	*Sqm*
		2	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*1.780*	*1.200*	*4.27*	*Sqm*
	Crest	*2*	*0.95*		*1.569*	*2.99*	*Sqm*
		2		*1.780*	*1.569*	*5.59*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.14*		*0.300*	*5.48*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.84*		*0.600*	*10.61*	*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					**260.05**	**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*	*3.735*		*16.81*	*Sqm*
	TOTAL					**16.81**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Pitching in U/S Portion	*1*	*8.60*	*3.450*	*0.450*	13.35	Cum
	Boulder Pitching in D/S Portion	*1*	*2.25*	*1.180*	*0.300*	0.80	Cum
	TOTAL					**14.15**	**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	*2.25*	*1.180*	*0.150*	**0.80**	**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*	*16.49*	*0.450*		*7.42*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.49*	*0.450*		*7.42*	*Sqm*
	TOTAL					**14.84**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**

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						
	Under U/S floor	1	6.968			6.97	**Cum**
	Abutment						
	Section 1-1	2	*3.44*	*1.572*		*10.815*	*Cum*
	Section 2-2	2	*3.50*	*0.966*		*6.762*	*Cum*
	Section 3-3	2	*2.20*	*0.736*		*3.238*	*Cum*
	Section 5-5	1	*7.59*	*1.755*		*13.320*	*Cum*
	Section 6-6	2	*2.52*	*0.736*		*3.712*	*Cum*
	D/S protection						
	Toe wall	2	*9.14*	*0.150*	*0.600*	*2.742*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**47.96**	**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	Naur Sub Dy	9000-9150	150.000	0.550	82.500	Cum	**5021.30**	414257.25	9.50	26.40
		9150-9544	394.000	0.488	192.272	Cum	**5021.30**	965455.39	22.15	61.53
2	Phulwaria Minor	1510-2450	940.000	0.490	460.600	Cum	**5021.30**	2312810.78	53.06	147.39
	Total				***735.37***			***₹ 36,92,523.42***	***84.71***	***235.32***
3	**Carriage of materials**									
	Coarse Sand (30 Km lead)				235.319	Cum	**1075.00**	252967.97		
	Cement (30 km lead)				84.715	MT	**742.00**	62858.42		
	Brick (30 km lead)				367686.00	No.	**3.18**	1169241.48		
	Carriage of materials Total (In Rs.)							**₹ 14,85,067.87**		
	SUB TOTAL (In Rs.)							**₹ 51,77,591.29**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	235.32	Cum		**584.64**	137576.92	13757.69			
	Total						**₹ 13,757.69**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF NAUR SUB DY.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	CULVERT	0.330	₹ 20,717.12
2	BRIDGE	0.555	₹ 1,07,283.90
3	CROSS DRAINAGE	0.730	₹ 46,810.79
4	CROSS DRAINAGE	1.110	₹ 27,573.77
5	CULVERT	1.180	₹ 36,485.91
6	NEW FALL (0.305 M)	1.500	₹ 0.00
7	BRIDGE	1.605	₹ 17,587.12
8	CULVERT	2.075	₹ 33,080.85
9	CULVERT	2.515	₹ 36,729.13
10	CULVERT	3.005	₹ 5,983.92
11	CULVERT	3.230	₹ 54,902.70
12	CULVERT	3.400	₹ 38,265.57
13	RAILWAY BRIDGE	3.675	₹ 0.00
14	FALL (1.219 M) / HR FOR PHULWARIA MR.	3.700	₹ 94,947.99
15	CULVERT	4.110	₹ 27,391.09
16	FALL (1.524 M)	4.400	₹ 20,324.66
17	FALL (1.524 M)	4.650	₹ 3,51,937.13
18	CULVERT	4.690	₹ 0.00
19	FALL (1.220 M)	4.950	₹ 0.00
20	CULVERT	5.075	₹ 0.00
21	FALL (0.915 M)	5.500	₹ 0.00
22	CULVERT / FALL (1.524 M)	5.995	₹ 1,46,024.87
23	NEW FALL (0.610 M)	6.700	₹ 0.00
24	CULVERT	7.010	₹ 20,770.07
25	FALL (1.829M) / CULVERT	7.610	₹ 1,03,995.38
26	CULVERT	7.765	₹ 22,862.51
27	CULVERT	8.730	₹ 24,633.17
28	NEW FALL (0.610 M)	9.000	₹ 0.00
29	FALL	9.400	₹ 38,265.57
Total In Rs.			**₹ 12,76,573.18**
Total In Lakhs.			**₹ 12.77**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF PHULWARIA MR.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.762 M)	0.155	₹ 15,891.71
2	CULVERT	0.255	₹ 28,660.14
3	CD WORK	0.320	₹ 56,491.65
4	FALL (0.762 M)	0.435	₹ 15,891.71
5	CD WORK	0.620	₹ 58,262.30
6	CULVERT	0.730	₹ 10,047.21
7	FALL (0.915 M)	0.780	₹ 67,690.53
8	NEW FALL (1.524 M)	1.030	₹ 0.00
9	CD WORK	1.060	₹ 9,832.94
10	CD WORK	1.260	₹ 53,845.98
11	CULVERT	1.365	₹ 26,408.54
12	CD WORK	1.430	₹ 1,534.57
13	CD WORK	2.120	₹ 5,290.71
14	CULVERT	2.440	₹ 1,475.55
15	FALL (0.762 M)	3.650	₹ 1,07,349.83
16	HR FOR MURAT BIGHA MR.	4.500	₹ 11,964.38
17	CULVERT	5.230	₹ 4,133.58
18	BRIDGE	5.586	₹ 2,037.88
19	FALL (0.762 M) / CULVERT	5.610	₹ 4,133.58
20	NEW FALL (0.305 M)	6.000	₹ 0.00
21	FALL (1.220 M)	6.187	₹ 4,788.41
22	FALL (1.220 M)	6.431	₹ 0.00
Total In Rs.			**₹ 4,85,731.22**
Total In Lakhs.			**₹ 4.86**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF MURAT BIGHA MR.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	NEW FALL (0.457 M)	0.000	₹ 0.00
2	FALL (1.220 M)	0.650	₹ 16,571.91
3	CULVERT	0.727	₹ 16,829.16
4	FALL (1.524 M)	0.880	₹ 11,953.07
5	NEW FALL (1.22 M)	0.975	₹ 0.00
6	CULVERT	1.086	₹ 17,110.39
7	CULVERT	1.110	₹ 18,701.79
8	FALL (0.762 M)	1.130	₹ 29,441.48
9	CULVERT	1.316	₹ 15,315.87
10	FALL (1.067 M)	1.330	₹ 74,400.95
11	FALL (1.524 M)	1.510	₹ 11,598.93
12	FALL (1.22 M)	1.650	₹ 1,32,408.97
13	ROAD CROSSING	2.542	₹ 34,765.26
Total In Rs.			**₹ 3,79,097.79**
Total In Lakhs.			**₹ 3.79**

DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		10.000	₹ 52,10,185.50
Total In Rs.			₹ 52,10,185.50
Total In Lakhs.			₹ 52.10

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF NAUR SUB DY.									
AOC FOR CULVERT (Ch.-0.330 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	5.5.5	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.	18.168	Sqm	**340.20**	6180.76	18.837	0.265	
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.	4.267	Sqm	**63.20**	269.69	0.01		
3		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.265	Cum	**1075.00**	285.15			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	18.843	MT	**742.00**	13981.52			
		TOTAL (In Rs.)				**20717.12**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.27	Cum	**584.64**	155.08	15.51		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**15.51**		
AOC FOR BRIDGE (Ch.0.555 Km)									
1	5.7.16	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.	2.07	Cum	**5021.30**	10394.09	0.24	0.66	
2	5.5.5	Providing 25 mm 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.	78.810	Sqm	**340.20**	26811.16	81.710	1.151	
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.	62.700	Sqm	**63.20**	3962.64	0.09		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	1.813	Cum	**1075.00**	1949.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	82.043	MT	**742.00**	60875.70			
		Brick (30 km lead)	1035.00	No.	**3.18**	3291.30			
		TOTAL (In Rs.)				**107283.90**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.81	Cum	**584.64**	1059.97	106.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**106.00**		

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 CROSS DRAINAGE (Ch.0.730 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	5.3.4	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.	1.831	Cum	**6381.70**	11685.65	0.59	0.82	1.65
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.	6.17	Sqm	**578.60**	3567.30			
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.	22.933	Sqm	**340.20**	7801.86	23.777	0.335	
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.	5.486	Sqm	**63.20**	346.74	0.01		
6		**Carriage of materials**							
		Coarse Sand (30 Km lead)	1.16	Cum	**1075.00**	**1245.74**			
		Coarse Aggregates (60 Km lead)	1.65	Cum	**1398.00**	**2303.91**			
		Cement (30 km lead)	24.38	MT	**742.00**	**18088.92**			
TOTAL (In Rs.)						**46810.79**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.16	Cum	**584.64**	677.50	67.75		
		Coarse Aggregate	1.65	Cum	**944.26**	1556.15	155.61		
		Total					**223.36**		
AOC FOR CROSS DRAINAGE (Ch.1.110 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.	120.000	Sqm	**11.80**	1416.53			
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.	22.93	Sqm	**340.20**	7801.86	23.777	0.335	
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.	5.49	Sqm	**63.20**	346.74	0.01		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.335	Cum	**1075.00**	359.94			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	23.785	MT	**742.00**	17648.71			
TOTAL (In Rs.)						**27573.77**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.33	Cum	**584.64**	195.75	19.58		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**19.58**		

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 CROSS DRAINAGE (Ch.1.180 Km)									
1	5.7.16	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.	2.10	Cum	**5021.30**	10560.40	0.24	0.67	
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.	19.11	Sqm	**340.20**	6501.55	19.814	0.279	
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.	2.74	Sqm	**63.20**	173.37	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.952	Cum	**1075.00**	1023.42			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	20.061	MT	**742.00**	14884.99			
		Brick (30 km lead)	1051.00	No.	**3.18**	3342.18			
TOTAL (In Rs.)						**36485.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.95	Cum	**584.64**	556.59	55.66		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**55.66**		
AOC FOR BRIDGE (Ch.1.605 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.	12.00	Sqm	**340.20**	4082.40	12.442	0.175	
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	12.442	Cum	**1075.00**	13374.72			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.175	MT	**742.00**	130.00			
TOTAL (In Rs.)						**17587.12**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	12.44	Cum	**584.64**	7273.86	727.39		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**727.39**		

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.2.075 Km)									
1	5.7.16	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.	1.91	Cum	**5021.30**	9574.76	0.22	0.61	
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.	17.327	Sqm	**340.20**	5894.74	17.965	0.253	
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.	2.487	Sqm	**63.20**	157.19	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.863	Cum	**1075.00**	927.90			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	18.188	MT	**742.00**	13495.73			
		Brick (30 km lead)	953.00	No.	**3.18**	3030.54			
TOTAL (In Rs.)						**33080.85**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.86	Cum	**584.64**	504.64	50.46		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**50.46**		
AOC FOR CULVERT (Ch.2.515 Km)									
1	5.7.16	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.	2.12	Cum	**5021.30**	10630.80	0.24	0.68	
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.	19.238	Sqm	**340.20**	6544.89	19.946	0.281	
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.	2.761	Sqm	**63.20**	174.53	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.958	Cum	**1075.00**	1030.24			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	20.194	MT	**742.00**	14984.23			
		Brick (30 km lead)	1058.00	No.	**3.18**	3364.44			
TOTAL (In Rs.)						**36729.13**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.96	Cum	**584.64**	560.30	56.03		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**56.03**		

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.3.005 Km)									
1	5.7.16	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.	0.35	Cum	**5021.30**	1732.35	0.04	0.11	
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.	3.135	Sqm	**340.20**	1066.53	3.250	0.046	
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.	0.450	Sqm	**63.20**	28.44	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.156	Cum	**1075.00**	167.88			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.291	MT	**742.00**	2441.76			
		Brick (30 km lead)	172.00	No.	**3.18**	546.96			
TOTAL (In Rs.)						**5983.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.16	Cum	**584.64**	91.30	9.13		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**9.13**		
AOC FOR CULVERT (Ch.3.230 Km)									
1	**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.	1.67	Cum	**8151.40**	13576.69	0.94	0.65	1.32
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.	4.554	Cum	**6381.70**	29060.42	1.48	2.05	4.10
3		**Carriage of materials**							
		Coarse Sand (30 Km lead)	2.699	Cum	**1075.00**	**2901.15**			
		Coarse Aggregates (60 Km lead)	5.414	Cum	**1398.00**	**7568.96**			
		Cement (30 km lead)	2.420	MT	**742.00**	**1795.48**			
TOTAL (In Rs.)						**54902.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.70	Cum	**584.64**	1577.79	157.78		
		Coarse Aggregate	5.41	Cum	**944.26**	5112.35	511.24		
		Total					**669.01**		

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)
AOC FOR CULVERT (Ch.3.400 Km)									
1	**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.	4.575	Cum	**6381.70**	29196.28	1.48	2.06	4.12
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	2.059	Cum	**1075.00**	2213.16			
		Coarse Aggregates (60 Km lead)	4.118	Cum	**1398.00**	5756.27			
		Cement (30 km lead)	1.482	MT	**742.00**	1099.87			
TOTAL (In Rs.)						**38265.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.06	Cum	**584.64**	1203.63	120.36		
		Coarse Aggregate	4.12	Cum	**944.26**	3887.99	388.80		
		Total					**509.16**		
AOC FOR RAILWAY BRIDGE (Ch.3.675 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL/HR OF PHULWARIA MR. (Ch.3.700 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.	38.092	Cum	**2492.58**	94947.99			
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**94947.99**			
		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 CULVERT (Ch.4.110 Km)									
1	5.7.16	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.	1.42	Cum	**5021.30**	7110.67	0.16	0.45	
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.	12.868	Sqm	**340.20**	4377.71	13.342	0.188	
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.	1.847	Sqm	**63.20**	116.74	0.00		
4	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.	0.338	Cum	**6381.70**	2153.82	0.11	0.15	0.30
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.793	Cum	**1075.00**	852.37			
		Coarse Aggregates (60 Km lead)	0.304	Cum	**1398.00**	424.64			
		Cement (30 km lead)	13.617	MT	**742.00**	10103.70			
		Brick (30 km lead)	708.00	No.	**3.18**	2251.44			
TOTAL (In Rs.)						**27391.09**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.79	Cum	**584.64**	463.56	46.36		
		Coarse Aggregate	0.30	Cum	**944.26**	286.82	28.68		
		Total					**75.04**		
AOC FOR FALL (Ch.4.400 Km)									
1	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.	2.430	Cum	**6381.70**	15507.53	0.79	1.09	2.19
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	1.094	Cum	**1075.00**	1175.51			
		Coarse Aggregates (60 Km lead)	2.187	Cum	**1398.00**	3057.43			
		Cement (30 km lead)	0.787	MT	**742.00**	584.19			
TOTAL (In Rs.)						**20324.66**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.09	Cum	**584.64**	639.30	63.93		
		Coarse Aggregate	2.19	Cum	**944.26**	2065.10	206.51		
		Total					**270.44**		

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 FALI. (Ch.4.650 Km)									
1	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.	19.575	Cum	**6381.70**	124921.78	6.34	8.81	17.62
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.	14.60	Cum	**6914.20**	100912.75	6.02	6.28	12.55
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.	101.17	Sqm	**578.60**	58536.96			
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	15.085	Cum	**1075.00**	**16215.95**			
		Coarse Aggregates (60 Km lead)	30.169	Cum	**1398.00**	**42176.54**			
		Cement (30 km lead)	12.363	MT	**742.00**	**9173.15**			
TOTAL (In Rs.)						**351937.13**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	15.08	Cum	**584.64**	8819.06	881.91		
		Coarse Aggregate	30.17	Cum	**944.26**	28487.57	2848.76		
		Total					**3730.66**		
AOC FOR CULVERT (Ch.4.690 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR CULVERT (Ch.5.075 Km)									
1	**Structure is in good condition and does not requir any repair works.**								

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/FALl. (Ch.5.995 Km)									
1	5.7.16	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.	1.54	Cum	**5021.30**	7744.29	0.18	0.49	
1	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.	8.100	Cum	**6381.70**	51691.77	2.62	3.65	7.29
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.	4.55	Cum	**6914.20**	31459.61	1.88	1.96	3.91
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.	46.65	Sqm	**578.60**	26991.69			
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	6.10	Cum	**1075.00**	**6552.16**			
		Coarse Aggregates (60 Km lead)	11.20	Cum	**1398.00**	**15661.79**			
		Cement (30 km lead)	4.68	MT	**742.00**	**3471.78**			
		Brick (30 km lead)	771.00	No.	**3.18**	**2451.78**			
TOTAL (In Rs.)						**146024.87**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.10	Cum	**584.64**	3563.40	356.34		
		Coarse Aggregate	11.20	Cum	**944.26**	10578.54	1057.85		
		Total					**1414.19**		
AOC FOR CULVERT (Ch.7.010 Km)									
1	5.7.16	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.	1.32	Cum	**5021.30**	6617.85	0.15	0.42	
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.	11.976	Sqm	**340.20**	4074.30	12.417	0.175	
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.	1.719	Sqm	**63.20**	108.65	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.60	Cum	**1075.00**	**641.34**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	12.57	MT	**742.00**	**9327.93**			
TOTAL (In Rs.)						**20770.07**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.60	Cum	**584.64**	348.80	34.88		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**34.88**		

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)
		AOC FOR CULVERT (Ch.7.610 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			
1	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.	1.975	Cum	**6381.70**	12604.52	0.64	0.89	1.78
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.	7.77	Cum	**6914.20**	53712.53	3.20	3.34	6.68
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.	17.29	Sqm	**944.26**	16329.65			
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	4.23	Cum	**1075.00**	**4546.42**			
		Coarse Aggregates (60 Km lead)	8.46	Cum	**1398.00**	**11824.91**			
		Cement (30 km lead)	3.84	MT	**742.00**	**2852.56**			
		TOTAL (In Rs.)				**103995.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.23	Cum	**584.64**	2472.57	247.26		
		Coarse Aggregate	8.46	Cum	**944.26**	7986.98	798.70		
		Total					**1045.96**		
		AOC FOR CULVERT (Ch.7.765 Km)							
1	5.7.16	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.	1.32	Cum	**5021.30**	6617.85	0.15	0.42	
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.	11.976	Sqm	**340.20**	4074.30	12.417	0.175	
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.	1.719	Sqm	**63.20**	108.65	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.60	Cum	**1075.00**	**641.34**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	12.57	MT	**742.00**	**9327.93**			
		Brick (30 km lead)	658.00	No.	**3.18**	**2092.44**			
		TOTAL (In Rs.)				**22862.51**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.60	Cum	**584.64**	348.80	34.88		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**34.88**		

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)
AOC FOR CULVERT (Ch.8.730 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	5.7.16	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.	1.32	Cum	**5021.30**	6617.85	0.15	0.42	
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.	11.976	Sqm	**340.20**	4074.30	12.417	0.175	
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.	1.719	Sqm	**63.20**	108.65	0.00		
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.60	Cum	**1075.00**	**641.34**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	12.57	MT	**742.00**	**9327.93**			
		Brick (30 km lead)	658.00	No.	**3.18**	**2092.44**			
TOTAL (In Rs.)						**24633.17**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.60	Cum	**584.64**	348.80	34.88		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**34.88**		
AOC FOR FALL (Ch.-9.400 Km)									
1	**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.	4.575	Cum	**6381.70**	29196.28	1.48	2.06	4.12
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	2.059	Cum	**1075.00**	2213.16			
		Coarse Aggregates (60 Km lead)	4.118	Cum	**1398.00**	5756.27			
		Cement (30 km lead)	1.482	MT	**742.00**	1099.87			
TOTAL (In Rs.)						**38265.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.06	Cum	**584.64**	1203.63	120.36		
		Coarse Aggregate	4.12	Cum	**944.26**	3887.99	388.80		
		Total					**509.16**		

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 PHULWARIA MR.									
AOC FOR FALL (Ch.-0.155 Km)									
1	**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.	1.900	Cum	**6381.70**	12125.23	0.62	0.86	1.71
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.855	Cum	**1075.00**	919.13			
		Coarse Aggregates (60 Km lead)	1.710	Cum	**1398.00**	2390.58			
		Cement (30 km lead)	0.616	MT	**742.00**	456.78			
TOTAL (In Rs.)						**15891.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.86	Cum	**584.64**	499.87	49.99		
		Coarse Aggregate	1.71	Cum	**944.26**	1614.68	161.47		
		Total					**211.46**		
AOC FOR CULVERT (Ch.-0.255 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	5.7.16	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.	1.57	Cum	**5021.30**	7885.10	0.18	0.50	
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.	14.270	Sqm	**340.20**	4854.49	14.795	0.208	
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.	2.048	Sqm	**63.20**	129.45	0.003		
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.71	Cum	**1075.00**	**764.15**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	14.98	MT	**742.00**	**11114.13**			
		Brick (30 km lead)	785.00	No.	**3.18**	**2496.30**			
TOTAL (In Rs.)						**28660.14**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.71	Cum	**584.64**	415.59	41.56		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**41.56**		

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)
AOC FOR CD WORK (Ch.-0.320 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.	49.680	Sqm	**340.20**	16901.14	51.508	0.725	
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.	9.200	Sqm	**63.20**	581.44	0.01		
3		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.73	Cum	**1075.00**	**779.73**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	51.52	MT	**742.00**	**38229.34**			
TOTAL (In Rs.)						**56491.65**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	424.06	42.41		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**42.41**		
AOC FOR FALL (Ch.-0.435 Km)									
1	**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.	1.900	Cum	**6381.70**	12125.23	0.62	0.86	1.71
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.855	Cum	**1075.00**	919.13			
		Coarse Aggregates (60 Km lead)	1.710	Cum	**1398.00**	2390.58			
		Cement (30 km lead)	0.616	MT	**742.00**	456.78			
TOTAL (In Rs.)						**15891.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.86	Cum	**584.64**	499.87	49.99		
		Coarse Aggregate	1.71	Cum	**944.26**	1614.68	161.47		
		Total					**211.46**		
AOC FOR CD WORK (Ch.-0.620 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.	49.680	Sqm	**340.20**	16901.14	51.508	0.725	
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.	9.200	Sqm	**63.20**	581.44	0.01		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.73	Cum	**1075.00**	**779.73**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	51.52	MT	**742.00**	**38229.34**			
TOTAL (In Rs.)						**58262.30**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	424.06	42.41		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**42.41**		
AOC FOR CULVERT (Ch.-0.730 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	5.7.16	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.	0.49	Cum	**5021.30**	2464.09	0.06	0.16	
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.	4.459	Sqm	**340.20**	1517.03	4.623	0.065	

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	5.5.10	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.	0.640	Sqm	**63.20**	40.45	0.00		
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.22	Cum	**1075.00**	**238.80**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	4.68	MT	**742.00**	**3473.17**			
		Brick (30 km lead)	245.00	No.	**3.18**	**779.10**			
TOTAL (In Rs.)						**10047.21**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.22	Cum	**584.64**	129.87	12.99		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**12.99**		

AOC FOR FALL (Ch.-0.780Km)									
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.	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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	8.53	Cum	**6914.20**	59008.55	3.52	3.67	7.34
3		**Carriage of materials**							
		Coarse Sand (30 Km lead)	3.67	Cum	**1075.00**	**3945.03**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	3.52	MT	**742.00**	**2612.17**			
TOTAL (In Rs.)						**67690.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.67	Cum	**584.64**	2145.51	214.55		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**214.55**		

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 CD WORK (Ch.-1.060 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.	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.	7.315	Sqm	**340.20**	2488.56	7.584	0.107	
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.	1.050	Sqm	**63.20**	66.36	0.00		
		Carriage of materials							
		Coarse Sand (30 Km lead)	0.11	Cum	**1075.00**	**114.81**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	7.59	MT	**742.00**	**5628.64**			
TOTAL (In Rs.)						**9832.94**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.11	Cum	**584.64**	62.44	6.24		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**6.24**		

AOC FOR CD WORK (Ch.-1.260 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	5.5.5	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.	45.900	Sqm	**340.20**	15615.18	47.589	0.670	
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.	8.500	Sqm	**63.20**	537.20	0.01		
		Carriage of materials							
		Coarse Sand (30 Km lead)	0.67	Cum	**1075.00**	**720.40**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	47.60	MT	**742.00**	**35320.59**			
TOTAL (In Rs.)						**53845.98**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.67	Cum	**584.64**	391.79	39.18		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**39.18**		

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.-1.365 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	5.7.16	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.	1.23	Cum	**5021.30**	6198.49	0.14	0.40	
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.	13.740	Sqm	**340.20**	4674.35	14.246	0.201	
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.	3.900	Sqm	**63.20**	246.48	0.01		
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.60	Cum	**1075.00**	**640.30**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	14.39	MT	**742.00**	**10680.12**			
		Brick (30 km lead)	617.00	No.	**3.18**	**1962.06**			
TOTAL (In Rs.)						**26408.54**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.60	Cum	**584.64**	348.23	34.82		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**34.82**		

AOC FOR CD WORK (Ch.-1.430 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		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.00	Cum	**1075.00**	**0.00**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	0.00	MT	**742.00**	**0.00**			
TOTAL (In Rs.)						**1534.57**			
		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 CD WORK (Ch.-2.120 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	5.5.5	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.	3.500	Sqm	**340.20**	1190.70	3.629	0.051	
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.	0.840	Sqm	**63.20**	53.09	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.05	Cum	**1075.00**	**54.93**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	3.63	MT	**742.00**	**2693.50**			
TOTAL (In Rs.)						**5290.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.05	Cum	**584.64**	29.88	2.99		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**2.99**		

AOC FOR CD WORK (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.	125.000	Sqm	**11.80**	1475.55			
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.00	Cum	**1075.00**	**0.00**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	0.00	MT	**742.00**	**0.00**			
TOTAL (In Rs.)						**1475.55**			
		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 FALL (Ch.-3.650 Km)									
1	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.	2.160	Cum	**6381.70**	13784.47	0.70	0.97	1.94
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.	8.51	Cum	**6914.20**	58854.56	3.51	3.66	7.32
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.	23.60	Sqm	**578.60**	13654.87			
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	4.63	Cum	**1075.00**	**4979.63**			
		Coarse Aggregates (60 Km lead)	9.26	Cum	**1398.00**	**12951.67**			
		Cement (30 km lead)	4.21	MT	**742.00**	**3124.63**			
TOTAL (In Rs.)						**107349.83**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.63	Cum	**584.64**	2708.18	270.82		
		Coarse Aggregate	9.26	Cum	**944.26**	8748.03	874.80		
		Total					**1145.62**		

AOC FOR HR MURAT BIGHA MR (Ch.-4.500 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.	4.800	Cum	**2492.58**	11964.38			
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**11964.38**			
		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 CULVERT (Ch.-5.230 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	5.3.4	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.	0.203	Cum	**6381.70**	1292.29	0.07	0.09	0.18
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.	16.192	Sqm	**63.20**	1023.33	0.02		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.09	Cum	**1075.00**	**97.96**			
		Coarse Aggregates (60 Km lead)	0.18	Cum	**1398.00**	**254.79**			
		Cement (30 km lead)	0.07	MT	**742.00**	**48.68**			
TOTAL (In Rs.)						**4133.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.09	Cum	**584.64**	53.28	5.33		
		Coarse Aggregate	0.18	Cum	**944.26**	172.09	17.21		
		Total					**22.54**		
AOC FOR BRIDGE(Ch.-5.586 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			
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.	6.096	Sqm	**63.20**	385.27	0.01		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.00	Cum	**1075.00**	**0.00**			
		Coarse Aggregates (60 Km lead)	0.00	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	0.00	MT	**742.00**	**0.00**			
TOTAL (In Rs.)						**2037.88**			
		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**		

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/CULVERT (Ch.-5.610 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	5.3.4	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.	0.203	Cum	**6381.70**	1292.29	0.07	0.09	0.18
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.	16.192	Sqm	**63.20**	1023.33	0.02		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.09	Cum	**1075.00**	**97.96**			
		Coarse Aggregates (60 Km lead)	0.18	Cum	**1398.00**	**254.79**			
		Cement (30 km lead)	0.07	MT	**742.00**	**48.68**			
TOTAL (In Rs.)						**4133.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.09	Cum	**584.64**	53.28	5.33		
		Coarse Aggregate	0.18	Cum	**944.26**	172.09	17.21		
		Total					**22.54**		
AOC FOR FALL(Ch.-6.187 KM)									
1	5.7.16	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.	0.28	Cum	**5021.30**	1385.88	0.03	0.09	
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.	2.508	Sqm	**340.20**	853.22	2.600	0.037	
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.	0.360	Sqm	**63.20**	22.75	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.125	Cum	**1075.00**	134.31			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.633	MT	**742.00**	1953.41			
		Brick (30 km lead)	138.00	No.	**3.18**	**438.84**			
TOTAL (In Rs.)						**4788.41**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.12	Cum	**584.64**	73.04	7.30		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**7.30**		

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 MURAT BIGHA MR									
AOC FOR FALL (Ch.-0.650 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.	140.000	Sqm	**11.80**	1652.61			
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.	1.350	Cum	**6381.70**	8615.30	0.44	0.61	1.22
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.	6.27	Sqm	**578.60**	3627.82			
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.61	Cum	**1075.00**	**653.06**			
		Coarse Aggregates (60 Km lead)	1.22	Cum	**1398.00**	**1698.57**			
		Cement (30 km lead)	0.44	MT	**742.00**	**324.55**			
TOTAL (In Rs.)						**16571.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.61	Cum	**584.64**	355.17	35.52		
		Coarse Aggregate	1.22	Cum	**944.26**	1147.28	114.73		
		Total					**150.24**		
AOC FOR CULVERT (Ch.-0.727 Km)									
1	5.7.16	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	**5021.30**	6929.39	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.	6.270	Sqm	**340.20**	2133.05	6.501	0.092	
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.	0.900	Sqm	**63.20**	56.88	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.533	Cum	**1075.00**	573.13			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	6.661	MT	**742.00**	4942.51			
		Brick (30 km lead)	690.00	No.	**3.18**	**2194.20**			
TOTAL (In Rs.)						**16829.16**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.53	Cum	**584.64**	311.70	31.17		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**31.17**		

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.-0.880 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	5.5.5	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	9.331	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.	2.700	Sqm	**63.20**	170.64	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.131	Cum	**1075.00**	141.26			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	9.335	MT	**742.00**	6926.76			
		TOTAL (In Rs.)				**11953.07**			
		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 CULVERT(Ch.-1.086 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	5.7.16	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.	1.25	Cum	**5021.30**	6276.63	0.14	0.40	
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.	6.250	Sqm	**340.20**	2126.25	6.480	0.091	
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.	1.500	Sqm	**63.20**	94.80	0.00		
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.491	Cum	**1075.00**	528.09			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	6.626	MT	**742.00**	4916.68			
		Brick (30 km lead)	625.00	No.	**3.18**	**1987.50**			
		TOTAL (In Rs.)				**17110.39**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.49	Cum	**584.64**	287.20	28.72		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**28.72**		

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.-1.110 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.	100.000	Sqm	**11.80**	1180.44			
2	5.7.16	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	**5021.30**	6904.29	0.16	0.44	
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.	6.875	Sqm	**340.20**	2338.88	7.128	0.100	
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.	1.650	Sqm	**63.20**	104.28	0.00		
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.540	Cum	**1075.00**	580.90			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.289	MT	**742.00**	5408.35			
		Brick (30 km lead)	687.00	No.	**3.18**	**2184.66**			
TOTAL (In Rs.)						**18701.79**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.54	Cum	**584.64**	315.92	31.59		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**31.59**		

AOC FOR FALL (Ch.1.130 Km)									
1	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.	3.520	Cum	**6381.70**	22463.58	1.14	1.58	3.17
2		**Carriage of materials**							
		Coarse Sand (30 Km lead)	1.584	Cum	**1075.00**	1702.80			
		Coarse Aggregates (60 Km lead)	3.168	Cum	**1398.00**	4428.86			
		Cement (30 km lead)	1.140	MT	**742.00**	846.24			
TOTAL (In Rs.)						**29441.48**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.58	Cum	**584.64**	926.07	92.61		
		Coarse Aggregate	3.17	Cum	**944.26**	2991.42	299.14		
		Total					**391.75**		

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)
AOC FOR CULVERT (Ch.-1.316 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	5.5.10	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.	3.600	Sqm	**63.20**	227.52	0.01		
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.	1.620	Cum	**6381.70**	10338.35	0.52	0.73	1.46
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.729	Cum	**1075.00**	783.68			
		Coarse Aggregates (60 Km lead)	1.458	Cum	**1398.00**	2038.28			
		Cement (30 km lead)	0.530	MT	**742.00**	393.47			
TOTAL (In Rs.)						**15315.87**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	426.20	42.62		
		Coarse Aggregate	1.46	Cum	**944.26**	1376.73	137.67		
		Total					**180.29**		

AOC FOR FALL (Ch.-1.330 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	5.5.5	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.	33.600	Sqm	**340.20**	11430.72	34.836	0.491	
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.	8.400	Sqm	**63.20**	530.88	0.01		
4	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.	4.113	Cum	**6381.70**	26247.93	1.33	1.85	3.70
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	2.341	Cum	**1075.00**	2517.02			
		Coarse Aggregates (60 Km lead)	3.702	Cum	**1398.00**	5174.98			
		Cement (30 km lead)	36.182	MT	**742.00**	26846.82			
TOTAL (In Rs.)						**74400.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.34	Cum	**584.64**	1368.88	136.89		
		Coarse Aggregate	3.70	Cum	**944.26**	3495.37	349.54		
		Total					**486.42**		

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)
AOC FOR FALL (Ch.-1.510 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.	110.000	Sqm	**11.80**	1298.48			
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	9.331	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.	2.700	Sqm	**63.20**	170.64	0.00		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.131	Cum	**1075.00**	141.26			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	9.335	MT	**742.00**	6926.76			
TOTAL (In Rs.)						**11598.93**			
		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.-1.650 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.	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.	4.800	Cum	**2492.58**	11964.38			
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.	10.800	Cum	**6381.70**	68922.36	3.50	4.86	9.72
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.	49.80	Sqm	**578.60**	28814.28			
5		**Carriage of materials**							
		Coarse Sand (30 Km lead)	4.86	Cum	**1075.00**	5224.50			
		Coarse Aggregates (60 Km lead)	9.72	Cum	**1398.00**	13588.56			
		Cement (30 km lead)	3.50	MT	**742.00**	2596.41			
TOTAL (In Rs.)						**132408.97**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.86	Cum	**584.64**	2841.35	284.14		
		Coarse Aggregate	9.72	Cum	**944.26**	9178.21	917.82		
		Total					**1201.96**		

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 ROAD CROSSING (Ch.-2.542 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	5.5.5	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.	29.400	Sqm	**340.20**	10001.88	30.482	0.429	
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.	6.000	Sqm	**63.20**	379.20	0.01		
4		**Carriage of materials**							
		Coarse Sand (30 Km lead)	0.429	Cum	**1075.00**	461.43			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	30.491	MT	**742.00**	22624.26			
TOTAL (In Rs.)						**34765.26**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.43	Cum	**584.64**	250.95	25.10		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**25.10**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF NAUR SUB DY.								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.0.330 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	4.27		2.1288	*18.17*	*Sqm*
		TOTAL					**18.17**	***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	4.27		0.5	*4.27*	*Sqm*
		TOTAL					**4.27**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.0.555 Km)								
1	5.7.16	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	4.5	0.25	0.92	*2.07*	*Cum*
		TOTAL					**2.07**	**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.						
		Abutment	2	8.00		1.5	*24.00*	*sqm*
		Wing Wall U/S& D/S	4	6.00		1.5	*36.00*	*Sqm*
		Parapet Wall	2	4.50		2.09	*18.81*	*Sqm*
		TOTAL					**78.81**	***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		1.5	*24.00*	*sqm*
		Wing Wall U/S& D/S	4	6.00		1.5	*36.00*	*Sqm*
		Parapet Wall	2	4.50		0.3	*2.70*	*Sqm*
		TOTAL					**62.70**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE (Ch.0.730 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**	**Sqm**
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.						
		Parapet D/S	1	0.79	0.45	0.9144	*0.33*	*Cum*
		Wing wall U/S for Road	2	2.74	0.45	0.6096	*1.51*	*Cum*
		TOTAL					**1.83**	***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.						
		Parapet D/S	2	0.79		0.91	*1.45*	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			2		0.45	0.91	*0.82*	Sqm
		Wing wall U/S for Road	2	2.74		0.61	*3.34*	Cum
			2		0.45	0.61	*0.55*	Cum
		TOTAL					**6.17**	**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.**						
		Parapet Wall	4	2.74		2.09	*22.93*	*Sqm*
		TOTAL					**22.93**	***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.**						
		Parapet Wall	4	2.74		0.5	*5.49*	*Sqm*
		TOTAL					**5.49**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE (Ch.1.110 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				**120.00**	**Sqm**
		TOTAL					**120.00**	**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	4	2.74		2.09	*22.93*	*Sqm*
		TOTAL					**22.93**	***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	4	2.74		0.5	*5.49*	*Sqm*
		TOTAL					**5.49**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.180 Km)								
1	**5.7.16**	**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	4.572	0.25	0.92	*2.10*	*Cum*
		TOTAL					**2.10**	**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	4.57		2.09	*19.11*	*Sqm*
		TOTAL					**19.11**	***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	4.57		0.3	*2.74*	*Sqm*
		TOTAL					**2.74**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.605 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	4.00		1.5	*12.00*	*Sqm*
		TOTAL					**12.00**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.075 Km)								
1	**5.7.16**	**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	4.14528	0.25	0.92	*1.91*	*Cum*
		TOTAL					**1.91**	**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	4.15		2.09	*17.33*	*Sqm*
		TOTAL					**17.33**	***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	4.15		0.3	*2.49*	*Sqm*
		TOTAL					**2.49**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.515 Km)								
1	**5.7.16**	**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	4.60248	0.25	0.92	*2.12*	*Cum*
		TOTAL					**2.12**	**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.**						
		Parapet Wall	2	4.60		2.09	*19.24*	*Sqm*
		TOTAL					**19.24**	***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	4.60		0.3	*2.76*	*Sqm*
		TOTAL					**2.76**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-3.005 Km)								
1	**5.7.16**	**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	1.5	0.25	0.92	*0.35*	*Cum*
		TOTAL					**0.35**	**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	1.50		2.09	*3.14*	*Sqm*
		TOTAL					**3.14**	***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	1.50		0.3	*0.45*	*Sqm*
		TOTAL					**0.45**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.3.230 Km)								
1	**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.**						
		Wearing Coat	1	5.06	4.39	0.075	*1.67*	*Cum*
		TOTAL					**1.67**	**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.**						
		Approach	2	3.00	5.06	0.15	*4.55*	*Cum*
		TOTAL					**4.55**	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.3.400 Km)								
1	**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.**						
		Floor D/S Portion	1	5.00	3.00	0.305	*4.58*	*Cum*
		TOTAL					**4.58**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR RAILWAY BRIDGE(Ch.3.675 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL/HR OF PHULWARIA MR (Ch.3.700 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 & D/S wing wall	4	3.00	0.45	1.5	*8.10*	*Cum*
		Fall Abutment	2	9.75	0.45	1.5	*13.17*	*Cum*
		CR & HR Abutment	4	0.45	0.45	1.2	*0.97*	*Cum*
		Crest	1	9.75	0.6	1.524	*8.92*	*Cum*
		D/S Floor	1	7.00	1.9812	0.5	*6.93*	*Cum*
		TOTAL					**38.09**	**Cum**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.4.110 Km)								
1	**5.7.16**	**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	3.08	0.25	0.92	*1.42*	*Cum*
		TOTAL					**1.42**	**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	3.08		2.09	*12.87*	*Sqm*
		TOTAL					**12.87**	***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	3.08		0.3	*1.85*	*Sqm*
		TOTAL					**1.85**	***Sqm***
4	**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.**						
		Wing Wall D/S top	2	2.50	0.45	0.15	*0.34*	*Cum*
		TOTAL					**0.34**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.4.400 Km)								
1	**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.**						
		Wing Wall D/S top	2	18.00	0.45	0.15	*2.43*	*Cum*
		TOTAL					**2.43**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.4.650 Km)								
1	**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.**						
		Wing Wall D/S top	2	15.00	0.45	0.15	*2.03*	*Cum*
		Wing wall D/S	2	15.00	0.45	1.3	*17.55*	*Cum*
		TOTAL					**19.58**	***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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing 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	2.1	0.45	1	*0.95*	*Cum*
		Floor	1	10	2.1	0.65	*13.65*	*Cum*
		TOTAL					**14.60**	**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.**						
		Wing wall D/S	4	15.00		1.30	*78.00*	Sqm
			4		0.45	1.30	*2.34*	Sqm
		Crest	2	2.10		1	*4.20*	Sqm
			2		0.45	1	*0.90*	Sqm
		Floor	2	10		0.65	*13.00*	Sqm
			2		2.10	0.65	*2.73*	Sqm
		TOTAL					**101.17**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.4.690 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.5.075 Km)								
1		**Structure requires no repair work.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.5.995 Km)								
1	**5.7.16**	**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	3.35	0.25	0.92	*1.54*	*Cum*
		TOTAL					**1.54**	**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.**						
		Wing wall D/S	2	6.00	0.45	1.5	*8.10*	*Cum*
		TOTAL					**8.10**	***Cum***
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.**						
		Crest	1	2	0.35	0.5	*0.35*	*Cum*
		Floor	1	6	2	0.35	*4.20*	*Cum*
		TOTAL					**4.55**	**Cum**
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.**						
		Wing wall D/S	4	6.00		1.5	*36.00*	Sqm
			4		0.45	1.5	*2.70*	Sqm
		Crest	2	2.00		0.5	*2.00*	Sqm
			2		0.35	0.5	*0.35*	Sqm
		Floor	2	6		0.35	*4.20*	Sqm
			2		2.00	0.35	*1.40*	Sqm
		TOTAL					**46.65**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.7.010 Km)								
1	**5.7.16**	**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	2.87	0.25	0.92	*1.32*	*Cum*
		TOTAL					**1.32**	**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	2.87		2.09	*11.98*	*Sqm*
		TOTAL					**11.98**	***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	2.87		0.3	*1.72*	*Sqm*
		TOTAL					**1.72**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.7.610 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**	**Sqm**
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.**						
		Coping in Abutment Top	2	14.63	0.45	0.15	*1.98*	*Cum*
		Coping in Wing wall Top	4	1.00	0.45	0.15	*0.27*	*Cum*
		TOTAL					**1.98**	***Cum***
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.**						
		Crest	1	1.52	0.6	1.829	*1.67*	*Cum*
		Floor	1	8	1.524	0.5	*6.10*	*Cum*
		TOTAL					**7.77**	**Cum**
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.**						
		Crest	2	1.52		1.829	*5.57*	Sqm
			2		0.60	1.829	*2.19*	Sqm
		Floor	2	8		0.5	*8.00*	Sqm
			2		1.52	0.5	*1.52*	Sqm
		TOTAL					**17.29**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.7.765 Km)								
1	**5.7.16**	**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	2.87	0.25	0.92	*1.32*	*Cum*
		TOTAL					**1.32**	**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	2.87		2.09	*11.98*	*Sqm*
		TOTAL					**11.98**	***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	2.87		0.3	*1.72*	*Sqm*
		TOTAL					**1.72**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch 8.730 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**	**Sqm**
2	**5.7.16**	**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	2.87	0.25	0.92	*1.32*	*Cum*
		TOTAL					**1.32**	**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	2.87		2.09	*11.98*	*Sqm*
		TOTAL					**11.98**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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	2.87		0.3	*1.72*	*Sqm*
		TOTAL					**1.72**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch 9.400 Km)								
1	**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.**						
		Floor D/S Portion	1	6.00	2.50	0.305	*4.58*	*Cum*
		TOTAL					**4.58**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF PHULWARIA MR.								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.155 Km)								
1	**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.**						
		Floor D/S Portion	1	5.00	2.50	0.152	*1.90*	*Cum*
		TOTAL					**1.90**	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.255 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
		TOTAL					**120.00**	**Sqm**
2	**5.7.16**	**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	3.41	0.25	0.92	*1.57*	*Cum*
		TOTAL					**1.57**	**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.**						
		Parapet Wall	2	3.41		2.09	*14.27*	*Sqm*
		TOTAL					**14.27**	***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	3.41		0.3	*2.05*	*Sqm*
		TOTAL					**2.05**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.320 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.**						
		Abutment Wall	2	4.20		2.7	*22.68*	*Sqm*
		Wing wall	4	2.50		2.7	*27.00*	*Sqm*
		TOTAL					**49.68**	***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.**						
		Abutment Wall	2	4.20		0.5	*4.20*	*Sqm*
		Wing wall	4	2.50		0.5	*5.00*	*Sqm*
		TOTAL					**9.20**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.435 Km)								
1	**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.**						
		Floor D/S Portion	1	5.00	2.50	0.152	*1.90*	*Cum*
		TOTAL					**1.90**	***Cum***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.620 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**	**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 Wall	2	4.20		2.7	*22.68*	*Sqm*
		Wing wall	4	2.50		2.7	*27.00*	*Sqm*
		TOTAL					**49.68**	***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 Wall	2	4.20		0.5	*4.20*	*Sqm*
		Wing wall	4	2.50		0.5	*5.00*	*Sqm*
		TOTAL					**9.20**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.730 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
		TOTAL					**130.00**	**Sqm**
2	**5.7.16**	**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	2.13	0.25	0.92	*0.49*	*Cum*
		TOTAL					**0.49**	**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	2.13		2.09	*4.46*	*Sqm*
		TOTAL					**4.46**	***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	2.13		0.3	*0.64*	*Sqm*
		TOTAL					**0.64**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.780Km)								
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				180.00	Sqm
		TOTAL					**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.**						
		D/S Floor	1	8	2.1336	0.5	*8.53*	*Cum*
		TOTAL					**8.53**	**Cum**
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.060 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				**130.00**	**Sqm**
		TOTAL					**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.**						
		Parapet Wall	1	3.50		2.09	*7.32*	*Sqm*
		TOTAL					**7.32**	***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	3.50		0.3	*1.05*	*Sqm*
		TOTAL					**1.05**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.260 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
		TOTAL					**140.00**	**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 Wall	2	3.50		2.7	*18.90*	*Sqm*
		Wing wall	4	2.50		2.7	*27.00*	*Sqm*
		TOTAL					**45.90**	***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.**						
		Abutment Wall	2	3.50		0.5	*3.50*	*Sqm*
		Wing wall	4	2.50		0.5	*5.00*	*Sqm*
		TOTAL					**8.50**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.365 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
		TOTAL					**170.00**	**Sqm**
2	**5.7.16**	**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	3.00	0.45	0.914	*1.23*	*Cum*
		TOTAL					**1.23**	**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		2.29	*13.74*	*Sqm*
		TOTAL					**13.74**	***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		0.65	*3.90*	*Sqm*
		TOTAL					**3.90**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.430 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
		TOTAL					**130.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-2.120 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**
		TOTAL					**110.00**	**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	1	2.80		1.25	*3.50*	*Sqm*
		TOTAL					**3.50**	***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	1	2.80		0.3	*0.84*	*Sqm*
		TOTAL					**0.84**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (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				125.00	Sqm
		TOTAL					**125.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.650 Km)								
1	**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.**						
		Wing wall D/S	2	8.00	0.45	0.3	*2.16*	*Cum*
		TOTAL					**2.16**	***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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing 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	1.92	0.35	0.762	*0.51*	*Cum*
		Floor	1	8	2	0.5	*8.00*	*Cum*
		TOTAL					**8.51**	**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.**						
		Wing wall D/S	4	8.00		0.3	*9.60*	Sqm
			4		0.45	0.3	*0.54*	Sqm
		Crest	2	1.92		0.762	*2.93*	Sqm
			2		0.35	0.762	*0.53*	Sqm
		Floor	2	8		0.5	*8.00*	Sqm
			2		2.00	0.5	*2.00*	Sqm
		TOTAL					**23.60**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR HR MURAT BIGHA MR (Ch.-4.500 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.**						
		U/S & D/S wing wall & parapet	2	6.00	0.4	1	*4.80*	*Cum*
		TOTAL					**4.80**	**Cum**
		New HR has been Proposed						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.230 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
		TOTAL					**120.00**	**Sqm**
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.**						
		Wing wall U/S	1	1.00	0.45	0.45	*0.20*	*Cum*
		TOTAL					**0.20**	***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.**						
		U/S Wing wall	2	2.00		0.50	*2.00*	*Sqm*
		Abutment	2	12.19		0.50	*12.19*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		D/S wing wall	2	2.00		0.50	*2.00*	*Sqm*
		TOTAL					**16.19**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-5.586 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
		TOTAL					**140.00**	**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.**						
		Abutment top	2	6.10		0.50	*6.10*	*Sqm*
		TOTAL					**6.10**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-5.610 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
		TOTAL					**120.00**	**Sqm**
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.**						
		Wing wall U/S	1	5.00	0.45	1.2	*2.70*	*Cum*
		TOTAL					**2.70**	***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.**						
		Wing wall D/S	2	5.00		1.2	*12.00*	Sqm
			2		0.45	1.2	*1.08*	Sqm
		TOTAL					**13.08**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-6.187 KM)								
1	**5.7.16**	**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	1.20	0.25	0.92	*0.28*	*Cum*
		TOTAL					**0.28**	**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	1	1.20		2.09	*2.51*	*Sqm*
		TOTAL					**2.51**	***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.**						
		Parapet Wall	1	1.20		0.3	*0.36*	*Sqm*
		TOTAL					**0.36**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF MURAT BIGHA MR.								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.650 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				**140.00**	**Sqm**
		TOTAL					**140.00**	**Sqm**
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.**						
		Wing wall U/S	1	10.00	0.45	0.30	*1.35*	*Cum*
		TOTAL					**1.35**	***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.**						
		Wing wall D/S	2	10.00		0.3	*6.00*	Sqm
			2		0.45	0.3	*0.27*	Sqm
		TOTAL					**6.27**	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.727 Km)								
1	**5.7.16**	**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	3.00	0.25	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	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***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	3.00		0.3	*0.90*	*Sqm*
		TOTAL					**0.90**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.880 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**
		TOTAL					**140.00**	**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 for Well	1	9.00		1	*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.**						
		Parapet Wall	1	9.00		0.3	*2.70*	*Sqm*
		TOTAL					**2.70**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT(Ch.-1.086 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**
		TOTAL					**100.00**	**Sqm**
2	**5.7.16**	**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	0.25	0.5	*1.25*	*Cum*
		TOTAL					**1.25**	**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	5.00		1.25	*6.25*	*Sqm*
		TOTAL					**6.25**	***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	5.00		0.3	*1.50*	*Sqm*
		TOTAL					**1.50**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.110 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				**100.00**	**Sqm**
		TOTAL					**100.00**	**Sqm**
2	**5.7.16**	**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	5.50	0.25	0.5	*1.38*	*Cum*
		TOTAL					**1.38**	**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	5.50		1.25	*6.88*	*Sqm*
		TOTAL					**6.88**	***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	5.50		0.3	*1.65*	*Sqm*
		TOTAL					**1.65**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.1.130 Km)								
1	**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.**						
		Floor D/S Portion	1	5.00	2.50	0.152	*1.90*	*Cum*
		Wing Wall D/S top	2	12.00	0.45	0.15	*1.62*	*Cum*
		TOTAL					**3.52**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.316 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**
		TOTAL					**130.00**	**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.**						
		Abutment	2	6.00		0.15	*1.80*	*sqm*
		Wing Wall U/S& D/S	2	6.00		0.15	*1.80*	*Sqm*
		TOTAL					**3.60**	***Sqm***
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.**						
		Abutment wall top	2	6.00	0.45	0.15	*0.81*	*Cum*
		Wing Wall U/S& D/S top	2	6.00	0.45	0.15	*0.81*	*Cum*
		TOTAL					**1.62**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.330 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
		TOTAL					**140.00**	**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		1.2	*19.20*	*Sqm*
		Wing wall	2	6.00		1.2	*14.40*	*Sqm*
		TOTAL					**33.60**	***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.**						
		Parapet Wall	2	8.00		0.3	*4.80*	*Sqm*
		Wing wall	2	6.00		0.3	*3.60*	*Sqm*
		TOTAL					**8.40**	***Sqm***
4	**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.**						
		Floor D/S Portion	1	4.50	2.00	0.457	*4.11*	*Cum*
		TOTAL					**4.11**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.510 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				**120.00**	**Sqm**
		TOTAL					**120.00**	**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 for Well	1	9.00		1	*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.**						
		Parapet Wall	1	9.00		0.3	*2.70*	*Sqm*
		TOTAL					**2.70**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.650 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				**110.00**	**Sqm**
		TOTAL					**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.**						
		U/S & D/S wing wall & parapet	2	6.00	0.4	1	*4.80*	*Cum*
		TOTAL					**4.80**	**Cum**
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.**						
		Wing Wall U/S & D/S	2	12.00	0.45	1	*10.80*	*Cum*
		TOTAL					**10.80**	***Cum***
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.**						
		Wing Wall U/S & D/S	4	12.00		1	*48.00*	Sqm
			4		0.45	1	*1.80*	Sqm
		TOTAL					**49.80**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR ROAD CROSSING (Ch.-2.542 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**
		TOTAL					**110.00**	**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	6.00		2.45	*29.40*	*Sqm*
		TOTAL					**29.40**	***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	6.00		0.5	*6.00*	*Sqm*
		TOTAL					**6.00**	***Sqm***

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per RCD 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	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.	60.00	Cum	**1044.90**	62694.00			
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.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (60 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 10 no., Total Seigniorage charges					**62028.25**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	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.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
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.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

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.	**160035.1095**

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)	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 (30 Km lead)	7.76	Cum	**1075.00**	8337.83				
		Coarse Aggregates (60 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 60 nos. outlet, Total Seigniorage charges					**66010.38**			

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.	**Refrence 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	SI-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	

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 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**

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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				83.18	
	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)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15% I like the coffee				₹ 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% I like the coffee				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	

Sl. No.	Refrence 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% I like the coffee				₹ 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% I like the coffee				₹ 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				6.15	
	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	

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	16	Add overhead charges and CP 15% I like the coffee				₹ 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				14.473	
	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**				**₹ 420.40**	
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**

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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	

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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	

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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	M10A
		(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	M10A
		(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	

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 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	M10A
		(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	M10A
		(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	M10A
		(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	M10A
		(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	

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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**
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**
	5.6.2	Labour Charges for Laying, fitting and fixing 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 .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m 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	1.50	nos	569.00	853.50	
		Unskilled Mazdoor	7.00	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**

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	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	**1200 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	0.057	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**
22	**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**
23	**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.					

Sl. No.	Refrence SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**
24	**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**

25	**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 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 2025 & PL 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	**Cum**	**174.89**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**Cum**	**217.92**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**Cum**	**268.53**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**Cum**	**319.14**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**Cum**	**369.80**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**Cum**	**420.40**
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.	**Cum**	**195.20**
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 Charges for Laying, fitting and fixing 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 .	**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

Nabinagar Division – Baria Minor
(Total Cost – Rs. 1.76 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (BARIA MR.)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork	1	Job	6496892.35	0.00	₹ 64,96,892.35	AOC Earthwork Baria minor	7
2	Cross Drainage Works							
	CD at 1.400 Km	1.00	No.	2072102.54	17683.42	₹ 20,89,785.96	C.D. Main canals-AOC	9
	CD at 2.220 Km	1.00	No.	2567675.71	22436.72	₹ 25,90,112.44		10
3	*Fall 0.305 m at Km 0.905*	1.00	No.	442324.29	3696.76	₹ 4,46,021.05	Fall (AOC) Baria minor	17
4	*Brick Section*	1.00	No.	1126242.91	2992.61	₹ 11,29,235.52	Brick Sec '!I11	23
5	Repair of Structures	7.00	No.	534947.66	2232.18	₹ 5,37,179.84	Abstract (Repair St.) Baria minor	24
	Approach Road	6	No.	521018.55	7578.59	₹ 31,71,582.87	Approach Road AOC	25
6	Outlets	9	No.	127744.47	1100.17	₹ 11,59,601.77	Outlet-AOC	34
7	Kilometer Stone	4	No.	3853.40	0.00	₹ 15,413.60	Rates '!F61	51
	TOTAL (In Rs.)					**17635825.39**		
	TOTAL (In Lacs)					**176.36**		

	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 X_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 Cost of =[(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			Cost of Carriage =[(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			

DETAIL QUANTITIES OF EARTHWORK

BARIA MR. (0.000 TO 3.050 KM)

Chainage	Length	Earthwork in Cutting			Earthwork in filling		
		Area of Cutting (Autocad)	Average area of Cutting	Earth work in Cutting	Area of Filling (Autocad)	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	0.033	0.017	1.650	6.318	3.159	315.900
200	100	0.306	0.170	16.950	5.617	5.968	596.750
300	100	0.404	0.355	35.500	4.990	5.304	530.350
400	100	0.288	0.346	34.600	6.487	5.739	573.850
500	100	0.155	0.222	22.150	4.460	5.474	547.350
600	100	0.000	0.078	7.750	5.651	5.056	505.550
700	100	0.000	0.000	0.000	6.352	6.002	600.150
800	100	0.020	0.010	1.000	5.768	6.060	606.000
900	100	0.123	0.072	7.150	5.322	5.545	554.500
1000	100	2.124	1.124	112.350	1.313	3.318	331.750
1100	100	0.289	1.207	120.650	3.924	2.619	261.850
1200	100	0.199	0.244	24.400	4.803	4.364	436.350
1300	100	0.102	0.151	15.050	5.187	4.995	499.500
1400	100	0.118	0.110	11.000	5.569	5.378	537.800
1500	100	0.005	0.062	6.150	4.895	5.232	523.200
1600	100	0.000	0.003	0.250	4.786	4.841	484.050
1700	100	0.107	0.054	5.350	3.263	4.025	402.450
1800	100	0.410	0.259	25.850	3.010	3.137	313.650
1900	100	0.303	0.357	35.650	3.827	3.419	341.850
2000	100	0.133	0.218	21.800	3.874	3.851	385.050
2100	100	0.272	0.203	20.250	3.865	3.870	386.950
2200	100	0.652	0.462	46.200	3.731	3.798	379.800
2300	100	0.398	0.525	52.500	3.465	3.598	359.800
2400	100	0.329	0.364	36.350	2.995	3.230	323.000
2500	100	0.258	0.294	29.350	3.621	3.308	330.800
2600	100	0.229	0.244	24.350	5.812	4.717	471.650
2700	100	0.616	0.423	42.250	2.291	4.052	405.150
2800	100	0.522	0.569	56.900	3.529	2.910	291.000
2900	100	0.424	0.473	47.300	6.866	5.198	519.750
3000	100	0.276	0.350	35.000	4.755	5.811	581.050
3050	50	0.533	0.405	20.225	2.900	3.828	191.375
Total				**915.925**			**13588.225**
						Earthwork in Cutting	**915.925**
						Earthwork in Filling	**13588.225**
						NET QUANTITY OF EARTHWORK IN BACKFILLING	**12672.300**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
BARIA MINOR OFFTAKING FROM 36.280 KM OF RMC				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.000 - 0.450	450	2.58	1161.00	Sqm
0.450 - 0.950	500	2.16	1080.00	Sqm
0.950 - 2.400	1450	1.81	2624.50	Sqm
2.400 - 2.740	340	1.48	503.20	Sqm
2.740 - 3.050	310	1.370	424.70	Sqm
	TOTAL		**5793.40**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.000 - 0.450	450	2.58	0.15	174.15	Cum
0.450 - 0.950	500	2.16	0.15	162.00	Cum
0.950 - 2.400	1450	1.81	0.15	393.68	Cum
2.400 - 2.740	340	1.48	0.15	75.48	Cum
2.740 - 3.050	310	1.37	0.15	63.71	Cum
	TOTAL			**869.01**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR BARIA 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.	5793.40	Sqm	**11.80**	68387.55261
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	915.93	Cum	**156.50**	143342.2625
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	366.37	Cum	**17.22**	6307.98065
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.	12672.30	Cum	**165.12**	2092398.99
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)	3801.69	Cum	**174.89**	664877.56
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	3168.08	Cum	**217.92**	690386.90
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	5702.54	Cum	**319.14**	1819907.02
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.				
			869.01	Cum	**196.10**	170412.86
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.	13588.23	Cum	**61.88**	840871.22
TOTAL COST OF EARTHWORK (in Rs.)						**6496892.35**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**64.969**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK				
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	*5793.40*	*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	915.925	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	366.37	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	12672.300	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	3801.69	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3168.08	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	5702.54	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	869.01	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	13588.23	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF BARIA MINOR									
Cross Drainage at Ch. 1.400 K.M									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
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	263.23	Cum	**149.30**	39300.89			
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.	35.65	Cum	**6381.70**	227476.70	11.55	16.04	32.08
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.	128.98	Cum	**6914.20**	891786.75	53.20	55.46	110.92
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.	477.31	Sqm	**578.60**	276170.12			
5	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	12.50	RM	**6002.82**	75035.25			
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 .	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.	2.53	MT	**73574.90**	186233.77			
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.	49.19	Cum	**195.20**	9601.11			
9		**Carriage of materials(As per Bihar SOR 2023)**							
		Coarse Sand 30 Km lead)	71.50	Cum	**1075.00**	**76863.90**			
		Coarse Aggregates (60 Km lead)	143.00	Cum	**1398.00**	**199917.63**			
		Cement (30 km lead)	64.75	MT	**742.00**	**48046.63**			
		Steel (30 Km lead)	2.53	MT	**742.00**	**1878.16**			
		Hume Pipe (60 Km)	12.50	RM	**1470.00**	**18375.00**			
TOTAL (In Rs.)						**₹ 20,72,102.54**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	71.50	Cum	**584.64**	41802.52	4180.25		
		Coarse Aggregate	143.00	Cum	**944.26**	135031.63	13503.16		
		Total					**17683.42**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 2.220 K.M.									
1	**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	323.95	Cum	**149.30**	48365.62			
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.	43.20	Cum	**6381.70**	275677.04	14.00	19.44	38.88
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.	165.77	Cum	**6914.20**	1146177.33	68.38	71.28	142.56
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.	521.87	Sqm	**578.60**	301952.07			
7	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	12.50	RM	**6002.82**	75035.25			
8	**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 .	12.50	RM	**1713.33**	21416.63			
9	**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.	3.25	MT	**73574.90**	239358.70			
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.	136.27	Cum	**195.20**	26599.98			
11		**Carriage of materials(As per Bihar SOR 2023)**							
		Coarse Sand 30 Km lead)	90.72	Cum	**1075.00**	**97524.94**			
		Coarse Aggregates (60 Km lead)	181.44	Cum	**1398.00**	**253655.56**			
		Cement (30 km lead)	82.38	MT	**742.00**	**61123.67**			
		Steel (30 Km lead)	3.25	MT	**742.00**	**2413.92**			
		Hume Pipe (60 Km)	12.50	RM	**1470.00**	**18375.00**			
TOTAL (In Rs.)						**₹ 25,67,675.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	90.72	Cum	**584.64**	53039.05	5303.91		
		Coarse Aggregate	181.44	Cum	**944.26**	171328.18	17132.82		
		Total					**22436.72**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF BARIA MINOR							
Cross Drainage at Ch. 1.400 Km							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**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*	*10.59*	*1.53*	*2.67*	*43.20*	*Cum*
		1	*6.23*	*3.94*	*3.16*	*77.58*	*Cum*
	Middle Portion	*1*	*1.83*	*24.12*		*44.15*	*Cum*
	Right Portion	*1*	*10.16*	*1.32*	*2.16*	*28.95*	*Cum*
		1	*5.92*	*3.94*	*2.97*	*69.36*	*Cum*
	TOTAL					**263.23**	**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*	*10.59*	*1.53*	*0.30*	*4.86*	*Cum*
		1	*6.23*	*3.94*	*0.30*	*7.36*	*Cum*
	300 mm Thick Right Abutment	*1*	*10.16*	*1.32*	*0.30*	*4.01*	*Cum*
		1	*5.92*	*3.89*	*0.30*	*6.90*	*Cum*
	Below Pipe Section	*1*	*9.71*	*1.83*	*0.30*	*5.33*	*Cum*
		2	*9.71*	*0.19*		*3.62*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.33*	*2.50*	*0.20*	*4.33*	*Cum*
	Pipe Section	*4*	*0.30*	*1.83*	*1.60*	*3.51*	*Cum*
	Deduct Area of Pipe	*4*	*0.30*	*3.56*		*-4.28*	*Cum*
	TOTAL					**35.65**	**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*	*10.29*	*0.30*	*0.20*	*1.23*	*Cum*
		2	*10.29*	*0.77*	*2.46*	*38.77*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*2.33*	*0.30*	*0.50*	*0.70*	*Cum*
		2	*2.33*	*0.81*	*2.88*	*10.90*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.31*	*0.30*	*0.35*	*0.91*	*Cum*
		2	*4.31*	*0.79*	*2.67*	*18.18*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*9.86*	*0.70*	*2.22*	*30.80*	*Cum*
		2	*9.86*	*0.30*	*0.20*	*1.18*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*2.33*	*0.84*	*2.77*	*10.88*	*Cum*
		2	*2.33*	*0.30*	*0.50*	*0.70*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.25*	*0.77*	*2.49*	*16.39*	*Cum*
		2	*4.25*	*0.30*	*0.35*	*0.89*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*1.08*	*1.188*		*-2.56*	*Cum*
	TOTAL					**128.98**	**Cum**
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	*10.59*		*0.30*	6.35	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.53*	*0.30*	0.92	*Sqm*
		2	6.23		0.30	3.74	*Sqm*
		2		3.94	0.30	2.36	*Sqm*
	300 mm Thick Right Abutment	2	*10.16*		*0.30*	6.10	*Sqm*
		2		*1.32*	*0.30*	0.79	*Sqm*
		2	5.92		0.30	3.55	*Sqm*
		2		3.89	0.30	2.33	*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	8	0.30		1.60	3.84	*Sqm*
		8		1.83	1.60	23.42	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*10.29*		*0.20*	8.23	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	*10.29*		*2.46*	101.30	*Sqm*
		4		0.77	2.46	7.54	*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*
		4	2.33		2.88	26.84	*Sqm*
		4		0.81	2.88	9.36	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.31		0.35	6.04	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
		4	4.31		2.67	46.09	*Sqm*
		4		0.79	2.67	8.43	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	2.33		2.77	25.82	*Sqm*
		4		0.84	2.77	9.33	*Sqm*
		4	2.33		0.50	4.66	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	9.86		2.22	87.44	*Sqm*
		4		0.70	2.22	6.25	*Sqm*
		4	9.86		0.20	7.89	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.25		2.49	42.39	*Sqm*
		4		0.77	2.49	7.71	*Sqm*
		4	4.25		0.35	5.95	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
	TOTAL					**477.31**	***Sqm***
6	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot						
	1 m 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%)	*128.98*	*0.0025*	*0.322*	*7850.00*	*2531.213*	*Kg*
	TOTAL					*2531.213*	*Kg*
	TOTAL					**2.53**	**M.T.**
8	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*	*10.59*	*1.39*		*14.71*	*Cum*
		1	*2.02*	*1.72*		*3.47*	*Cum*
	Middle Portion	*1*	*1.83*	*9.87*		*18.06*	*Cum*
	Right Portion	*1*	*10.16*	*0.90*		*9.14*	*Cum*
		1	*1.99*	*1.91*		*3.80*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**49.19**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Cross Drainage at Ch. 2.220 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*	*10.58*	*1.53*	*2.75*	*44.48*	*Cum*
		1	*6.22*	*3.92*	*2.98*	*72.63*	*Cum*
	Middle Portion	*1*	*1.83*	*28.73*		*52.58*	*Cum*
	Right Portion	*1*	*11.16*	*1.82*	*3.14*	*63.70*	*Cum*
		1	*6.50*	*3.92*	*3.55*	*90.56*	*Cum*
	TOTAL					**323.95**	**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*	*10.58*	*1.53*	*0.30*	*4.85*	*Cum*
		1	*6.22*	*3.92*	*0.30*	*7.32*	*Cum*
	300 mm Thick Right Abutment	*1*	*11.16*	*1.82*	*0.30*	*6.09*	*Cum*
		1	*6.50*	*3.92*	*0.30*	*7.64*	*Cum*
	Below Pipe Section	*1*	*9.78*	*1.83*	*0.30*	*5.37*	*Cum*
		2	*9.78*	*0.19*		*3.64*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*4.33*	*2.50*	*0.20*	*4.33*	*Cum*
	Pipe Section	*4*	*1.60*	*1.83*	*0.30*	*3.51*	*Cum*
	Deduct Area of Pipe	*4*	*0.30*	*0.37*		*0.45*	*Cum*
	TOTAL					**43.20**	**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*	*10.28*	*0.30*	*0.20*	*1.23*	*Cum*
		2	*10.28*	*0.76*	*2.45*	*38.51*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*2.33*	*0.30*	*0.50*	*0.70*	*Cum*
		2	*2.33*	*0.86*	*2.84*	*11.33*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.30*	*0.30*	*0.35*	*0.90*	*Cum*
		2	*4.30*	*0.81*	*2.64*	*18.47*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*10.86*	*0.30*	*0.20*	*1.30*	*Cum*
		2	*10.86*	*0.91*	*3.04*	*60.02*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*2.32*	*0.30*	*0.50*	*0.70*	*Cum*
		2	*2.32*	*0.86*	*2.84*	*11.32*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.40*	*0.30*	*0.35*	*0.92*	*Cum*
		2	*4.40*	*0.88*	*2.94*	*22.86*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*1.06*	*1.188*		*-2.51*	*Cum*
	TOTAL					**165.77**	**Cum**
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	*10.58*		*0.30*	6.35	*Sqm*
		2		*1.53*	*0.30*	0.92	*Sqm*
		2	6.22		0.30	3.73	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		3.92	0.30	2.35	*Sqm*
	300 mm Thick Right Abutment	2	*11.16*		*0.30*	6.70	*Sqm*
		2		*1.82*	*0.30*	1.09	*Sqm*
		2	6.50		0.30	3.90	*Sqm*
		2		3.92	0.30	2.35	*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	8	1.60		0.30	3.84	*Sqm*
		8		1.83	0.30	4.39	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*10.28*		*0.20*	8.22	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	*10.28*		*2.45*	100.89	*Sqm*
		4		0.76	2.45	7.49	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	2.33		0.50	4.65	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	2.33		2.84	26.39	*Sqm*
		4		0.86	2.84	9.74	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.30		0.35	6.03	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
		4	4.30		2.64	45.53	*Sqm*
		4		0.81	2.64	8.58	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	10.86		0.20	8.69	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	10.86		3.04	132.00	*Sqm*
		4		0.91	3.04	11.05	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	2.32		0.50	4.65	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	2.32		2.84	26.35	*Sqm*
		4		0.86	2.84	9.74	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.40		0.35	6.16	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
		4	4.40		2.94	51.71	*Sqm*
		4		0.88	2.94	10.39	*Sqm*
	TOTAL					**521.87**	***Sqm***
6	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot						
	1 m 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%)	*165.77*	*0.0025*	*0.414*	*7850.00*	*3253.266*	*Kg*
	TOTAL					*3253.266*	*Kg*
	TOTAL					**3.25**	**M.T.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	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*	*10.58*	*1.51*		*15.97*	*Cum*
		1	*2.02*	*1.47*		*2.95*	*Cum*
	Middle Portion	*1*	*6.12*	*14.82*		*90.72*	*Cum*
	Right Portion	*1*	*11.16*	*2.02*		*22.59*	*Cum*
		1	*2.07*	*1.95*		*4.03*	*Cum*
	TOTAL					**136.27**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 0.950 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.	42.240	Cum	**195.20**	8245.31			
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.	7.20	Cum	**6381.70**	45970.68	2.33	3.24	6.48
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.	26.61	Cum	**6914.20**	184002.77	10.98	11.44	22.89
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.	0.52	Cum	**8151.40**	4201.84	0.29	0.20	0.41
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.	0.64	MT	**73574.90**	47004.00			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	116.72	Sqm	**578.60**	67536.49			
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.	5.89	Sqm	**680.10**	4003.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.09	Cum	**694.61**	62.51			
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**	111.33			
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.	0.09	Cum	**1377.70**	123.99			
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**	46.49			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.87	Sqm	**63.20**	560.55			
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	1.34	Cum	**149.30**	200.63			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand 30 Km lead)	14.886	Cum	**1075.00**	16002.35			
	Coarse Aggregates (60 Km lead)	29.867	Cum	**1398.00**	41754.02			
	Cement (30 km lead)	13.604	MT	**742.00**	10094.01			
	Boulder (60 Km lead)	0.09	Cum	**1159.00**	104.31			
	Brick (30 km lead)	353.00	No.	**3.18**	1122.54			
	Steel(30 km lead)	0.639	MT	**742.00**	474.03			
TOTAL (In Rs.)					**442324.29**			
TOTAL (In Rs.)					**₹ 4,42,324.29**			

	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	14.89	Cum	**584.64**	8702.90	870.29		
	Coarse Aggregate	29.87	Cum	**944.26**	28202.18	2820.22		
	Boulders	0.09	Cum	**694.61**	62.51	6.25		
	Total					3696.76		
	For 1 nos. fall, Total Seigniorage charges					**3696.76**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BARIA MR.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 0.950 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.						
		1	42.24			**42.24**	**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*	*0.542*	*0.80*	*0.15*	*0.07*	*Cum*
		1	*0.783*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*4.568*	*0.80*	*0.15*	*0.55*	*Cum*
		1	*0.282*	*0.80*	*0.15*	*0.03*	*Cum*
		1	*0.446*	*0.80*	*0.15*	*0.05*	*Cum*
		1	*0.782*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*0.542*	*0.80*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.77*	*1.35*	*0.15*	*0.72*	*Cum*
	Section 2-2	*2*	*1.85*	*0.99*	*0.15*	*0.55*	*Cum*
	Section 3-3	*2*	*1.47*	*0.87*	*0.15*	*0.38*	*Cum*
	Section 5-5	*2*	*2.62*	*1.35*	*0.15*	*1.06*	*Cum*
	Section 6-6	*2*	*1.53*	*0.87*	*0.15*	*0.40*	*Cum*
	Toe Wall D/S Portion	*1*	*4.87*	*0.75*	*0.30*	*1.10*	*Cum*
	Toe Wall D/S Portion	*1*	*4.57*	*0.45*	*0.60*	*1.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**7.20**	**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*	*1.54*	*0.45*	*0.45*	*0.62*	*Cum*
		2	*1.54*	*0.75*	*1.01*	*2.32*	*Cum*
		2	*1.54*	*1.20*	*0.50*	*1.85*	*Cum*
	Section 2-2	*2*	*1.85*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.85*	*0.65*	*0.65*	*1.55*	*Cum*
		2	*1.85*	*0.99*	*0.50*	*1.83*	*Cum*
	Section 3-3	*2*	*1.70*	*0.45*	*0.45*	*0.69*	*Cum*
		2	*1.70*	*0.59*	*0.45*	*0.89*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.70*	*0.87*	*0.50*	*1.48*	*Cum*
	Section 5-5	*2*	*2.57*	*0.45*	*0.45*	*1.04*	*Cum*
		2	*2.57*	*0.75*	*1.01*	*3.89*	*Cum*
		2	*2.57*	*1.20*	*0.50*	*3.10*	*Cum*
	Section 6-6	*2*	*1.45*	*0.45*	*0.45*	*0.59*	*Cum*
		2	*1.45*	*0.59*	*0.45*	*0.76*	*Cum*
		2	*1.45*	*0.87*	*0.50*	*1.26*	*Cum*
	Floor	*1*	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
		1	*5.00*	*0.80*	*0.50*	*2.00*	*Cum*
		1	*0.50*	*0.80*	*0.20*	*0.08*	*Cum*
		1	*0.20*	*0.80*	*0.40*	*0.06*	*Cum*
		1	*1.80*	*0.80*	*0.50*	*0.72*	*Cum*
		1	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
	Crest	*1*	*0.72*	*0.80*	*0.76*	*0.44*	*Cum*
	TOTAL					**26.61**	**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*	*0.80*	*0.15*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.86*	*0.45*	*0.05*	*0.22*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.86*	*0.45*	*0.05*	*0.22*	*Sqm*
	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.	Qty (Cum)	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**27.13**	**0.30%**	**0.08**	**7850**	**638.86**	**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*	*1.54*		*0.45*	*2.76*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.54*		*1.01*	*6.17*	*Sqm*
		4		*0.75*	*1.01*	*3.02*	*Sqm*
		4	*1.54*		*0.50*	*3.07*	*Sqm*
		4		*1.20*	*0.50*	*2.41*	*Sqm*
	Section 2-2	*4*	*1.85*		*0.45*	*3.33*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.85*		*0.65*	*4.81*	*Sqm*
		4		*0.65*	*0.65*	*1.68*	*Sqm*
		4	*1.85*		*0.50*	*3.70*	*Sqm*
		4		*0.99*	*0.50*	*1.98*	*Sqm*
	Section 3-3	*4*	*1.70*		*0.45*	*3.05*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*1.70*		*0.45*	*3.05*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*1.70*		*0.50*	*3.39*	*Sqm*
		4		*0.87*	*0.50*	*1.74*	*Sqm*
	Section 5-5	*4*	*2.57*		*0.45*	*4.63*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.57*		*1.01*	*10.34*	*Sqm*
		4		*0.75*	*1.01*	*3.02*	*Sqm*
		4	*2.57*		*0.50*	*5.15*	*Sqm*
		4		*1.20*	*0.50*	*2.41*	*Sqm*
	Section 6-6	*4*	*1.45*		*0.45*	*2.61*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.45*		*0.45*	*2.61*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*1.45*		*0.50*	*2.90*	*Sqm*
		4		*0.87*	*0.50*	*1.74*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.80*	*0.20*	*0.32*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.80*	*0.40*	*0.64*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
	Crest	*2*	*0.718*		*0.759*	*1.09*	*Sqm*
		2		*0.8*	*0.759*	*1.21*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.87*		*0.30*	*2.92*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.57*		*0.60*	*5.48*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**116.72**	**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*	*1.96*		*5.89*	*Sqm*
	TOTAL					**5.89**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.20*	*0.30*	**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	*1.50*	*0.20*	*0.15*	**0.09**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*9.86*	*0.45*		*4.43*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.86*	*0.45*		*4.43*	*Sqm*
	TOTAL					**8.87**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1	1.34			1.34	**Cum**
	TOTAL					**1.34**	**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	Baria Minor	2740-3050	310.000	0.516	159.960	Cum	**5021.30**	803207.15	18.43	51.19
	Total				***159.96***			***₹ 8,03,207.15***	***18.43***	***51.19***
2	**Carriage of materials(As per Bihar SOR 2025)**									
	Coarse Sand (30 Km lead)				51.187	Cum	**1075.00**	55026.24		
	Cement (30 km lead)				18.427	MT	**742.00**	13673.12		
	Brick (30 km lead)				79980.00	No.	**3.18**	254336.40		
	Carriage of materials Total (In Rs.)							**₹ 3,23,035.76**		
	SUB TOTAL (In Rs.)							**₹ 11,26,242.91**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	51.19	Cum		**584.64**	29926.08	2992.61			
	Total						**₹ 2,992.61**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND		
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF BARIA MINOR		
Sl. No.	**Description of Structures**	**Amount (In Rs.)**
1	CD work/ Culvert at 0.430 Km	₹ 73,250.44
2	Culvert at 0.990 Km	₹ 2,507.81
3	CD work at 1.400 Km	₹ 1,27,620.10
4	Culvert at 1.825 Km	₹ 1,36,633.44
5	CD work at 2.200 Km	₹ 1,27,620.10
6	Culvert at 2.630 Km	₹ 3,603.84
7	Culvert at 2.785 Km	₹ 61,941.27
8	Culvert at 3.040 Km	₹ 1,770.66
Total In Rs.		**₹ 5,34,947.66**
Total In Lakhs.		**₹ 5.35**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND		
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD		
Sl. No.	**APPROACH ROAD (6 no.)**	**Amount (In Rs.)**
1		₹ 31,26,111.30
Total In Rs.		**₹ 31,26,111.30**
Total In Lakhs.		**₹ 31.26**

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	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.	60.00	Cum	**1044.90**	62694.00			
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.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials(As per Bihar SOR 2025)**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (60 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
TOTAL (In Rs.)					**521018.55**			
TOTAL (In Rs.)					**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 6 no., Total Seigniorage charges					**45471.57**		

QUANTITIES OF CONSTRUCTION FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	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.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	#REF!	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost 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	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES									
AOC FOR CD/CULVERT (Ch.- 0.430Km)									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 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.	70.000	Sqm	**11.80**	826.31			
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.	6.07	Cum	**6914.20**	41969.19	2.50	2.61	5.22
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.	87.36	Sqm	**63.20**	5521.15			
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.	22.420	Sqm	**578.60**	12972.21			
5		**Carriage of materials(As per Bihar SOR 2023)**							
		Coarse Sand 30 Km lead)	2.61	Cum	**1075.00**	**2805.86**			
		Coarse Aggregates (60 Km lead)	5.22	Cum	**1398.00**	**7297.84**			
		Cement (30 km lead)	2.50	MT	**742.00**	**1857.88**			
TOTAL (In Rs.)						**73250.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.61	Cum	**584.64**	1525.97	152.60		
		Coarse Aggregate	5.22	Cum	**944.26**	4929.23	492.92		
		Total					**645.52**		
AOC FOR CULVERT (Ch.- 0.990 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	**5.1.31**	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	8.100	Cum	**149.30**	1209.33			
TOTAL (In Rs.)						**2507.81**			
AOC FOR CD WORK (Ch.- 1.400 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.	51.200	Cum	**2492.58**	127620.10			
TOTAL (In Rs.)						**127620.10**			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CULVERT (Ch. - 1.825 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	Ha	**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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	12.66	Cum	**6914.20**	87517.18	5.22	5.44	10.89
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.	38.514	Sqm	**578.60**	22284.43			
4		**Carriage of materials(As per Bihar SOR 2023)**							
		Coarse Sand (30 Km lead)	5.44	Cum	**1075.00**	**5850.98**			
		Coarse Aggregates (60 Km lead)	10.89	Cum	**1398.00**	**15217.98**			
		Cement (30 km lead)	5.22	MT	**742.00**	**3874.17**			
TOTAL (In Rs.)						**136633.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.44	Cum	**584.64**	3182.06	318.21		
		Coarse Aggregate	10.89	Cum	**944.26**	10278.78	1027.88		
		Total					**1346.08**		
AOC FOR CD WORK (Ch. - 2.220 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.	51.200	Cum	**2492.58**	127620.10			
TOTAL (In Rs.)						**127620.10**			
AOC FOR CULVERT (Ch. - 2.630 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.	120.00	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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.83	Cum	**6914.20**	12644.69	0.75	0.79	1.57
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.	8.914	Sqm	**578.60**	5157.87			
4		**Carriage of materials(As per Bihar SOR 2023)**							
		Coarse Sand (30 Km lead)	0.79	Cum	**1075.00**	**845.36**			
		Coarse Aggregates (60 Km lead)	1.57	Cum	**1398.00**	**2198.73**			
		Cement (30 km lead)	0.75	MT	**742.00**	**559.75**			
TOTAL (In Rs.)						**3603.84**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.79	Cum	**584.64**	459.75	45.98		
		Coarse Aggregate	1.57	Cum	**944.26**	1485.10	148.51		
		Total					**194.49**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CULVERT (Ch. - 2.785 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.	100.00	Sqm	**11.80**	1180.44			
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.	54.000	Sqm	**340.20**	18370.80	55.99	0.79	
3		**Carriage of materials(As per Bihar SOR 2023)**							
		Coarse Sand (30 Km lead)	0.79	Cum	**1075.00**	**847.53**			
		Cement (30 km lead)	55.99	MT	**742.00**	**41542.50**			
TOTAL (In Rs.)						**61941.27**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.79	Cum	**584.64**	460.93	46.09		
		Total					**46.09**		
AOC FOR CULVERT (Ch. - 3.040 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.	150.00	Sqm	**11.80**	1770.66			
TOTAL (In Rs.)						**1770.66**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CD/CULVERT (Ch.-0.430 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.**						
		Cleaning of hume pipe	1				**70.00**	**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.**						
		Construction of Parapet Top	2	7.00	0.61	0.5	*4.27*	*Cum*
		Repair of Approach Wings	4	1.00	1.00	0.45	*1.80*	*Cum*
		TOTAL					**6.07**	**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.**						
		*Cement **Punning** of Parapet*						
		Top of wall	*2*	*7.00*	*0.48*		*6.72*	*Sqm*
		Side wall left	*2*	*7.00*		*0.53*	*7.42*	*Sqm*
		Side wall right	*2*	*7.00*		*0.56*	*7.84*	*Sqm*
		Slab	*2*	*7.00*	*4.67*		*65.38*	*Sqm*
		TOTAL					**87.36**	**Sqm**
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.**						
		Parapet Top	4	7.00		0.5	14.00	Sqm
			4		0.61	0.5	1.22	Sqm
		Approach Wings	8	1.00		0.45	3.60	Sqm
			8		1.00	0.45	3.60	Sqm
		TOTAL					**22.42**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.99 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	5.1.31	**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**						
		Right Side for making Ramp	*1*	*6.00*	*4.50*	*0.15*	*4.05*	*Cum*
		Left Side for making Ramp	*1*	*6.00*	*4.50*	*0.15*	*4.05*	*Cum*
		TOTAL					**8.10**	**Cum**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.400 Km)								
1		**A new CD Work has been proposed at this location.**						
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 walls	4	6.00	0.6	3	*43.20*	*Cum*
		Hume Pipe	1	8.00	1	1	*8.00*	*Cum*
		TOTAL					**51.20**	**Cum**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.825 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.**						
		Construction of Parapet	2	8.00	0.46	0.50	*3.66*	*Cum*
		Wing walls	4	5.00	1.00	0.45	*9.00*	*Cum*
		TOTAL					**12.66**	**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.**						
		Parapet	4	8.00		0.5	16.00	Sqm
			4		0.46	0.5	0.91	Sqm
		Wing walls	8	5.00		0.45	*18.00*	Sqm
			8		1.00	0.45	*3.60*	Sqm
		TOTAL					**38.51**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-2.200 Km)								
1		**A new CD Work has been proposed at this location.**						
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 walls	4	6.00	0.6	3	*43.20*	*Cum*
		Hume Pipe	1	8.00	1	1	*8.00*	*Cum*
		TOTAL					**51.20**	**Cum**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.630 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.**						
		Construction of Parapet	2	4.00	0.46	0.50	*1.83*	*Cum*
		TOTAL					**1.83**	**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.**						
		Parapet	4	4.00		0.5	*8.00*	Sqm
			4		0.46	0.5	*0.91*	Sqm
		TOTAL					**8.91**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.785 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	**5.5.5**	**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*	*4*		*3.00*	*48.00*	*Sqm*
			4		*0.5*	*3.00*	*6.00*	*Sqm*
		TOTAL					**54.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-3.040 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**

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				
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 2025)**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (60 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 (60 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 9 nos. outlet, Total Seigniorage charges					**9901.56**			

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 & direction of E/I.						
	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. 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-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 2025 & PL MARCH**
		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	SI-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	0.125	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	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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	SI-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	SI-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.					
		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	

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				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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	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**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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)**	2.436	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 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

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	₹ 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

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 ***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	0.353	m^3			
		Add 5% wastage	0.0177	m^3			
		Cost of 0.37 cum local wood planks.	0.370	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			

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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	0.014	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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					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**
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**
	5.6.2	Labour Charges for Laying, fitting and fixing 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 .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m 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	1.50	nos	569.00	853.50	
		Unskilled Mazdoor	7.00	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	**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					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**
	5.6.1.8	**1200 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	0.057	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**
22	**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**
23	**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**
24	**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					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**
25	**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 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 2025 & PL 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	**Cum**	**174.89**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**Cum**	**217.92**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**Cum**	**268.53**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**Cum**	**319.14**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**Cum**	**369.80**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**Cum**	**420.40**
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.	**Cum**	**195.20**
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 Charges for Laying, fitting and fixing 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 .	**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**

Nabinagar Division – Ruir Branch Canal
(Total Cost – Rs. 32.43 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST (RUIR BRANCH CANAL)								
S. No.	**Items**	**Qty.**	**Unit**	**Rate**	**Seigniorage Charges**	**Amount (Rs.) including Seigniorage Charges**	**Reference for Rate**	**Page No.**
1	Earthwork							
	RUIR BRANCH CANAL	1	Job	73412463.38	0.00	₹ 7,34,12,463.38	AOC Earthwork Ruir Branch Canal	53
	PANTI MINOR	1	Job	17650745.62	0.00	₹ 1,76,50,745.62	AOC Earthwork Panti minor	55
	CHAPRI MINOR	1	Job	4782349.02	0.00	₹ 47,82,349.02	AOC Earthwork Chapri minor	57
	BISHUNPUR SUB DY.	1	Job	44013625.57	0.00	₹ 4,40,13,625.57	AOC Earthwork Bishunpur Sub Dy.	59
	TETRIA MINOR	1	Job	7863762.69	0.00	₹ 78,63,762.69	AOC Earthwork Tetria minor	61
	KARMARI MINOR	1	Job	5819562.06	0.00	₹ 58,19,562.06	AOC Earthwork Karmari minor	63
	MIRZAPUR MINOR	1	Job	9009531.00	0.00	₹ 90,09,531.00	AOC Earthwork Mirzapur minor	65
	JASOEA MINOR	1	Job	5183974.35	0.00	₹ 51,83,974.35	AOC Earthwork Jasoea minor	67
	SENDHOKHAP MINOR	1	Job	4468305.19	0.00	₹ 44,68,305.19	AOC Earthwork Sendhokhap minor	69
2	Head Regulator							
	PANTI MINOR	1	No.	2364598.26	17714.15	₹ 23,82,312.41	HR (AOC) Panti Minor	81
	CHAPRI MINOR	1	No.	1941541.37	14933.58	₹ 19,56,474.95	HR (AOC) Chapri Minor	84
	BISHUNPUR SUB DY.	1	No.	4157364.23	27777.61	₹ 41,85,141.83	HR (AOC) Bishunpur Sub Dy.	87
	TETRIA MINOR	1	No.	1724925.25	12292.77	₹ 17,37,218.03	HR (AOC) Tetria Minor	90
	KARMARI MINOR	1	No.	1816077.13	13674.69	₹ 18,29,751.83	HR (AOC) Karmari Minor	93
	MIRZAPUR MINOR	1	No.	2256163.82	16762.79	₹ 22,72,926.61	HR (AOC) Mirzapur Minor	96
	JASOEA MINOR	1	No.	1682956.68	12106.09	₹ 16,95,062.77	HR (AOC) Jasoea Minor	99
	SENDHOKHAP MINOR	1	No.	1758733.35	12653.00	₹ 17,71,386.35	HR (AOC) Sendhokhap Minor	102
3	Falls							
	RUIR BRANCH CANAL :							
	0.610 m Fall at Ch. 0.400 Km	1	No.	2942962.95	28817.62	₹ 29,71,780.57	Fall (AOC) Ruir Branch Canal	151
	1.220 m Fall at Ch. 2.720 Km	1	No.	4343274.93	43685.80	₹ 43,86,960.73		190
	0.610 m Fall at Ch. 3.630 Km	1	No.	3042944.15	29507.87	₹ 30,72,452.01		152
	1.220 m Fall at Ch. 7.220 Km	1	No.	3950762.19	39594.23	₹ 39,90,356.42		191
	0.457 m Fall at Ch. 8.950 Km	1	No.	3628636.43	31920.41	₹ 36,60,556.83		155
	1.220 m Fall at Ch. 8.070 Km	1	No.	3668384.19	36293.22	₹ 37,04,677.41		153
	1.676 m Fall at Ch. 8.410 Km	1	No.	6579620.04	61292.01	₹ 66,40,912.05		154
	0.914 m Fall at Ch. 11.760 Km	1	No.	3007260.31	29015.54	₹ 30,36,275.85		156
	1.830 m Fall at Ch. 16.870 Km	1	No.	3628798.92	35740.69	₹ 36,64,539.61		192
	0.305 m Fall at Ch. 18.325 Km	1	No.	1596128.38	15242.41	₹ 16,11,370.80		157
	1.524 m Fall at Ch. 27.340 Km	1	No.	2418570.68	21119.40	₹ 24,39,690.08		158
	1.220 m Fall at Ch. 28.170 Km	1	No.	1745957.02	14771.66	₹ 17,60,728.68		159
	Panti Minor :							
	1.524 m Fall at Ch. 0.890 Km	1	No.	1387836.31	12218.20	₹ 14,00,054.52	Fall (AOC) Panti Minor	160
	0.457 m Fall at Ch. 1.800 Km	1	No.	727039.57	6435.41	₹ 7,33,474.98		162
	0.914 m Fall at Ch. 2.550 Km	1	No.	833272.19	7280.17	₹ 8,40,552.37		163

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
	1.067 m Fall at Ch. 3.000 Km	1	No.	953205.36	8359.36	₹ 9,61,564.72		165
	Chapri Minor :							
	0.457 m Fall at Ch. 0.000 Km	1	No.	461342.39	3896.00	₹ 4,65,238.39	Fall (AOC) Chapri minor	166
	1.220 m Fall at Ch. 1.850 Km	1	No.	390308.27	3522.31	₹ 3,93,830.58		168
	Bishunpur Sub Dy. :							
	0.305 m Fall at Ch. 0.000 Km	1	No.	2395086.73	20991.19	₹ 24,16,077.92	Fall (AOC) Bishunpur Sub Dy.	169
	1.524 m Fall at Ch. 4.550 Km	1	No.	4099844.16	36427.46	₹ 41,36,271.62		171
	1.830 m Fall at Ch. 5.880 Km	1	No.	4418489.27	39207.27	₹ 44,57,696.54		172
	Tetaria Minor :							
	0.914 m Fall at Ch. 1.220 Km	1	No.	2920411.01	25297.66	₹ 29,45,708.67	Fall (AOC) Tetaria minor	173
	Karmari Minor :							
	0.914 m Fall at Ch. 1.050 Km	1	No.	515515.07	4312.21	₹ 5,19,827.28	Fall (AOC) Karmari minor	175
	Mirzapur Minor :							
	0.457 m Fall at Ch. 0.000 Km	1	No.	577523.76	5001.10	₹ 5,82,524.86	Fall (AOC) Mirzapur minor	177
	0.914 m Fall at Ch. 0.990 Km	1	No.	646925.19	5550.19	₹ 6,52,475.38		179
	Jasoea Minor :							
	0.610 m Fall at Ch. 0.150 Km	1	No.	597458.39	5139.04	₹ 6,02,597.43	Fall (AOC) Jasoea Minor	180
	0.457 m Fall at Ch. 1.050 Km	1	No.	579218.19	4936.09	₹ 5,84,154.28		182
	1.524 m Fall at Ch. 1.700 Km	1	No.	876522.29	7506.36	₹ 8,84,028.65		183
	0.610 m Fall at Ch. 2.150 Km	1	No.	430162.62	3599.56	₹ 4,33,762.18		184
	0.914 m Fall at Ch. 2.350 Km	1	No.	491016.59	4126.57	₹ 4,95,143.16		185
	Sendhokhap Minor :							
	0.610 m Fall at Ch. 1.600 Km	1	No.	422124.95	3522.58	₹ 4,25,647.54	Fall (AOC) Sendhokhap minor	186
	1.220 m Fall at Ch. 2.060 Km	1	No.	1137739.88	9697.22	₹ 11,47,437.11		188
4	*Pipe Culvert*							
	Tetaria Minor :							
	At Km 1.030	1	No.	808717.04	6916.16	₹ 8,15,633.21	Pipe Culvert AOC Tetaria Minor	292
	At Km 2.890	1	No.	736660.94	6152.72	₹ 7,42,813.65		294
	Karmari Minor :							
	At Km 0.635	1	No.	750351.18	6350.91	₹ 7,56,702.09	Pipe Culvert AOC Karmari Minor	296
	At Km 1.900	1	No.	431968.22	3469.35	₹ 4,35,437.57		298
	Jasoea Minor :							
	At Km 0.110	1	No.	860422.49	7045.08	₹ 8,67,467.56	Pipe Culvert AOC Jasoea Minor	300
5	Brick Section	1	No.	13185969.79	35037.24	₹ 1,32,21,007.03	'Brick Sec '!I16	320
6	*Repair of Structures*							
	RUIR BRANCH CANAL	24	No.	2799280.669	20101.73	2819382.40	Abstract (Repair St.) Ruir Branch Canal	322
	PANTI MINOR	9	No.	264602.5152	1274.76	265877.27	Abstract (Repair St.) Panti minor	323
	CHAPRI MINOR	5	No.	76397.34312	559.22	76956.56	Abstract (Repair St.) Chapri minor	324
	BISHUNPUR SUB DY.	24	No.	986386.4417	4120.67	990507.11	Abstract (Repair St.) Bishunpur Sub Dy.	325
	KARMARI MINOR	2	No.	42775.88233	486.97	43262.85	Abstract (Repair St.) Karmari minor	327
	MIRZAPUR MINOR	10	No.	201505.9384	659.89	202165.83	Abstract (Repair St.) Mirzapur minor	328
	JASOEA MINOR	2	No.	42773.86354	494.79	43268.66	Abstract (Repair St.) Jasoea minor	329

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
	SENDHOKHAP MINOR	5	No.	72005.43338	209.10	72214.53	Abstract (Repair St.) Sendhokhap minor	329
	TETRIA MINOR	4	No.	27687.20394	269.45	27956.66	Abstract (Repair St.) Tetria minor	326
	APPROACH ROAD	42	No.	521018.55	90943.14	21973722.24	Approach Road AOC	330
7	Outlets							
	RUIR BRANCH CANAL	96	No.	127744.47	1100.17	₹ 1,23,69,085.50	Outlet-AOC	407
	PANTI MINOR	21	No.	127744.47	1100.17	₹ 27,05,737.45		407
	CHAPRI MINOR	4	No.	127744.47	1100.17	₹ 5,15,378.56		407
	BISHUNPUR SUB DY.	29	No.	127744.47	1100.17	₹ 37,36,494.58		407
	KARMARI MINOR	5	No.	127744.47	1100.17	₹ 6,44,223.20		407
	MIRZAPUR MINOR	10	No.	127744.47	1100.17	₹ 12,88,446.41		407
	JASOEA MINOR	8	No.	127744.47	1100.17	₹ 10,30,757.13		407
	SENDHOKHAP MINOR	8	No.	127744.47	1100.17	₹ 10,30,757.13		407
	TETRIA MINOR	10	No.	127744.47	1100.17	₹ 12,88,446.41		407
8	Kilometer Stone	77	No.	3853.40	0.00	₹ 2,96,711.80	Rates '!F61	439
	TOTAL (In Rs.)					**324313376.25**		
	TOTAL (In Lacs)					**3243.13**		

	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	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK

RUIR BRANCH CANAL. - KM 0.000 TO KM 30.00

		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	3.187	1.594	159.350	4.184	2.092	209.200
200	100	1.305	2.246	224.600	4.544	4.364	436.400
300	100	1.665	1.485	148.500	4.778	4.661	466.100
400	100	17.624	9.645	964.450	0.849	2.814	281.350
500	100	2.726	10.175	1017.500	3.400	2.125	212.450
600	100	3.941	3.334	333.350	3.373	3.387	338.650
700	100	4.239	4.090	409.000	1.424	2.399	239.850
800	100	2.204	3.222	322.150	4.296	2.860	286.000
900	100	1.192	1.698	169.800	9.813	7.055	705.450
1000	100	0.110	0.651	65.100	8.165	8.989	898.900
1100	100	1.027	0.569	56.850	5.845	7.005	700.500
1200	100	1.505	1.266	126.600	6.592	6.219	621.850
1300	100	2.882	2.194	219.350	4.106	5.349	534.900
1400	100	5.151	4.017	401.650	4.087	4.097	409.650
1500	100	2.332	3.742	374.150	9.110	6.599	659.850
1600	100	3.845	3.089	308.850	3.306	6.208	620.800
1700	100	5.059	4.452	445.200	5.927	4.617	461.650
1800	100	5.361	5.210	521.000	3.803	4.865	486.500
1900	100	3.652	4.507	450.650	4.859	4.331	433.100
2000	100	4.428	4.040	404.000	4.973	4.916	491.600
2100	100	9.346	6.887	688.700	0.816	2.895	289.450
2200	100	8.212	8.779	877.900	0.709	0.763	76.250
2300	100	10.457	9.335	933.450	2.337	1.523	152.300
2400	100	8.708	9.583	958.250	3.750	3.044	304.350
2500	100	6.981	7.845	784.450	3.553	3.652	365.150
2600	100	5.392	6.187	618.650	1.791	2.672	267.200
2700	100	4.927	5.160	515.950	3.222	2.507	250.650
2800	100	7.142	6.035	603.450	4.178	3.700	370.000
2900	100	10.005	8.574	857.350	6.322	5.250	525.000
3000	100	10.961	10.483	1048.300	4.038	5.180	518.000
3100	100	3.653	7.307	730.700	7.033	5.536	553.550
3200	100	6.948	5.301	530.050	3.247	5.140	514.000
3300	100	6.161	6.555	655.450	3.900	3.574	357.350
3400	100	3.459	4.810	481.000	5.019	4.460	445.950
3500	100	4.717	4.088	408.800	5.626	5.323	532.250
3600	100	7.588	6.153	615.250	1.149	3.388	338.750
3700	100	3.968	5.778	577.800	2.703	1.926	192.600
3800	100	2.229	3.099	309.850	4.248	3.476	347.550
3900	100	2.852	2.541	254.050	3.865	4.057	405.650
4000	100	1.670	2.261	226.100	3.569	3.717	371.700
4100	100	1.982	1.826	182.600	4.208	3.889	388.850
4200	100	0.982	1.482	148.200	4.951	4.580	457.950
4300	100	0.229	0.606	60.550	7.488	6.220	621.950
4400	100	0.578	0.404	40.350	6.661	7.075	707.450

		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
4500	100	0.724	0.651	65.100	6.046	6.354	635.350
4600	100	0.690	0.707	70.700	7.363	6.705	670.450
4700	100	1.778	1.234	123.400	2.977	5.170	517.000
4800	100	2.861	2.320	231.950	2.077	2.527	252.700
4900	100	3.869	3.365	336.500	3.231	2.654	265.400
5000	100	2.783	3.326	332.600	4.140	3.686	368.550
5100	100	2.577	2.680	268.000	3.912	4.026	402.600
5200	100	3.583	3.080	308.000	6.600	5.256	525.600
5300	100	4.660	4.122	412.150	1.105	3.853	385.250
5400	100	3.796	4.228	422.800	2.772	1.939	193.850
5500	100	3.508	3.652	365.200	2.538	2.655	265.500
5600	100	3.100	3.304	330.400	3.044	2.791	279.100
5700	100	2.319	2.710	270.950	2.364	2.704	270.400
5800	100	4.058	3.189	318.850	2.355	2.360	235.950
5900	100	4.394	4.226	422.600	2.109	2.232	223.200
6000	100	4.117	4.256	425.550	3.250	2.680	267.950
6100	100	3.246	3.682	368.150	3.839	3.545	354.450
6200	100	4.259	3.753	375.250	2.318	3.079	307.850
6300	100	6.912	5.586	558.550	3.056	2.687	268.700
6400	100	8.265	7.589	758.850	0.962	2.009	200.900
6500	100	4.309	6.287	628.700	1.968	1.465	146.500
6600	100	5.972	5.141	514.050	4.067	3.018	301.750
6700	100	2.110	4.041	404.100	5.612	4.840	483.950
6800	100	2.814	2.462	246.200	3.563	4.588	458.750
6900	100	1.575	2.195	219.450	7.753	5.658	565.800
7000	100	2.353	1.964	196.400	4.296	6.025	602.450
7100	100	3.502	2.928	292.750	3.346	3.821	382.100
7200	100	1.358	2.430	243.000	2.952	3.149	314.900
7300	100	6.470	3.914	391.400	3.720	3.336	333.600
7400	100	4.814	5.642	564.200	1.960	2.840	284.000
7500	100	2.867	3.841	384.050	2.194	2.077	207.700
7600	100	4.285	3.576	357.600	1.252	1.723	172.300
7700	100	1.553	2.919	291.900	2.450	1.851	185.100
7800	100	0.946	1.250	124.950	1.627	2.039	203.850
7900	100	10.055	5.501	550.050	1.240	1.434	143.350
8000	100	1.542	5.799	579.850	3.795	2.518	251.750
8100	100	10.509	6.026	602.550	0.280	2.038	203.750
8200	100	2.511	6.510	651.000	1.163	0.722	72.150
8300	100	4.198	3.355	335.450	1.043	1.103	110.300
8400	100	2.670	3.434	343.400	2.200	1.622	162.150
8500	100	10.064	6.367	636.700	0.496	1.348	134.800
8600	100	9.947	10.006	1000.550	0.223	0.360	35.950
8700	100	8.689	9.318	931.800	0.159	0.191	19.100
8800	100	9.045	8.867	886.700	0.850	0.505	50.450
8900	100	3.915	6.480	648.000	0.589	0.720	71.950
9000	100	6.750	5.333	533.250	0.716	0.653	65.250
9100	100	2.711	4.731	473.050	1.143	0.930	92.950

		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
9200	100	3.315	3.013	301.300	0.329	0.736	73.600
9300	100	3.585	3.450	345.000	0.618	0.474	47.350
9400	100	4.245	3.915	391.500	1.144	0.881	88.100
9500	100	1.414	2.830	282.950	12.387	6.766	676.550
9600	100	0.022	0.718	71.800	13.976	13.182	1318.150
9700	100	7.650	3.836	383.600	1.423	7.700	769.950
9800	100	7.871	7.761	776.050	1.099	1.261	126.100
9900	100	9.982	8.927	892.650	0.714	0.907	90.650
10000	100	8.367	9.175	917.450	2.142	1.428	142.800
10100	100	7.052	7.710	770.950	0.308	1.225	122.500
10200	100	6.625	6.839	683.850	0.370	0.339	33.900
10300	100	7.094	6.860	685.950	0.153	0.262	26.150
10400	100	4.835	5.965	596.450	1.459	0.806	80.600
10500	100	3.548	4.192	419.150	1.708	1.584	158.350
10600	100	5.256	4.402	440.200	1.138	1.423	142.300
10700	100	4.516	4.886	488.600	0.808	0.973	97.300
10800	100	4.350	4.433	443.300	1.254	1.031	103.100
10900	100	5.106	4.728	472.800	1.100	1.177	117.700
11000	100	3.619	4.363	436.250	2.224	1.662	166.200
11100	100	9.416	6.518	651.750	0.772	1.498	149.800
11200	100	8.582	8.999	899.900	0.494	0.633	63.300
11300	100	8.109	8.346	834.550	0.585	0.540	53.950
11400	100	7.542	7.826	782.550	2.001	1.293	129.300
11500	100	7.263	7.403	740.250	0.938	1.470	146.950
11600	100	6.258	6.761	676.050	0.208	0.573	57.300
11700	100	5.155	5.707	570.650	0.640	0.424	42.400
11800	100	14.537	9.846	984.600	0.930	0.785	78.500
11900	100	10.346	12.442	1244.150	2.027	1.479	147.850
12000	100	9.688	10.017	1001.700	1.895	1.961	196.100
12100	100	8.703	9.196	919.550	1.321	1.608	160.800
12200	100	7.961	8.332	833.200	1.655	1.488	148.800
12300	100	6.448	7.205	720.450	1.091	1.373	137.300
12400	100	5.805	6.127	612.650	2.071	1.581	158.100
12500	100	5.640	5.723	572.250	3.143	2.607	260.700
12600	100	4.960	5.300	530.000	1.187	2.165	216.500
12700	100	3.634	4.297	429.700	2.218	1.703	170.250
12800	100	4.372	4.003	400.300	1.727	1.973	197.250
12900	100	5.097	4.735	473.450	0.387	1.057	105.700
13000	100	2.587	3.842	384.200	0.861	0.624	62.400
13100	100	2.100	2.344	234.350	1.046	0.954	95.350
13200	100	1.624	1.862	186.200	1.813	1.430	142.950
13300	100	3.579	2.602	260.150	5.036	3.425	342.450
13400	100	5.973	4.776	477.600	0.940	2.988	298.800
13500	100	5.455	5.714	571.400	1.434	1.187	118.700
13600	100	4.745	5.100	510.000	0.766	1.100	110.000
13700	100	5.130	4.938	493.750	0.571	0.669	66.850
13800	100	5.622	5.376	537.600	0.561	0.566	56.600

		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
13900	100	5.537	5.580	557.950	0.496	0.529	52.850
14000	100	5.029	5.283	528.300	0.580	0.538	53.800
14100	100	4.292	4.661	466.050	0.840	0.710	71.000
14200	100	5.877	5.085	508.450	0.747	0.794	79.350
14300	100	17.943	11.910	1191.000	0.670	0.709	70.850
14400	100	21.388	19.666	1966.550	2.142	1.406	140.600
14500	100	23.975	22.682	2268.150	3.586	2.864	286.400
14600	100	21.654	22.815	2281.450	3.250	3.418	341.800
14700	100	21.565	21.610	2160.950	4.784	4.017	401.700
14800	100	22.081	21.823	2182.300	3.997	4.391	439.050
14900	100	22.393	22.237	2223.700	1.435	2.716	271.600
15000	100	17.546	19.970	1996.950	4.171	2.803	280.300
15100	100	16.300	16.923	1692.300	5.050	4.611	461.050
15200	100	15.222	15.761	1576.100	3.505	4.278	427.750
15300	100	15.021	15.122	1512.150	3.270	3.388	338.750
15400	100	14.651	14.836	1483.600	2.769	3.020	301.950
15500	100	14.483	14.567	1456.700	2.444	2.607	260.650
15600	100	15.005	14.744	1474.400	2.795	2.620	261.950
15700	100	13.697	14.351	1435.100	6.971	4.883	488.300
15800	100	9.264	11.481	1148.050	3.810	5.391	539.050
15900	100	13.372	11.318	1131.800	3.331	3.571	357.050
16000	100	8.641	11.007	1100.650	1.040	2.186	218.550
16100	100	8.460	8.551	855.050	0.822	0.931	93.100
16200	100	8.019	8.240	823.950	0.707	0.765	76.450
16300	100	6.845	7.432	743.200	1.692	1.200	119.950
16400	100	7.427	7.136	713.600	4.314	3.003	300.300
16500	100	3.948	5.688	568.750	0.666	2.490	249.000
16600	100	4.633	4.291	429.050	1.196	0.931	93.100
16700	100	3.864	4.249	424.850	2.211	1.704	170.350
16800	100	3.509	3.687	368.650	4.382	3.297	329.650
16900	100	18.672	11.091	1109.050	4.171	4.277	427.650
17000	100	15.904	17.288	1728.800	3.166	3.669	366.850
17100	100	14.046	14.975	1497.500	3.021	3.094	309.350
17200	100	12.176	13.111	1311.100	2.572	2.797	279.650
17300	100	9.542	10.859	1085.900	2.537	2.555	255.450
17400	100	8.131	8.837	883.650	2.182	2.360	235.950
17500	100	6.920	7.526	752.550	1.553	1.868	186.750
17600	100	5.763	6.342	634.150	3.912	2.733	273.250
17700	100	3.856	4.810	480.950	2.178	3.045	304.500
17800	100	7.859	5.858	585.750	2.116	2.147	214.700
17900	100	6.991	7.425	742.500	1.370	1.743	174.300
18000	100	4.858	5.925	592.450	0.529	0.950	94.950
18100	100	4.836	4.847	484.700	1.166	0.848	84.750
18200	100	3.470	4.153	415.300	1.159	1.163	116.250
18300	100	1.474	2.472	247.200	1.956	1.558	155.750
18400	100	1.933	1.704	170.350	1.808	1.882	188.200
18500	100	2.585	2.259	225.900	0.494	1.151	115.100

		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
18600	100	4.066	3.326	332.550	0.210	0.352	35.200
18700	100	3.062	3.564	356.400	3.198	1.704	170.400
18800	100	2.791	2.927	292.650	1.190	2.194	219.400
18900	100	4.909	3.850	385.000	0.155	0.673	67.250
19000	100	3.171	4.040	404.000	1.585	0.870	87.000
19100	100	14.568	8.870	886.950	7.782	4.684	468.350
19200	100	3.598	9.083	908.300	5.776	6.779	677.900
19300	100	2.295	2.947	294.650	5.532	5.654	565.400
19400	100	4.655	3.475	347.500	4.987	5.260	525.950
19500	100	4.043	4.349	434.900	4.694	4.841	484.050
19600	100	2.511	3.277	327.700	5.365	5.030	502.950
19700	100	0.895	1.703	170.300	5.894	5.630	562.950
19800	100	0.000	0.448	44.750	7.803	6.849	684.850
19900	100	0.216	0.108	10.800	11.145	9.474	947.400
20000	100	0.138	0.177	17.700	9.009	10.077	1007.700
20100	100	0.417	0.278	27.750	3.699	6.354	635.400
20200	100	0.619	0.518	51.800	4.054	3.877	387.650
20300	100	2.530	1.575	157.450	3.688	3.871	387.100
20400	100	3.735	3.133	313.250	2.176	2.932	293.200
20500	100	6.280	5.008	500.750	2.897	2.537	253.650
20600	100	5.795	6.038	603.750	4.549	3.723	372.300
20700	100	8.084	6.940	693.950	1.939	3.244	324.400
20800	100	8.675	8.380	837.950	2.043	1.991	199.100
20900	100	14.075	11.375	1137.500	1.210	1.627	162.650
21000	100	6.546	10.311	1031.050	0.822	1.016	101.600
21100	100	11.163	8.855	885.450	0.711	0.767	76.650
21200	100	13.635	12.399	1239.900	0.300	0.506	50.550
21300	100	11.714	12.675	1267.450	0.579	0.440	43.950
21400	100	10.862	11.288	1128.800	0.593	0.586	58.600
21500	100	12.111	11.487	1148.650	0.257	0.425	42.500
21600	100	12.001	12.056	1205.600	0.994	0.626	62.550
21700	100	10.635	11.318	1131.800	0.993	0.994	99.350
21800	100	10.875	10.755	1075.500	0.393	0.693	69.300
21900	100	7.019	8.947	894.700	0.966	0.680	67.950
22000	100	5.657	6.338	633.800	2.256	1.611	161.100
22100	100	4.986	5.322	532.150	1.029	1.643	164.250
22200	100	2.240	3.613	361.300	1.451	1.240	124.000
22300	100	3.456	2.848	284.800	0.380	0.916	91.550
22400	100	3.115	3.286	328.550	1.160	0.770	77.000
22500	100	2.982	3.049	304.850	1.533	1.347	134.650
22600	100	4.218	3.600	360.000	0.731	1.132	113.200
22700	100	4.706	4.462	446.200	0.731	0.731	73.100
22800	100	2.799	3.753	375.250	1.230	0.981	98.050
22900	100	7.827	5.313	531.300	1.462	1.346	134.600
23000	100	5.334	6.581	658.050	1.064	1.263	126.300
23100	100	2.743	4.039	403.850	1.584	1.324	132.400
23200	100	1.767	2.255	225.500	2.555	2.070	206.950

		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
23300	100	1.678	1.723	172.250	3.471	3.013	301.300
23400	100	2.594	2.136	213.600	2.355	2.913	291.300
23500	100	1.012	1.803	180.300	2.657	2.506	250.600
23600	100	1.633	1.323	132.250	1.455	2.056	205.600
23700	100	9.067	5.350	535.000	0.478	0.967	96.650
23800	100	7.723	8.395	839.500	0.033	0.256	25.550
23900	100	5.666	6.695	669.450	0.373	0.203	20.300
24000	100	1.725	3.696	369.550	1.685	1.029	102.900
24100	100	4.772	3.249	324.850	1.111	1.398	139.800
24200	100	7.206	5.989	598.900	2.175	1.643	164.300
24300	100	4.707	5.957	595.650	2.505	2.340	234.000
24400	100	18.081	11.394	1139.400	4.047	3.276	327.600
24500	100	4.664	11.373	1137.250	0.933	2.490	249.000
24600	100	1.763	3.214	321.350	1.953	1.443	144.300
24700	100	1.729	1.746	174.600	2.614	2.284	228.350
24800	100	1.341	1.535	153.500	1.754	2.184	218.400
24900	100	0.820	1.081	108.050	1.446	1.600	160.000
25000	100	0.696	0.758	75.800	1.449	1.448	144.750
25100	100	1.218	0.957	95.700	1.095	1.272	127.200
25200	100	1.021	1.120	111.950	1.579	1.337	133.700
25300	100	1.406	1.214	121.350	0.525	1.052	105.200
25400	100	2.029	1.718	171.750	0.602	0.564	56.350
25500	100	1.398	1.714	171.350	0.693	0.648	64.750
25600	100	0.034	0.716	71.600	2.646	1.670	166.950
25700	100	0.239	0.137	13.650	2.517	2.582	258.150
25800	100	0.780	0.510	50.950	1.016	1.767	176.650
25900	100	0.469	0.625	62.450	2.211	1.614	161.350
26000	100	0.213	0.341	34.100	2.729	2.470	247.000
26100	100	0.075	0.144	14.400	3.169	2.949	294.900
26200	100	4.183	2.129	212.900	1.082	2.126	212.550
26300	100	4.396	4.290	428.950	2.244	1.663	166.300
26400	100	3.633	4.015	401.450	2.151	2.198	219.750
26500	100	2.927	3.280	328.000	2.447	2.299	229.900
26600	100	3.260	3.094	309.350	0.256	1.352	135.150
26700	100	2.370	2.815	281.500	1.035	0.646	64.550
26800	100	1.718	2.044	204.400	1.392	1.214	121.350
26900	100	1.210	1.464	146.400	0.834	1.113	111.300
27000	100	0.663	0.937	93.650	0.706	0.770	77.000
27100	100	0.928	0.796	79.550	1.845	1.276	127.550
27200	100	0.358	0.643	64.300	2.501	2.173	217.300
27300	100	1.051	0.705	70.450	2.000	2.251	225.050
27400	100	6.120	3.586	358.550	0.654	1.327	132.700
27500	100	5.995	6.058	605.750	3.068	1.861	186.100
27600	100	1.849	3.922	392.200	0.518	1.793	179.300
27700	100	1.620	1.735	173.450	0.527	0.523	52.250
27800	100	1.280	1.450	145.000	0.685	0.606	60.600
27900	100	0.780	1.030	103.000	0.988	0.837	83.650

		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
28000	100	0.183	0.482	48.150	1.390	1.189	118.900
28100	100	0.243	0.213	21.300	1.646	1.518	151.800
28200	100	7.644	3.944	394.350	0.777	1.212	121.150
28300	100	2.391	5.018	501.750	2.790	1.784	178.350
28400	100	1.677	2.034	203.400	0.645	1.718	171.750
28500	100	0.875	1.276	127.600	1.092	0.869	86.850
28600	100	0.546	0.711	71.050	1.706	1.399	139.900
28700	100	0.335	0.441	44.050	1.822	1.764	176.400
28800	100	0.071	0.203	20.300	3.295	2.559	255.850
28900	100	0.000	0.036	3.550	4.208	3.752	375.150
29000	100	0.006	0.003	0.300	5.359	4.784	478.350
29100	100	0.000	0.003	0.300	4.984	5.172	517.150
29200	100	0.000	0.000	0.000	4.500	4.742	474.200
29300	100	0.027	0.014	1.350	3.743	4.122	412.150
29400	100	0.142	0.085	8.450	5.659	4.701	470.100
29500	100	0.534	0.338	33.800	5.755	5.707	570.700
29600	100	0.663	0.599	59.850	5.204	5.480	547.950
29700	100	0.494	0.579	57.850	5.141	5.173	517.250
29800	100	0.538	0.516	51.600	4.458	4.800	479.950
29900	100	0.515	0.527	52.650	5.249	4.854	485.350
30000	100	0.702	0.609	60.850	4.210	4.730	472.950
Total				**158390.900**			**78685.800**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**158390.900**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**78685.800**
NET QUANTITY OF EARTHWORK IN FILLING							**78685.80**

		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 PANTI MR. (0.000 TO 7.100 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	1.430	0.715	71.500	5.295	2.648	264.750
200	100	0.325	0.878	87.750	5.674	5.485	548.450
300	100	1.296	0.811	81.050	7.194	6.434	643.400
400	100	0.884	1.090	109.000	8.394	7.794	779.400
500	100	0.000	0.442	44.200	5.689	7.042	704.150
600	100	0.485	0.243	24.250	7.407	6.548	654.800
700	100	0.562	0.524	52.350	10.723	9.065	906.500
800	100	0.065	0.314	31.350	15.043	12.883	1288.300
900	100	4.484	2.275	227.450	1.594	8.319	831.850
1000	100	2.649	3.567	356.650	1.733	1.664	166.350
1100	100	0.755	1.702	170.200	4.193	2.963	296.300
1200	100	0.380	0.568	56.750	3.180	3.687	368.650
1300	100	0.063	0.222	22.150	7.038	5.109	510.900
1400	100	3.414	1.739	173.850	6.712	6.875	687.500
1500	100	2.331	2.873	287.250	2.181	4.447	444.650
1600	100	0.893	1.612	161.200	4.531	3.356	335.600
1700	100	0.321	0.607	60.700	1.946	3.239	323.850
1800	100	2.374	1.348	134.750	0.202	1.074	107.400
1900	100	0.406	1.390	139.000	1.122	0.662	66.200
2000	100	0.000	0.203	20.300	3.448	2.285	228.500
2100	100	5.662	2.831	283.100	5.538	4.493	449.300
2200	100	0.792	3.227	322.700	3.594	4.566	456.600
2300	100	0.343	0.568	56.750	2.752	3.173	317.300
2400	100	0.961	0.652	65.200	3.752	3.252	325.200
2500	100	0.222	0.592	59.150	8.236	5.994	599.400
2600	100	1.501	0.862	86.150	3.768	6.002	600.200
2700	100	0.000	0.751	75.050	12.443	8.106	810.550
2800	100	0.646	0.323	32.300	5.031	8.737	873.700
2900	100	0.348	0.497	49.700	6.060	5.546	554.550
3000	100	3.341	1.845	184.450	2.911	4.486	448.550
3100	100	0.541	1.941	194.100	8.776	5.844	584.350
3200	100	2.228	1.385	138.450	6.987	7.882	788.150
3300	100	1.370	1.799	179.900	6.751	6.869	686.900
3400	100	0.714	1.042	104.200	10.944	8.848	884.750
3500	100	2.502	1.608	160.800	6.653	8.799	879.850
3600	100	1.107	1.805	180.450	8.990	7.822	782.150
3700	100	0.450	0.779	77.850	11.112	10.051	1005.100
3800	100	0.000	0.225	22.500	14.040	12.576	1257.600
3900	100	1.524	0.762	76.200	5.802	9.921	992.100
4000	100	0.583	1.054	105.350	8.242	7.022	702.200
4100	100	0.069	0.326	32.600	8.297	8.270	826.950
4200	100	2.588	1.329	132.850	4.372	6.335	633.450
4300	100	1.260	1.924	192.400	5.448	4.910	491.000
4400	100	2.461	1.861	186.050	1.760	3.604	360.400

		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
4500	100	1.360	1.911	191.050	2.143	1.952	195.150
4600	100	0.457	0.909	90.850	2.674	2.409	240.850
4700	100	0.259	0.358	35.800	3.943	3.309	330.850
4800	100	0.123	0.191	19.100	5.429	4.686	468.600
4900	100	0.008	0.066	6.550	6.414	5.922	592.150
5000	100	0.000	0.004	0.400	7.956	7.185	718.500
5100	100	0.000	0.000	0.000	9.556	8.756	875.600
5200	100	0.000	0.000	0.000	11.218	10.387	1038.700
5300	100	1.503	0.752	75.150	1.717	6.468	646.750
5400	100	0.000	0.752	75.150	3.577	2.647	264.700
5500	100	1.008	0.504	50.400	2.164	2.871	287.050
5600	100	0.644	0.826	82.600	0.324	1.244	124.400
5700	100	0.051	0.348	34.750	3.721	2.023	202.250
5800	100	0.217	0.134	13.400	7.553	5.637	563.700
5900	100	0.857	0.537	53.700	2.738	5.146	514.550
6000	100	0.196	0.527	52.650	2.168	2.453	245.300
6100	100	0.000	0.098	9.800	3.443	2.806	280.550
6200	100	0.000	0.000	0.000	3.721	3.582	358.200
6300	100	0.000	0.000	0.000	3.498	3.610	360.950
6400	100	0.225	0.113	11.250	2.183	2.841	284.050
6500	100	0.000	0.113	11.250	3.143	2.663	266.300
6600	100	0.000	0.000	0.000	5.655	4.399	439.900
6700	100	2.881	1.441	144.050	7.350	6.503	650.250
6800	100	0.238	1.560	155.950	6.503	6.927	692.650
6900	100	0.502	0.370	37.000	4.213	5.358	535.800
7000	100	0.089	0.296	29.550	4.126	4.170	416.950
7100	100	0.595	0.342	34.200	3.318	3.722	372.200
Total				**6524.550**			**38434.700**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**6524.550**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**38434.700**
NET QUANTITY OF EARTHWORK IN FILLING							**31910.15**

		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 CHAPRI MR. (0.000 TO 2.400 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	1.460	0.730	73.000	4.299	2.150	214.950
200	100	0.363	0.912	91.150	4.716	4.508	450.750
300	100	0.000	0.182	18.150	6.401	5.559	555.850
400	100	0.000	0.000	0.000	8.255	7.328	732.800
500	100	0.207	0.104	10.350	5.423	6.839	683.900
600	100	0.000	0.104	10.350	7.110	6.267	626.650
700	100	0.035	0.018	1.750	5.400	6.255	625.500
800	100	0.000	0.018	1.750	4.724	5.062	506.200
900	100	3.752	1.876	187.600	0.387	2.556	255.550
1000	100	3.034	3.393	339.300	1.613	1.000	100.000
1100	100	0.174	1.604	160.400	4.102	2.858	285.750
1200	100	0.000	0.087	8.700	4.294	4.198	419.800
1300	100	0.000	0.000	0.000	7.103	5.699	569.850
1400	100	0.195	0.098	9.750	2.914	5.009	500.850
1500	100	2.627	1.411	141.100	3.095	3.005	300.450
1600	100	1.783	2.205	220.500	3.202	3.149	314.850
1700	100	0.505	1.144	114.400	3.986	3.594	359.400
1800	100	0.263	0.384	38.400	3.006	3.496	349.600
1900	100	2.685	1.474	147.400	5.945	4.476	447.550
2000	100	0.461	1.573	157.300	4.602	5.274	527.350
2100	100	0.113	0.287	28.700	3.869	4.236	423.550
2200	100	0.726	0.420	41.950	5.018	4.444	444.350
2300	100	0.580	0.653	65.300	3.474	4.246	424.600
2400	100	0.000	0.290	29.000	7.628	5.551	555.100
Total				**1896.300**			**10675.200**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1896.300**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**10675.200**
NET QUANTITY OF EARTHWORK IN FILLING							**8778.90**

		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 BISHUNPUR SUB DY. (0.000 TO 14.900 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	1.989	0.995	99.450	4.735	2.368	236.750
200	100	4.649	3.319	331.900	1.541	3.138	313.800
300	100	0.950	2.800	279.950	5.471	3.506	350.600
400	100	0.932	0.941	94.100	4.453	4.962	496.200
500	100	23.924	12.428	1242.800	3.650	4.052	405.150
600	100	3.346	13.635	1363.500	4.542	4.096	409.600
700	100	2.274	2.810	281.000	5.405	4.974	497.350
800	100	1.371	1.823	182.250	5.967	5.686	568.600
900	100	0.979	1.175	117.500	4.808	5.388	538.750
1000	100	6.473	3.726	372.600	9.710	7.259	725.900
1100	100	2.896	4.685	468.450	6.218	7.964	796.400
1200	100	2.527	2.712	271.150	7.133	6.676	667.550
1300	100	2.476	2.502	250.150	5.680	6.407	640.650
1400	100	2.214	2.345	234.500	6.297	5.989	598.850
1500	100	1.954	2.084	208.400	6.857	6.577	657.700
1600	100	1.703	1.829	182.850	7.383	7.120	712.000
1700	100	1.459	1.581	158.100	7.664	7.524	752.350
1800	100	1.205	1.332	133.200	7.692	7.678	767.800
1900	100	0.971	1.088	108.800	8.038	7.865	786.500
2000	100	0.820	0.896	89.550	8.626	8.332	833.200
2100	100	1.967	1.394	139.350	4.497	6.562	656.150
2200	100	2.455	2.211	221.100	3.896	4.197	419.650
2300	100	0.543	1.499	149.900	7.253	5.575	557.450
2400	100	0.422	0.483	48.250	5.945	6.599	659.900
2500	100	1.019	0.721	72.050	6.374	6.160	615.950
2600	100	1.571	1.295	129.500	5.659	6.017	601.650
2700	100	1.021	1.296	129.600	4.521	5.090	509.000
2800	100	0.666	0.844	84.350	4.054	4.288	428.750
2900	100	0.586	0.626	62.600	4.014	4.034	403.400
3000	100	0.503	0.545	54.450	5.024	4.519	451.900
3100	100	0.428	0.466	46.550	4.030	4.527	452.700
3200	100	0.365	0.397	39.650	4.312	4.171	417.100
3300	100	0.913	0.639	63.900	5.625	4.969	496.850
3400	100	10.859	5.886	588.600	14.121	9.873	987.300
3500	100	0.441	5.650	565.000	10.890	12.506	1250.550
3600	100	0.480	0.461	46.050	9.248	10.069	1006.900
3700	100	0.547	0.514	51.350	7.332	8.290	829.000
3800	100	0.647	0.597	59.700	5.873	6.603	660.250
3900	100	0.498	0.573	57.250	5.936	5.905	590.450
4000	100	0.014	0.256	25.600	12.920	9.428	942.800
4100	100	2.690	1.352	135.200	13.923	13.422	1342.150
4200	100	1.412	2.051	205.100	10.493	12.208	1220.800
4300	100	0.665	1.039	103.850	8.219	9.356	935.600
4400	100	0.693	0.679	67.900	7.543	7.881	788.100

		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
4500	100	0.244	0.469	46.850	10.248	8.896	889.550
4600	100	1.546	0.895	89.500	5.651	7.950	794.950
4700	100	1.811	1.679	167.850	5.976	5.814	581.350
4800	100	1.731	1.771	177.100	6.918	6.447	644.700
4900	100	1.387	1.559	155.900	7.635	7.277	727.650
5000	100	1.071	1.229	122.900	6.866	7.251	725.050
5100	100	0.791	0.931	93.100	7.260	7.063	706.300
5200	100	0.581	0.686	68.600	7.127	7.194	719.350
5300	100	0.544	0.563	56.250	4.869	5.998	599.800
5400	100	7.518	4.031	403.100	2.024	3.447	344.650
5500	100	0.510	4.014	401.400	4.482	3.253	325.300
5600	100	0.597	0.554	55.350	5.271	4.877	487.650
5700	100	1.266	0.932	93.150	6.590	5.931	593.050
5800	100	1.288	1.277	127.700	6.038	6.314	631.400
5900	100	4.085	2.687	268.650	3.619	4.829	482.850
6000	100	2.794	3.440	343.950	3.930	3.775	377.450
6100	100	1.733	2.264	226.350	4.240	4.085	408.500
6200	100	0.869	1.301	130.100	5.137	4.689	468.850
6300	100	0.210	0.540	53.950	5.374	5.256	525.550
6400	100	0.820	0.515	51.500	4.354	4.864	486.400
6500	100	0.150	0.485	48.500	8.323	6.339	633.850
6600	100	0.257	0.204	20.350	9.556	8.940	893.950
6700	100	1.741	0.999	99.900	6.253	7.905	790.450
6800	100	0.718	1.230	122.950	5.620	5.937	593.650
6900	100	0.000	0.359	35.900	10.683	8.152	815.150
7000	100	2.506	1.253	125.300	4.155	7.419	741.900
7100	100	1.663	2.085	208.450	4.688	4.422	442.150
7200	100	0.917	1.290	129.000	5.514	5.101	510.100
7300	100	0.413	0.665	66.500	7.005	6.260	625.950
7400	100	0.478	0.446	44.550	6.163	6.584	658.400
7500	100	0.000	0.239	23.900	9.118	7.641	764.050
7600	100	0.362	0.181	18.100	7.243	8.181	818.050
7700	100	0.000	0.181	18.100	10.015	8.629	862.900
7800	100	0.000	0.000	0.000	14.140	12.078	1207.750
7900	100	1.192	0.596	59.600	5.011	9.576	957.550
8000	100	0.409	0.801	80.050	5.898	5.455	545.450
8100	100	0.404	0.407	40.650	6.183	6.041	604.050
8200	100	0.644	0.524	52.400	6.423	6.303	630.300
8300	100	1.032	0.838	83.800	6.455	6.439	643.900
8400	100	0.216	0.624	62.400	8.834	7.645	764.450
8500	100	3.279	1.748	174.750	3.575	6.205	620.450
8600	100	2.521	2.900	290.000	3.383	3.479	347.900
8700	100	2.350	2.436	243.550	1.692	2.538	253.750
8800	100	1.375	1.863	186.250	2.844	2.268	226.800
8900	100	1.016	1.196	119.550	3.485	3.165	316.450
9000	100	1.300	1.158	115.800	2.159	2.822	282.200
9100	100	0.823	1.062	106.150	3.507	2.833	283.300

		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
9200	100	0.521	0.672	67.200	5.046	4.277	427.650
9300	100	0.335	0.428	42.800	6.692	5.869	586.900
9400	100	0.204	0.270	26.950	5.466	6.079	607.900
9500	100	2.061	1.133	113.250	3.411	4.439	443.850
9600	100	0.661	1.361	136.100	4.907	4.159	415.900
9700	100	0.316	0.489	48.850	6.779	5.843	584.300
9800	100	1.280	0.798	79.800	4.728	5.754	575.350
9900	100	0.000	0.640	64.000	6.431	5.580	557.950
10000	100	0.000	0.000	0.000	8.442	7.437	743.650
10100	100	0.000	0.000	0.000	10.521	9.482	948.150
10200	100	1.187	0.594	59.350	4.333	7.427	742.700
10300	100	0.815	1.001	100.100	5.851	5.092	509.200
10400	100	0.549	0.682	68.200	6.041	5.946	594.600
10500	100	0.136	0.343	34.250	7.958	7.000	699.950
10600	100	0.175	0.156	15.550	8.757	8.358	835.750
10700	100	0.333	0.254	25.400	8.322	8.540	853.950
10800	100	0.059	0.196	19.600	8.937	8.630	862.950
10900	100	0.268	0.164	16.350	8.578	8.758	875.750
11000	100	0.160	0.214	21.400	8.529	8.554	855.350
11100	100	0.058	0.109	10.900	8.502	8.516	851.550
11200	100	0.050	0.054	5.400	7.750	8.126	812.600
11300	100	0.865	0.458	45.750	5.548	6.649	664.900
11400	100	0.462	0.664	66.350	6.053	5.801	580.050
11500	100	12.635	6.549	654.850	2.194	4.124	412.350
11600	100	2.034	7.335	733.450	10.444	6.319	631.900
11700	100	0.957	1.496	149.550	10.092	10.268	1026.800
11800	100	0.510	0.734	73.350	11.063	10.578	1057.750
11900	100	0.272	0.391	39.100	9.932	10.498	1049.750
12000	100	0.054	0.163	16.300	9.812	9.872	987.200
12100	100	0.000	0.027	2.700	8.503	9.158	915.750
12200	100	0.000	0.000	0.000	9.125	8.814	881.400
12300	100	1.281	0.641	64.050	6.097	7.611	761.100
12400	100	0.899	1.090	109.000	6.681	6.389	638.900
12500	100	0.638	0.769	76.850	7.541	7.111	711.100
12600	100	0.391	0.515	51.450	8.575	8.058	805.800
12700	100	0.129	0.260	26.000	10.232	9.404	940.350
12800	100	0.000	0.065	6.450	10.214	10.223	1022.300
12900	100	0.000	0.000	0.000	9.091	9.653	965.250
13000	100	0.000	0.000	0.000	8.226	8.659	865.850
13100	100	0.000	0.000	0.000	8.389	8.308	830.750
13200	100	0.000	0.000	0.000	7.064	7.727	772.650
13300	100	0.000	0.000	0.000	6.412	6.738	673.800
13400	100	1.197	0.599	59.850	5.786	6.099	609.900
13500	100	1.320	1.259	125.850	5.209	5.498	549.750
13600	100	1.445	1.383	138.250	4.689	4.949	494.900
13700	100	1.403	1.424	142.400	5.367	5.028	502.800
13800	100	1.224	1.314	131.350	5.769	5.568	556.800

		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
13900	100	0.000	0.612	61.200	7.839	6.804	680.400
14000	100	0.083	0.042	4.150	5.741	6.790	679.000
14100	100	0.524	0.304	30.350	4.252	4.997	499.650
14200	100	1.502	1.013	101.300	2.736	3.494	349.400
14300	100	2.649	2.076	207.550	2.637	2.687	268.650
14400	100	2.724	2.687	268.650	2.922	2.780	277.950
14500	100	2.587	2.656	265.550	3.418	3.170	317.000
14600	100	2.543	2.565	256.500	5.589	4.504	450.350
14700	100	2.647	2.595	259.500	6.395	5.992	599.200
14800	100	2.950	2.799	279.850	7.264	6.830	682.950
14900	100	3.093	3.022	302.150	9.405	8.335	833.450
Total				**21031.850**			**97269.050**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**21031.850**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**97269.050**
NET QUANTITY OF EARTHWORK IN FILLING							**76237.20**

		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 TETARIA MR. (0.000 TO 2.900 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	1.818	0.909	90.900	3.965	1.983	198.250
200	100	1.677	1.748	174.750	3.174	3.570	356.950
300	100	0.409	1.043	104.300	2.658	2.916	291.600
400	100	0.000	0.205	20.450	4.820	3.739	373.900
500	100	0.000	0.000	0.000	8.733	6.777	677.650
600	100	0.000	0.000	0.000	13.278	11.006	1100.550
700	100	1.750	0.875	87.500	0.590	6.934	693.400
800	100	0.480	1.115	111.500	1.837	1.214	121.350
900	100	0.203	0.342	34.150	3.669	2.753	275.300
1000	100	0.205	0.204	20.400	5.319	4.494	449.400
1100	100	0.000	0.103	10.250	8.184	6.752	675.150
1200	100	0.000	0.000	0.000	11.350	9.767	976.700
1300	100	1.964	0.982	98.200	0.931	6.141	614.050
1400	100	0.803	1.384	138.350	2.321	1.626	162.600
1500	100	0.385	0.594	59.400	4.524	3.423	342.250
1600	100	0.394	0.390	38.950	3.719	4.122	412.150
1700	100	0.086	0.240	24.000	5.718	4.719	471.850
1800	100	0.000	0.043	4.300	8.275	6.997	699.650
1900	100	0.000	0.000	0.000	10.801	9.538	953.800
2000	100	0.000	0.000	0.000	13.947	12.374	1237.400
2100	100	0.674	0.337	33.700	2.934	8.441	844.050
2200	100	0.603	0.639	63.850	3.496	3.215	321.500
2300	100	0.328	0.466	46.550	3.775	3.636	363.550
2400	100	0.054	0.191	19.100	5.744	4.760	475.950
2500	100	0.000	0.027	2.700	7.869	6.807	680.650
2600	100	0.000	0.000	0.000	9.890	8.880	887.950
2700	100	0.000	0.000	0.000	8.569	9.230	922.950
2800	100	0.168	0.084	8.400	2.321	5.445	544.500
2900	100	0.279	0.224	22.350	6.355	4.338	433.800
Total				**1214.050**			**16558.850**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1214.050**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**16558.850**
NET QUANTITY OF EARTHWORK IN FILLING							**15344.80**

		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 KARMARI MR. (0.000 TO 2.100 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.590	0.295	29.500	5.499	2.750	274.950
200	100	0.189	0.390	38.950	3.575	4.537	453.700
300	100	0.336	0.263	26.250	4.545	4.060	406.000
400	100	0.000	0.168	16.800	9.049	6.797	679.700
500	100	0.020	0.010	1.000	7.701	8.375	837.500
600	100	3.353	1.687	168.650	7.578	7.640	763.950
700	100	1.404	2.379	237.850	1.837	4.708	470.750
800	100	0.427	0.916	91.550	2.694	2.266	226.550
900	100	0.002	0.215	21.450	3.337	3.016	301.550
1000	100	0.000	0.001	0.100	4.106	3.722	372.150
1100	100	1.060	0.530	53.000	3.267	3.687	368.650
1200	100	0.520	0.790	79.000	2.665	2.966	296.600
1300	100	0.021	0.271	27.050	4.519	3.592	359.200
1400	100	0.020	0.021	2.050	5.951	5.235	523.500
1500	100	0.018	0.019	1.900	7.139	6.545	654.500
1600	100	0.016	0.017	1.700	8.518	7.829	782.850
1700	100	0.234	0.125	12.500	7.927	8.223	822.250
1800	100	0.236	0.235	23.500	9.852	8.890	888.950
1900	100	0.293	0.265	26.450	11.177	10.515	1051.450
2000	100	0.877	0.585	58.500	9.810	10.494	1049.350
2100	100	0.876	0.877	87.650	5.213	7.512	751.150
Total				**1005.400**			**12335.250**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1005.400**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**12335.250**
NET QUANTITY OF EARTHWORK IN FILLING							**11329.85**

		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 MIRZAPUR MR. (0.000 TO 3.900 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.016	0.008	0.800	2.335	1.168	116.750
200	100	0.000	0.008	0.800	4.364	3.350	334.950
300	100	0.120	0.060	6.000	4.675	4.520	451.950
400	100	0.654	0.387	38.700	2.194	3.435	343.450
500	100	0.176	0.415	41.500	2.041	2.118	211.750
600	100	0.068	0.122	12.200	3.633	2.837	283.700
700	100	0.017	0.043	4.250	5.298	4.466	446.550
800	100	0.000	0.009	0.850	6.961	6.130	612.950
900	100	0.000	0.000	0.000	8.855	7.908	790.800
1000	100	2.194	1.097	109.700	1.674	5.265	526.450
1100	100	0.936	1.565	156.500	3.004	2.339	233.900
1200	100	0.957	0.947	94.650	2.106	2.555	255.500
1300	100	0.295	0.626	62.600	3.752	2.929	292.900
1400	100	0.000	0.148	14.750	4.518	4.135	413.500
1500	100	0.027	0.014	1.350	8.242	6.380	638.000
1600	100	0.000	0.014	1.350	10.863	9.553	955.250
1700	100	0.000	0.000	0.000	9.887	10.375	1037.500
1800	100	0.013	0.007	0.650	5.467	7.677	767.700
1900	100	0.018	0.016	1.550	4.760	5.114	511.350
2000	100	0.180	0.099	9.900	6.610	5.685	568.500
2100	100	0.110	0.145	14.500	7.611	7.111	711.050
2200	100	0.045	0.078	7.750	8.821	8.216	821.600
2300	100	1.966	1.006	100.550	1.035	4.928	492.800
2400	100	1.576	1.771	177.100	1.996	1.516	151.550
2500	100	1.937	1.757	175.650	0.617	1.307	130.650
2600	100	0.916	1.427	142.650	2.642	1.630	162.950
2700	100	0.224	0.570	57.000	4.672	3.657	365.700
2800	100	0.000	0.112	11.200	7.577	6.125	612.450
2900	100	0.892	0.446	44.600	2.661	5.119	511.900
3000	100	0.302	0.597	59.700	4.057	3.359	335.900
3100	100	0.082	0.192	19.200	6.836	5.447	544.650
3200	100	0.803	0.443	44.250	2.042	4.439	443.900
3300	100	0.575	0.689	68.900	3.629	2.836	283.550
3400	100	0.420	0.498	49.750	4.451	4.040	404.000
3500	100	0.423	0.422	42.150	4.843	4.647	464.700
3600	100	0.308	0.366	36.550	6.240	5.542	554.150
3700	100	0.165	0.237	23.650	6.926	6.583	658.300
3800	100	0.000	0.083	8.250	8.207	7.567	756.650
3900	100	0.022	0.011	1.100	7.249	7.728	772.800
Total				**1642.600**			**18972.650**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1642.600**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**18972.650**
NET QUANTITY OF EARTHWORK IN FILLING							**17330.05**

		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
JASOEA MR. (0.000 TO 2.600 KM)

0	0	0.000	0	0	0.000	0	0.000
100	100	0.220	0.110	11.000	4.824	2.412	241.200
200	100	2.164	1.192	119.200	1.266	3.045	304.500
300	100	0.575	1.370	136.950	2.997	2.132	213.150
400	100	0.432	0.504	50.350	2.360	2.679	267.850
500	100	0.328	0.380	38.000	4.341	3.351	335.050
600	100	1.589	0.959	95.850	2.187	3.264	326.400
700	100	0.948	1.269	126.850	1.250	1.719	171.850
800	100	0.465	0.707	70.650	1.254	1.252	125.200
900	100	0.042	0.254	25.350	3.959	2.607	260.650
1000	100	0.000	0.021	2.100	6.878	5.419	541.850
1100	100	0.243	0.122	12.150	3.846	5.362	536.200
1200	100	0.000	0.122	12.150	6.801	5.324	532.350
1300	100	3.031	1.516	151.550	1.254	4.028	402.750
1400	100	0.630	1.831	183.050	2.977	2.116	211.550
1500	100	0.056	0.343	34.300	5.019	3.998	399.800
1600	100	0.000	0.028	2.800	8.538	6.779	677.850
1700	100	1.542	0.771	77.100	4.519	6.529	652.850
1800	100	0.520	1.031	103.100	5.633	5.076	507.600
1900	100	0.330	0.425	42.500	4.125	4.879	487.900
2000	100	0.289	0.310	30.950	3.554	3.840	383.950
2100	100	0.000	0.145	14.450	9.822	6.688	668.800
2200	100	0.174	0.087	8.700	5.617	7.720	771.950
2300	100	0.000	0.087	8.700	9.507	7.562	756.200
2400	100	0.793	0.397	39.650	1.775	5.641	564.100
2500	100	0.246	0.520	51.950	4.509	3.142	314.200
2600	100	0.000	0.123	12.300	4.041	4.275	427.500
Total				**1461.700**			**11083.250**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1461.700**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**11083.250**
NET QUANTITY OF EARTHWORK IN FILLING							**9621.55**

		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 SENDHOKHAP MR. (0.000 TO 2.400 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.801	0.401	40.050	4.361	2.181	218.050
200	100	0.610	0.706	70.550	3.516	3.939	393.850
300	100	0.828	0.719	71.900	3.657	3.587	358.650
400	100	0.287	0.558	55.750	2.791	3.224	322.400
500	100	0.000	0.144	14.350	7.497	5.144	514.400
600	100	0.531	0.266	26.550	2.558	5.028	502.750
700	100	0.076	0.304	30.350	4.790	3.674	367.400
800	100	0.000	0.038	3.800	8.419	6.605	660.450
900	100	0.258	0.129	12.900	5.322	6.871	687.050
1000	100	0.015	0.137	13.650	6.421	5.872	587.150
1100	100	2.318	1.167	116.650	1.197	3.809	380.900
1200	100	0.545	1.432	143.150	3.089	2.143	214.300
1300	100	0.088	0.317	31.650	4.333	3.711	371.100
1400	100	0.000	0.044	4.400	5.924	5.129	512.850
1500	100	0.000	0.000	0.000	5.324	5.624	562.400
1600	100	0.682	0.341	34.100	1.898	3.611	361.100
1700	100	0.975	0.829	82.850	1.638	1.768	176.800
1800	100	0.517	0.746	74.600	0.987	1.313	131.250
1900	100	0.100	0.309	30.850	2.985	1.986	198.600
2000	100	0.016	0.058	5.800	5.902	4.444	444.350
2100	100	2.599	1.308	130.750	0.745	3.324	332.350
2200	100	0.356	1.478	147.750	2.510	1.628	162.750
2300	100	0.196	0.276	27.600	5.854	4.182	418.200
2400	100	0.023	0.110	10.950	7.633	6.744	674.350
Total				**1180.950**			**9553.450**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1180.950**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**9553.450**
NET QUANTITY OF EARTHWORK IN FILLING							**8372.50**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
RUIR BRANCH CANAL				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 2.709	2709	12.50	33862.50	Sqm
2.709 - 7.220	4511	11.50	51876.50	Sqm
7.220 - 10.800	3580	9.77	34976.60	Sqm
10.800 - 11.760	960	9.28	8908.80	Sqm
11.760 - 15.900	4140	8.92	36928.80	Sqm
15.900 - 16.880	980	8.56	8388.80	Sqm
16.880 - 20.050	3170	7.85	24884.50	Sqm
20.050 - 21.900	1850	7.29	13486.50	Sqm
21.900 - 23.390	1490	7.02	10459.80	Sqm
23.390 - 23.419	29	6.60	191.40	Sqm
23.419-24.400	981	6.19	6072.39	Sqm
24.400-25.200	800	5.90	4720.00	Sqm
25.200-25.500	300	4.55	1365.00	Sqm
25.500-27.000	1500	3.63	5445.00	Sqm
27.000-27.600	600	3.32	1992.00	Sqm
27.600-27.850	250	2.81	702.50	Sqm
27.850-28.750	900	2.49	2241.00	Sqm
28.750-29.350	600	1.68	1008.00	Sqm
29.350-30.130	780	1.40	1092.00	Sqm
	TOTAL		**223964.20**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 2.709	2709	12.500	0.15	5079.38	Cum
2.709 - 7.220	4511	11.500	0.15	7781.48	Cum
7.220 - 10.800	3580	9.770	0.15	5246.49	Cum
10.800 - 11.760	960	9.280	0.15	1336.32	Cum
11.760 - 15.900	4140	8.920	0.15	5539.32	Cum
15.900 - 16.880	980	8.560	0.15	1258.32	Cum
16.880 - 20.050	3170	7.850	0.15	3732.68	Cum
20.050 - 21.900	1850	7.290	0.15	2022.98	Cum
21.900 - 23.390	1490	7.020	0.15	1568.97	Cum
23.390 - 23.419	29	6.600	0.15	28.71	Cum
23.419-24.400	981	6.190	0.15	910.86	Cum
24.400-25.200	800	5.900	0.15	708.00	Cum
25.200-25.500	300	4.550	0.15	204.75	Cum
25.500-27.000	1500	3.630	0.15	816.75	Cum
27.000-27.600	600	3.320	0.15	298.80	Cum
27.600-27.850	250	2.810	0.15	105.38	Cum
27.850-28.750	900	2.490	0.15	336.15	Cum
28.750-29.350	600	1.680	0.15	151.20	Cum
29.350-30.130	780	1.400	0.15	163.80	Cum
	TOTAL			**37290.31**	**Cum**

PANTI MR. (0.000 TO 7.100 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 2.200	2200	4.07	8954.00	Sqm
2.200 - 3.650	1450	3.48	5046.00	Sqm
3.650 - 4.900	1250	3.04	3800.00	Sqm
4.900 - 5.850	950	2.73	2593.50	Sqm
5.850 - 6.200	350	2.22	777.00	Sqm
6.200 - 6.700	500	1.84	920.00	Sqm
6.700 - 7.050	350	1.58	553.00	Sqm
7.050 - 7.200	150	1.40	210.00	Sqm
	TOTAL		**22853.50**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 2.200	2200	4.07	0.15	1343.10	Cum
2.200 - 3.650	1450	3.48	0.15	756.90	Cum
3.650 - 4.900	1250	3.04	0.15	570.00	Cum
4.900 - 5.850	950	2.73	0.15	389.03	Cum
5.850 - 6.200	350	2.22	0.15	116.55	Cum
6.200 - 6.700	500	1.84	0.15	138.00	Cum
6.700 - 7.050	350	1.58	0.15	82.95	Cum
7.050 - 7.200	150	1.4	0.15	31.50	Cum
	TOTAL			**3428.03**	**Cum**

CHAPPRI MR. (0.000 TO 2.400 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.700	700	2.01	1407.00	Sqm
0.700 - 1.650	950	1.58	1501.00	Sqm
1.650 - 2.450	800	1.30	1040.00	Sqm
	TOTAL		**3948.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.700	700	2.01	0.15	211.05	Cum
0.700 - 1.650	950	1.58	0.15	225.15	Cum
1.650 - 2.450	800	1.30	0.15	156.00	Cum
	TOTAL			**592.20**	**Cum**

KARMARI MR. (0.000 TO 2.100 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 -0.120	120	2.25	270.00	Sqm
0.120-1.050	930	1.83	1701.90	Sqm
1.050-1.700	650	2.79	1813.50	Sqm
1.700-2.200	500	1.28	640.00	Sqm
	TOTAL		**4425.40**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 -0.120	120	2.25	0.15	40.50	Cum
0.120-1.050	930	1.83	0.15	255.29	Cum
1.050-1.700	650	2.79	0.15	272.03	Cum
1.700-2.200	500	1.28	0.15	96.00	Cum
	TOTAL			**663.81**	**Cum**

MIRZAPUR MR. (0.000 TO 3.950 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 -1.770	1770	2.95	5221.50	Sqm
1.770-2.250	480	2.34	1123.20	Sqm
2.250-2.880	630	1.98	1247.40	Sqm
2.880-3.900	1020	1.20	1224.00	Sqm
	TOTAL		**8816.10**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 -1.770	1770	2.95	0.15	783.23	Cum
1.770-2.250	480	2.34	0.15	168.48	Cum
2.250-2.880	630	1.98	0.15	187.11	Cum
2.880-3.900	1020	1.2	0.15	183.60	Cum
	TOTAL			**1322.42**	**Cum**

JASOEA MR. (0.000 TO 2.700 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 -1.550	1550	2.69	4169.50	Sqm
1.550-1.950	400	2.25	900.00	Sqm
1.950-2.000	50	1.87	93.50	Sqm
2.000-2.700	700	1.63	1141.00	Sqm
	TOTAL		**6304.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 -1.550	1550	2.69	0.15	625.43	Cum
1.550-1.950	400	2.25	0.15	135.00	Cum
1.950-2.000	50	1.87	0.15	14.03	Cum
2.000-2.700	700	1.63	0.15	171.15	Cum
	TOTAL			**945.60**	**Cum**

SENDHOKHAP MR. (0.000 TO 2.450 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.030	30	2.77	83.10	Sqm
0.030 - 1.300	1270	2.35	2984.50	Sqm
1.300 - 1.900	600	1.80	1080.00	Sqm
1.900 - 2.250	350	1.57	549.50	Sqm
2.250 - 2.450	200	1.25	250.00	Sqm
	TOTAL		**4947.10**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.030	30	2.77	0.15	12.47	Cum
0.030 - 1.300	1270	2.35	0.15	447.68	Cum
1.300 - 1.900	600	1.80	0.15	162.00	Cum
1.900 - 2.250	350	1.57	0.15	82.43	Cum
2.250 - 2.450	200	1.25	0.15	37.50	Cum
	TOTAL			**742.07**	**Cum**

BISHUNPUR SUB-DY. (0.000 TO 14.950 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.990	990	6.28	6217.20	Sqm
0.990 - 5.400	4410	6.02	26548.20	Sqm
5.400 - 7.380	1980	5.30	10494.00	Sqm
7.380 - 9.360	1980	5.05	9999.00	Sqm
9.360 - 10.900	1540	4.01	6175.40	Sqm
10.900 - 11.760	860	3.55	3053.00	Sqm
11.760 - 12.650	890	2.98	2652.20	Sqm
12.650 - 13.650	1000	2.52	2520.00	Sqm
13.650 - 14.050	400	1.94	776.00	Sqm
14.050-14.350	300	1.72	516.00	Sqm
14.350 -14.800	450	1.40	630.00	Sqm
	TOTAL		**69581.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.990	990	6.28	0.15	932.58	Cum
0.990 - 5.400	4410	6.02	0.15	3982.23	Cum
5.400 - 7.380	1980	5.30	0.15	1574.10	Cum
7.380 - 9.360	1980	5.05	0.15	1499.85	Cum
9.360 - 10.900	1540	4.01	0.15	926.31	Cum
10.900 - 11.760	860	3.55	0.15	457.95	Cum
11.760 - 12.650	890	2.98	0.15	397.83	Cum
12.650 - 13.650	1000	2.52	0.15	378.00	Cum
13.650 - 14.050	400	1.94	0.15	116.40	Cum
14.050-14.350	300	1.72	0.15	77.40	Cum
14.350 -14.800	450	1.40	0.15	94.50	Cum
	TOTAL			**10437.15**	**Cum**

TETRIA MR. (0.000 TO 2.950 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.250	250	2.94	735.00	Sqm
0.250 - 1.650	1400	2.41	3374.00	Sqm
1.650 - 2.300	650	2.1	1365.00	Sqm
2.300 - 2.900	600	1.48	888.00	Sqm
	TOTAL		**6362.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.250	250	2.94	0.15	110.25	Cum
0.250 - 1.650	1400	2.41	0.15	506.10	Cum
1.650 - 2.300	650	2.1	0.15	204.75	Cum
2.300 - 2.900	600	1.48	0.15	133.20	Cum
	TOTAL			**954.30**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR RUIR 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	*223964.20*	*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	158390.900	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	63356.36	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	78685.800	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	23605.74	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	19671.45	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	35408.61	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	37290.31	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.			
	Net quantity of filling	1	78685.80	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR PANTI 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	*22853.50*	*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	6524.550	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	2609.82	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	31910.150	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	9573.05	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	7977.54	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	14359.57	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	3428.03	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.			
	Net quantity of filling	1	38434.70	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR CHAPRI 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	*3948.00*	*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	1896.300	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	758.52	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	8778.900	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	2633.67	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2194.73	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3950.51	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	592.20	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.			
	Net quantity of filling	1	10675.20	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR BISHUNPUR 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	*69581.00*	*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	21031.850	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	8412.74	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	76237.200	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	22871.16	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	19059.30	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	34306.74	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	10437.15	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.			
	Net quantity of filling	1	97269.05	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR TETARIA 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.			
	Separate sheet attached	1	*6362.00*	*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	1214.050	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	485.62	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	15344.800	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	4603.44	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3836.20	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	6905.16	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	954.30	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.			
	Net quantity of filling	1	16558.85	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR KARMARI 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.			
	Separate sheet attached	1	*4425.40*	*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	1005.400	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	402.16	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	11329.850	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	3398.96	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2832.46	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	5098.43	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	663.81	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.			
	Net quantity of filling	1	12335.25	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR MIRZAPUR 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.			
	Separate sheet attached	1	*8816.10*	*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	1642.600	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	657.04	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	17330.050	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	5199.02	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	4332.51	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	7798.52	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	1322.42	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.			
	Net quantity of filling	1	18972.65	Cum

S.No.	Items	No.	Quantity	Unit
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	*6304.00*	*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	1461.700	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	584.68	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	9621.550	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	2886.47	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2405.39	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	4329.70	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	945.60	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.			
	Net quantity of filling	1	11083.25	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR SENDHOKHAP 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.			
	Separate sheet attached	1	*4947.10*	*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	1180.950	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	472.38	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	8372.500	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	2511.75	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2093.13	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3767.63	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	742.07	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.			
	Net quantity of filling	1	9553.45	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR RUIR 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.	223964.20	Sqm	**11.80**	2643760.747
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	158390.90	Cum	**156.50**	24788175.85
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	63356.36	Cum	**17.22**	1090839.023
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.	78685.80	Cum	**165.12**	12992281.44
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)	23605.74	Cum	**174.89**	4128407.87
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	19671.45	Cum	**217.92**	4286802.38
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	35408.61	Cum	**319.14**	11300303.80
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.				
			37290.31	Cum	**196.10**	7312630.48

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.	78685.80	Cum	**61.88**	4869261.79
TOTAL COST OF EARTHWORK (in Rs.)						**73412463.38**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**734.125**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
		ABSTRACT OF QUANTITY OF EARTHWORK FOR PANTI 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.	22853.50	Sqm	**11.80**	269771.6252
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	6524.55	Cum	**156.50**	1021092.075
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	2609.82	Cum	**17.22**	44934.61271
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.	31910.15	Cum	**165.12**	5268875.07
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)	9573.05	Cum	**174.89**	1674229.84
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	7977.54	Cum	**217.92**	1738464.97
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	14359.57	Cum	**319.14**	4582712.37
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.				
			3428.03	Cum	**196.10**	672235.70

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.	38434.70	Cum	**61.88**	2378429.35
TOTAL COST OF EARTHWORK (in Rs.)						**17650745.62**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**176.507**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR CHAPRI 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.	3948.00	Sqm	**11.80**	46603.73144
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	1896.30	Cum	**156.50**	296770.95
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	758.52	Cum	**17.22**	13059.82881
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.	8778.90	Cum	**165.12**	1449536.51
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)	2633.67	Cum	**174.89**	460602.55
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2194.73	Cum	**217.92**	478274.47
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3950.51	Cum	**319.14**	1260764.17
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.				
			592.20	Cum	**196.10**	116130.42

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.	10675.20	Cum	**61.88**	660606.41
TOTAL COST OF EARTHWORK (in Rs.)						**4782349.02**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**47.823**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR BISHUNPUR 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.	69581.00	Sqm	**11.80**	821361.2556
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	21031.85	Cum	**156.50**	3291484.525
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	8412.74	Cum	**17.22**	144846.4698
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.	76237.20	Cum	**165.12**	12587978.50
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)	22871.16	Cum	**174.89**	3999937.17
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	19059.30	Cum	**217.92**	4153402.66
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	34306.74	Cum	**319.14**	10948653.00
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.				
			10437.15	Cum	**196.10**	2046725.12

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.	97269.05	Cum	**61.88**	6019236.87
TOTAL COST OF EARTHWORK (in Rs.)						**44013625.57**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**440.136**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR TETARIA 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.	6362.00	Sqm	**11.80**	75099.52873
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	1214.05	Cum	**156.50**	189998.825
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	485.62	Cum	**17.22**	8361.169209
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.	15344.80	Cum	**165.12**	2533671.39
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)	4603.44	Cum	**174.89**	805095.62
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	3836.20	Cum	**217.92**	835984.70
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	6905.16	Cum	**319.14**	2203712.76
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.				
			954.30	Cum	**196.10**	187138.23

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.	16558.85	Cum	**61.88**	1024700.46
TOTAL COST OF EARTHWORK (in Rs.)						**7863762.69**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**78.638**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR KARMARI 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.	4425.40	Sqm	**11.80**	52239.14719
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	1005.40	Cum	**156.50**	157345.1
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	402.16	Cum	**17.22**	6924.19548
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.	11329.85	Cum	**165.12**	1870739.06
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)	3398.96	Cum	**174.89**	594443.24
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2832.46	Cum	**217.92**	617250.23
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	5098.43	Cum	**319.14**	1627113.75
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.				
			663.81	Cum	**196.10**	130173.14

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.	12335.25	Cum	**61.88**	763334.19
TOTAL COST OF EARTHWORK (in Rs.)						**5819562.06**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**58.196**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR MIRZAPUR 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.	8816.10	Sqm	**11.80**	104068.6821
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	1642.60	Cum	**156.50**	257066.9
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	657.04	Cum	**17.22**	11312.59548
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.	17330.05	Cum	**165.12**	2861467.85
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)	5199.02	Cum	**174.89**	909255.73
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	4332.51	Cum	**217.92**	944141.12
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	7798.52	Cum	**319.14**	2488820.47
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.				
			1322.42	Cum	**196.10**	259325.58

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.	18972.65	Cum	**61.88**	1174072.07
TOTAL COST OF EARTHWORK (in Rs.)						**9009531.00**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**90.095**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR JASOEA 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.	6304.00	Sqm	**11.80**	74414.87411
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	1461.70	Cum	**156.50**	228756.05
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	584.68	Cum	**17.22**	10066.73616
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.	9621.55	Cum	**165.12**	1588671.47
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)	2886.47	Cum	**174.89**	504813.86
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2405.39	Cum	**217.92**	524182.04
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	4329.70	Cum	**319.14**	1381779.66
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.				
			945.60	Cum	**196.10**	185432.16

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.	11083.25	Cum	**61.88**	685857.50
TOTAL COST OF EARTHWORK (in Rs.)						**5183974.35**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**51.840**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR SENDHOKHAP 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.	4947.10	Sqm	**11.80**	58397.49742
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	1180.95	Cum	**156.50**	184818.675
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	472.38	Cum	**17.22**	8133.209322
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.	8372.50	Cum	**165.12**	1382433.38
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)	2511.75	Cum	**174.89**	439279.96
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2093.13	Cum	**217.92**	456133.80
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3767.63	Cum	**319.14**	1202399.84
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.				
			742.07	Cum	**196.10**	145518.95

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.	9553.45	Cum	**61.88**	591189.89
TOTAL COST OF EARTHWORK (in Rs.)						**4468305.19**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**44.683**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF PANTI MR.				
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.	2.500	0.500	**3.00**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.350	0.200	**1.55**
	(h) is head of water above sill of gate in m	1.350	0.3	**1.650**
	Weight of lift gate	**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	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.650	400	660
	Columns with bracings/Anchors/Stiffeners	**0.66**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.65	400	660
	Beams with cross beams/stiffeners	**0.66**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.32	10%	0.132
	Railing/ Chequered plate/Ladder etc	**0.132**		**T**
Total Weight of One Gate		**2.80**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF CHAPRI MR.				
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.	1.000	0.500	**1.50**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.104	0.200	**1.30**
	(h) is head of water above sill of gate in m	1.104	0.3	**1.404**
	Weight of lift gate	**0.34**		**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	0.34	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.404	400	561.6
	Columns with bracings/Anchors/Stiffeners	**0.5616**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.404	400	561.6
	Beams with cross beams/stiffeners	**0.5616**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.1232	10%	0.11232
	Railing/ Chequered plate/Ladder etc	**0.11232**		**T**
Total Weight of One Gate		**1.87**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF BISHUNPUR 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.	1.800	0.500	**2.30**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	2.100	0.200	**2.30**
	(h) is head of water above sill of gate in m	2.100	0.3	**2.400**
	Weight of lift gate	**1.23**		**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	1.23	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		2.400	400	960
	Columns with bracings/Anchors/Stiffeners	**0.96**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		2.4	400	960
	Beams with cross beams/stiffeners	**0.96**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.92	10%	0.192
	Railing/ Chequered plate/Ladder etc	**0.192**		**T**
Total Weight of One Gate		**3.64**		**T**
Total Weight of 2 Gates		**7.29**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF TETRIA MR.				
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.	1.730	0.500	**2.23**
	(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	**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
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**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		**2.25**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF KARMARI MR.				
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.	1.000	0.500	**1.50**
	(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	**0.34**		**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	0.34	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**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		**1.87**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF SENDHOKHAP MR.				
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.	1.670	0.500	**2.17**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.150	0.200	**1.35**
	(h) is head of water above sill of gate in m	1.150	0.3	**1.450**
	Weight of lift gate	**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
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.450	400	580
	Columns with bracings/Anchors/Stiffeners	**0.58**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.45	400	580
	Beams with cross beams/stiffeners	**0.58**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.16	10%	0.116
	Railing/ Chequered plate/Ladder etc	**0.116**		**T**
Total Weight of One Gate		**2.15**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF JASOEA MR.				
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.	1.460	0.500	**1.96**
	(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	**0.48**		**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	0.48	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**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		**2.01**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF MIRZAPUR MR.				
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.	1.720	0.500	**2.22**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.650	0.200	**1.85**
	(h) is head of water above sill of gate in m	1.650	0.3	**1.950**
	Weight of lift gate	**0.89**		**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	0.89	1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.950	400	780
	Columns with bracings/Anchors/Stiffeners	**0.78**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.95	400	780
	Beams with cross beams/stiffeners	**0.78**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.56	10%	0.156
	Railing/ Chequered plate/Ladder etc	**0.156**		**T**
Total Weight of One Gate		**2.90**		**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 PANTI MR OFFTAKING FROM RUIR BRANCH CANAL								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 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.	138.016	Cum	**195.20**	26940.67			
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.	23.77	Cum	**6381.70**	151686.92	7.70	10.70	21.39
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.	116.93	Cum	**6914.20**	808476.30	48.23	50.28	100.56
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.	22.74	Cum	**8151.40**	185392.49	12.90	8.87	17.97

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	2.45	MT	**73574.90**	180040.07			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.80	MT	**160035.11**	448771.33			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	341.16	Sqm	**578.60**	197397.40			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	5.13	Cum	**694.61**	3563.35			
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.	5.13	Cum	**1237.00**	6345.81			
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)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	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	36.86	Sqm	**149.30**	5502.83			
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	69.846	Cum	**1075.00**	75084.36			
	Coarse Aggregates (60 Km lead)	140.579	Cum	**1398.00**	196529.83			
	Cement (30 km lead)	68.830	MT	**742.00**	51072.14			
	Boulder (60 Km lead)	5.13	Cum	**1159.00**	5945.67			
	Steel (30 Km lead)	5.25	MT	**742.00**	3896.42			
TOTAL (In Rs.)					**2364598.26**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	69.85	Cum	**584.64**	40834.72	4083.47		
	Coarse Aggregate	140.58	Cum	**944.26**	132743.39	13274.34		
	Boulders	5.13	Cum	**694.61**	3563.35	356.33		
	Total					17714.15		
	For 1 nos. HR, Total Seigniorage charges					**17714.15**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR CHAPRI MINOR OFFTAKING FROM RD-6+060 KM (RT.) AT RUIR 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.	180.545	Cum	**195.20**	35242.33			
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.	19.37	Cum	**6381.70**	123607.57	6.28	8.72	17.43
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.	105.27	Cum	**6914.20**	727831.48	43.42	45.26	90.53
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.	14.85	Cum	**8151.40**	121017.68	8.42	5.79	11.73

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	1.90	MT	**73574.90**	139561.57			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.87	MT	**160035.11**	299923.55			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	325.66	Sqm	**578.60**	188429.17			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.08	Cum	**694.61**	750.18			
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.	1.08	Cum	**1237.00**	1335.96			
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. (WRD 5.2.2)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	41.63	Sqm	**149.30**	6215.45			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	59.771	Cum	**1075.00**	64253.37			
	Coarse Aggregates (60 Km lead)	120.350	Cum	**1398.00**	168248.76			
	Cement (30 km lead)	58.116	MT	**742.00**	43121.85			
	Boulder (60 Km lead)	1.08	Cum	**1159.00**	1251.72			
	Steel (30 Km lead)	3.77	MT	**742.00**	2798.06			
TOTAL (In Rs.)					**1941541.37**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	59.77	Cum	**584.64**	34944.27	3494.43		
	Coarse Aggregate	120.35	Cum	**944.26**	113641.33	11364.13		
	Boulders	1.08	Cum	**694.61**	750.18	75.02		
	Total					14933.58		
	For 1 nos. HR, Total Seigniorage charges					**14933.58**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR BISHUNPUR SUB DY OFFTAKING FROM RD-7+220 KM (RT.) AT RUIR 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.	306.347	Cum	**195.20**	59798.99			
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.	31.62	Cum	**6381.70**	201769.71	10.24	14.23	28.46
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.	194.49	Cum	**6914.20**	1344727.93	80.23	83.63	167.26
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.	32.42	Cum	**8151.40**	264237.09	18.38	12.64	25.61

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	3.84	MT	**73574.90**	282217.26			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	7.29	MT	**160035.11**	1165962.57			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	461.26	Sqm	**578.60**	266885.24			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	5.13	Cum	**694.61**	3563.35			
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.	5.13	Cum	**1237.00**	6345.81			
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)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	57.88	Sqm	**149.30**	8641.48			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	110.500	Cum	**1075.00**	118787.17			
	Coarse Aggregates (60 Km lead)	221.984	Cum	**1398.00**	310333.00			
	Cement (30 km lead)	108.850	MT	**742.00**	80766.76			
	Boulder (60 Km lead)	5.13	Cum	**1159.00**	5945.67			
	Steel (30 Km lead)	11.12	MT	**742.00**	8252.12			
TOTAL (In Rs.)					**4157364.23**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	110.50	Cum	**584.64**	64602.54	6460.25		
	Coarse Aggregate	221.98	Cum	**944.26**	209610.19	20961.02		
	Boulders	5.13	Cum	**694.61**	3563.35	356.33		
	Total					27777.61		
	For 1 nos. HR, Total Seigniorage charges					**27777.61**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR TETRIA MINOR OFFTAKING FROM RD 5.363 KM (RT.) FROM BISHUNPUR SUB 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.	131.930	Cum	**195.20**	25752.71			
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.	18.07	Cum	**6381.70**	115317.53	5.85	8.13	16.26
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.	77.47	Cum	**6914.20**	535658.88	31.96	33.31	66.63
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.	18.16	Cum	**8151.40**	148019.11	10.30	7.08	14.35

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	1.74	MT	**73574.90**	128267.74			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.25	MT	**160035.11**	359286.31			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	266.78	Sqm	**578.60**	154356.30			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.05	Cum	**694.61**	2119.26			
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.	3.05	Cum	**1237.00**	3774.09			
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)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	21.48	Sqm	**149.30**	3206.37			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	48.527	Cum	**1075.00**	52165.99			
	Coarse Aggregates (60 Km lead)	97.895	Cum	**1398.00**	136856.64			
	Cement (30 km lead)	48.108	MT	**742.00**	35696.14			
	Boulder (60 Km lead)	3.05	Cum	**1159.00**	3536.11			
	Steel (30 Km lead)	3.99	MT	**742.00**	2959.40			
TOTAL (In Rs.)					**1724925.25**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	48.53	Cum	**584.64**	28370.54	2837.05		
	Coarse Aggregate	97.89	Cum	**944.26**	92437.95	9243.80		
	Boulders	3.05	Cum	**694.61**	2119.26	211.93		
	Total					12292.77		
	For 1 nos. HR, Total Seigniorage charges					**12292.77**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR KARMARI MINOR OFFTAKING FROM RD-8+650 KM (RT.) AT RUIR 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.	159.374	Cum	**195.20**	31109.78			
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.	17.57	Cum	**6381.70**	112150.12	5.69	7.91	15.82
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.	95.50	Cum	**6914.20**	660326.69	39.39	41.07	82.13
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.	14.63	Cum	**8151.40**	119276.88	8.30	5.71	11.56

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	1.85	MT	**73574.90**	136300.89			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.87	MT	**160035.11**	299149.06			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	303.43	Sqm	**578.60**	175563.61			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.08	Cum	**694.61**	750.18			
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.	1.08	Cum	**1237.00**	1335.96			
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. (WRD 5.2.2)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	38.43	Sqm	**149.30**	5737.73			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	54.681	Cum	**1075.00**	58782.29			
	Coarse Aggregates (60 Km lead)	110.169	Cum	**1398.00**	154015.87			
	Cement (30 km lead)	53.386	MT	**742.00**	39612.11			
	Boulder (60 Km lead)	1.08	Cum	**1159.00**	1251.72			
	Steel (30 Km lead)	3.72	MT	**742.00**	2761.59			
TOTAL (In Rs.)					**1816077.13**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	54.68	Cum	**584.64**	31968.81	3196.88		
	Coarse Aggregate	110.17	Cum	**944.26**	104027.91	10402.79		
	Boulders	1.08	Cum	**694.61**	750.18	75.02		
	Total					13674.69		
	For 1 nos. HR, Total Seigniorage charges					**13674.69**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR MIRZAPUR MR OFFTAKING FROM RD-16+870 KM (RT.) AT RUIR 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.	193.286	Cum	**195.20**	37729.49			
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.	21.45	Cum	**6381.70**	136903.25	6.95	9.65	19.31
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.	110.20	Cum	**6914.20**	761970.32	45.46	47.39	94.78
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.	19.76	Cum	**8151.40**	161095.74	11.21	7.71	15.61

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	1.97	MT	**73574.90**	144619.36			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.90	MT	**160035.11**	464671.12			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	333.86	Sqm	**578.60**	193168.65			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	9.62	Cum	**694.61**	6684.09			
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.	9.62	Cum	**1237.00**	11903.40			
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)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	37.88	Sqm	**149.30**	5656.12			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	64.749	Cum	**1075.00**	69604.91			
	Coarse Aggregates (60 Km lead)	130.355	Cum	**1398.00**	182236.47			
	Cement (30 km lead)	63.615	MT	**742.00**	47202.49			
	Boulder (60 Km lead)	9.62	Cum	**1159.00**	11152.83			
	Steel (30 Km lead)	4.87	MT	**742.00**	3612.92			
TOTAL (In Rs.)					**2256163.82**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	64.75	Cum	**584.64**	37854.71	3785.47		
	Coarse Aggregate	130.36	Cum	**944.26**	123089.13	12308.91		
	Boulders	9.62	Cum	**694.61**	6684.09	668.41		
	Total					16762.79		
	For 1 nos. HR, Total Seigniorage charges					**16762.79**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR JASOEA MINOR OFFTAKING FROM RD-23+400 KM (RT.) AT RUIR 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.	133.661	Cum	**195.20**	26090.61			
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.	17.62	Cum	**6381.70**	112463.35	5.71	7.93	15.86
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.	78.29	Cum	**6914.20**	541324.23	32.30	33.67	67.33
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.	16.38	Cum	**8151.40**	133505.95	9.29	6.39	12.94

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	1.84	MT	**73574.90**	135239.13			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.01	MT	**160035.11**	321962.97			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	273.96	Sqm	**578.60**	158515.32			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	2.32	Cum	**694.61**	1612.88			
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.	2.32	Cum	**1237.00**	2872.31			
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)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	26.02	Sqm	**149.30**	3884.42			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	47.983	Cum	**1075.00**	51581.94			
	Coarse Aggregates (60 Km lead)	96.790	Cum	**1398.00**	135312.68			
	Cement (30 km lead)	47.292	MT	**742.00**	35090.35			
	Boulder (60 Km lead)	2.32	Cum	**1159.00**	2691.20			
	Steel (30 Km lead)	3.85	MT	**742.00**	2856.66			
TOTAL (In Rs.)					**1682956.68**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	47.98	Cum	**584.64**	28052.90	2805.29		
	Coarse Aggregate	96.79	Cum	**944.26**	91395.10	9139.51		
	Boulders	2.32	Cum	**694.61**	1612.88	161.29		
	Total					12106.09		
	For 1 nos. HR, Total Seigniorage charges					**12106.09**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR SENDHOKHAP MINOR OFFTAKING FROM RD-25+470 KM (RT.) AT RUIR 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.	137.218	Cum	**195.20**	26784.90			
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.	18.03	Cum	**6381.70**	115085.66	5.84	8.12	16.23
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.	80.81	Cum	**6914.20**	558706.52	33.33	34.75	69.49
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.	18.37	Cum	**8151.40**	149779.55	10.42	7.17	14.52

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	1.88	MT	**73574.90**	138428.82			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.15	MT	**160035.11**	344346.14			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	277.30	Sqm	**578.60**	160447.99			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	2.89	Cum	**694.61**	2006.73			
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.	2.89	Cum	**1237.00**	3573.69			
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. (WRD 5.2.2)	0.66	Cum	**1377.70**	909.28			
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.	0.66	Cum	**516.50**	340.89			
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
13	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			
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	10.50	RM	**499.80**	5247.90			
15	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	24.41	Sqm	**149.30**	3644.27			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	50.028	Cum	**1075.00**	53779.81			
	Coarse Aggregates (60 Km lead)	100.899	Cum	**1398.00**	141057.10			
	Cement (30 km lead)	49.594	MT	**742.00**	36798.53			
	Boulder (60 Km lead)	2.89	Cum	**1159.00**	3348.35			
	Steel (30 Km lead)	4.03	MT	**742.00**	2992.60			
TOTAL (In Rs.)					**1758733.35**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	50.03	Cum	**584.64**	29248.21	2924.82		
	Coarse Aggregate	100.90	Cum	**944.26**	95275.09	9527.51		
	Boulders	2.89	Cum	**694.61**	2006.73	200.67		
	Total					12653.00		
	For 1 nos. HR, Total Seigniorage charges					**12653.00**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF HR FOR PANTI MR OFFTAKING FROM RD-2+720 KM (RT.) AT RUIR 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*	*1.17*	*1.88*	*3.300*	*14.455*	*Cum*
	Section B-B	*2*	*5.25*	*1.88*	*2.500*	*49.350*	*Cum*
	Section C-C	*2*	*0.50*	*1.70*	*2.500*	*4.250*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.83*	*1.51*	*3.300*	*29.056*	*Cum*
	Left Bank Sec a to d	*1*	*4.25*	*3.28*	*0.150*	*2.088*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*0.300*	*0.339*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.78*	*2.07*	*0.300*	*3.458*	*Cum*
	Floor						
	U/S key	*1*	*3.8805*	*1.65*	*0.850*	*5.442*	*Cum*
	Floor	*1*	*4.152*	*3.8805*	*0.650*	*10.473*	*Cum*
		1	*0.318*	*2.5*	*0.450*	*0.239*	*Cum*
		1	*0.618*	*2.5*	*0.350*	*0.309*	*Cum*
		1	*0.318*	*2.5*	*0.300*	*0.239*	*Cum*
		1	*3*	*2.5*	*0.950*	*3.750*	*Cum*
		1	*0.981*	*2.5*	*0.200*	*0.491*	*Cum*
		2	*0.500*	*2.5*	*0.200*	*0.749*	*Cum*
		1	*1.3*	*2.5*	*0.650*	*1.625*	*Cum*
		1	*0.825*	*2.5*	*0.850*	*1.444*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.000*	*2.150*	*0.600*	*2.580*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.500*	*0.850*	*1.200*	*2.550*	*Cum*
	Boulder Apron in D/S Portion	*1*	*3.000*	*1.900*	*0.900*	*5.130*	*Cum*
						138.02	**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*	*4.520*	*0.150*	*0.42*	*Cum*
		1	*2.213*	*3.140*	*0.150*	*1.04*	*Cum*
		1	*1.375*	*2.500*	*0.150*	*0.52*	*Cum*
		1	*0.670*	*2.500*	*0.150*	*0.25*	*Cum*
		1	*3.238*	*2.500*	*0.150*	*1.21*	*Cum*
		1	*0.948*	*2.500*	*0.150*	*0.36*	*Cum*
		1	*0.234*	*2.500*	*0.150*	*0.09*	*Cum*
		1	*0.782*	*2.500*	*0.150*	*0.29*	*Cum*
		1	*0.692*	*2.500*	*0.150*	*0.26*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.165*	*1.880*	*0.300*	*1.31*	*Cum*
	Section B-B	*2*	*5.250*	*1.880*	*0.300*	*5.92*	*Cum*
	Section C-C	*2*	*0.500*	*1.700*	*0.300*	*0.51*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.831*	*1.510*	*0.300*	*2.64*	*Cum*
	Left Bank Sec a to d	*1*	*4.249*	*3.276*	*0.150*	*2.09*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.514*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.780*	*2.073*	*0.300*	*3.46*	*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*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Portion C.C. Blocks (600x600x300)mm	*13*	*0.600*	*0.600*	*0.300*	*1.40*	*Cum*
	TOTAL					**23.77**	**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*	*1.17*	*0.82*	*0.50*	*0.96*	*Cum*
		2	*1.17*	*1.12*	*1.10*	*2.86*	*Cum*
		2	*1.17*	*1.41*	*1.40*	*4.61*	*Cum*
	Section B-B	*2*	*5.25*	*1.15*	*1.10*	*13.28*	*Cum*
		2	*5.25*	*1.48*	*1.10*	*17.09*	*Cum*
	Section C-C	*2*	*0.50*	*1.06*	*0.80*	*0.85*	*Cum*
		2	*0.50*	*1.30*	*1.40*	*1.82*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*5.83*	*0.45*	*0.50*	*1.31*	*Cum*
		1	*5.83*	*0.78*	*1.10*	*5.00*	*Cum*
		1	*5.83*	*1.11*	*1.40*	*9.06*	*Cum*
	Left Bank						
	Section a-a	*1*		3.18	*0.50*	*1.59*	*Sqm*
		1		*3.03*	*0.20*	*0.61*	*Sqm*
		1		*1.68*	*1.60*	*2.69*	*Sqm*
						4.88	***Sqm***
	Section b-b	*1*		*3.18*	*0.50*	*1.59*	*Sqm*
		1		*2.66*	*0.20*	*0.53*	*Sqm*
		1		*1.57*	*1.60*	*2.51*	*Sqm*
						4.63	***Sqm***
	Section c-c	*1*		*3.18*	*0.50*	*1.59*	*Sqm*
		1		*1.97*	*0.20*	*0.39*	*Sqm*
		1		*1.22*	*1.60*	*1.96*	*Sqm*
						3.94	***Sqm***
	Section d-d	*1*		*3.18*	*0.50*	*1.59*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.60*	*0.77*	*Sqm*
						2.45	***Sqm***
	Bottom Key	*1*	*4.25*	*1.65*	*0.70*	*4.91*	*Cum*
	Top Stem Area	*1*	*4.25*	*3.98*		*16.90*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.90*	*0.65*	*Cum*
		2	*0.51*	*0.53*	*0.72*	*0.39*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.78*	*1.67*	*0.90*	*8.37*	*Cum*
		2	*2.78*	*1.30*	*0.72*	*5.22*	*Cum*
		2	*2.78*	*0.75*	*0.50*	*2.08*	*Cum*
	Floor						
	U/S key	*1*	*1.65*	*3.88*	*0.70*	*4.48*	*Cum*
	Floor	*1*	*4.15*	*3.88*	*0.50*	*8.06*	*Cum*
		1	*0.32*	*2.50*	*0.30*	*0.24*	*Cum*
		1	*0.62*	*2.50*	*0.20*	*0.31*	*Cum*
		1	*0.32*	*2.50*	*0.30*	*0.24*	*Cum*
		1	*3.00*	*2.50*	*0.50*	*3.75*	*Cum*
		1	*0.98*	*2.50*	*0.20*	*0.49*	*Cum*
		2	*0.50*	*2.50*	*0.30*	*0.75*	*Cum*
		1	*1.30*	*2.50*	*0.50*	*1.63*	*Cum*
	D/S key	*1*	*0.83*	*2.50*	*0.70*	*1.44*	*Cum*
	TOTAL					**116.93**	**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*	*5.15*	*3.88*	*0.20*	*4.00*	*Cum*
		1	*0.67*	*2.50*	*0.20*	*0.34*	*Cum*
		1	*3.08*	*2.50*	*0.20*	*1.54*	*Cum*
		1	*0.95*	*2.50*	*0.20*	*0.47*	*Cum*
		1	*1.30*	*2.50*	*0.20*	*0.65*	*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*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*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					**22.74**	**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*	*2.501*	*54*		*0.888*	*119.888*	*Kg*
x2	*16*	*1.265*	*54*		*1.578*	*107.803*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*85.90*	*0.25%*	*0.21*	*7850*	*1685.73*	*Kg*
	TOTAL Weight of steel (in kg)					2447.03	Kg
	TOTAL Weight of Steel (in Tonne)					**2.45**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.80		**2.80**	**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*	*1.17*		*0.50*	*2.33*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.17*		*1.10*	*5.13*	*Sqm*
		4		*1.12*	*1.10*	*4.91*	*Sqm*
		4	*1.17*		*1.40*	*6.52*	*Sqm*
		4		*1.41*	*1.40*	*7.92*	*Sqm*
	Section B-B	*4*	*5.25*		*1.10*	*23.10*	*Sqm*
		4		*1.15*	*1.10*	*5.06*	*Sqm*
		4	*5.25*		*1.10*	*23.10*	*Sqm*
		4		*1.48*	*1.10*	*6.51*	*Sqm*
	Section C-C	*4*	*0.50*		*0.80*	*1.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.06	0.80	3.39	Sqm
		4	0.50		1.40	2.80	Sqm
		4		1.30	1.40	7.28	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	5.83		0.50	5.83	Sqm
		2		0.45	0.50	0.45	Sqm
		2	5.83		1.10	12.83	Sqm
		2		0.78	1.10	1.72	Sqm
		2	5.83		1.40	16.33	Sqm
		2		1.11	1.40	3.11	Sqm
	Left Bank						
	Bottom Key	2	4.25		0.70	5.95	Sqm
		2		1.65	0.70	2.31	Sqm
	Section a-a	2	1.42		0.5	1.42	Sqm
		2		3.18	0.5	3.18	Sqm
		2	1.42		0.2	0.57	Sqm
		2		3.03	0.2	1.21	Sqm
		2	1.42		1.6	4.53	Sqm
		2		1.68	1.6	5.38	Sqm
	Section b-b	2	1.42		0.5	1.42	Sqm
		2		3.18	0.5	3.18	Sqm
		2	1.42		0.2	0.57	Sqm
		2		2.662	0.2	1.06	Sqm
		2	1.42		1.6	4.53	Sqm
		2		1.57	1.6	5.02	Sqm
	Section c-c	2	1.42		0.5	1.42	Sqm
		2		3.18	0.5	3.18	Sqm
		2	1.42		0.2	0.57	Sqm
		2		1.966	0.2	0.79	Sqm
		2	1.42		1.6	4.53	Sqm
		2		1.223	1.6	3.91	Sqm
	Section d-d	2	1.42		0.50	1.42	Sqm
		2		3.18	0.5	3.18	Sqm
		2	1.42		0.20	0.57	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.42		1.60	4.53	Sqm
		2		0.48	1.6	1.54	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.85	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		0.72	1.48	Sqm
		4		0.53	0.72	1.51	Sqm
		4	0.51		0.50	1.03	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.78		0.90	10.01	Sqm
		4		1.67	0.90	6.02	Sqm
		4	2.78		0.72	8.00	Sqm
		4		1.30	0.72	3.75	Sqm
		4	2.78		0.50	5.56	Sqm
		4		0.75	0.50	1.50	Sqm
	Floor						
	U/S key	2	3.88		0.70	5.43	Sqm
		2		1.65	0.70	2.31	Sqm
	Floor	2	4.15		0.50	4.15	Sqm
		2		3.88	0.50	3.88	Sqm
		2	0.32		0.30	0.19	Sqm
		2		2.50	0.30	1.50	Sqm
		2	0.62		0.20	0.25	Sqm
		2		2.50	0.20	1.00	Sqm
		2	0.32		0.30	0.19	Sqm
		2		2.50	0.30	1.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.00*		*0.50*	*3.00*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*0.98*		*0.20*	*0.39*	*Sqm*
		2		*2.50*	*0.2*	*1.00*	*Sqm*
		2	*1.30*		*0.50*	*1.30*	*Sqm*
		2		*2.50*	*0.5*	*2.50*	*Sqm*
	D/S key	*2*	*0.83*		*0.70*	*1.16*	*Sqm*
		2		*2.50*	*0.70*	*3.50*	*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*	*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*	*4.14*		*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					**341.16**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.90*	*0.90*	*5.13*	***Cum***
	TOTAL					**5.13**	**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. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.50*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.50*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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						
	Abutment						
	Section A-A	2	*1.17*	*1.40*		*3.262*	*Cum*
	Section B-B	2	*5.25*	*1.64*		*17.220*	*Cum*
	Section C-C	2	*0.50*	*1.37*		*1.370*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*5.83*	*1.29*		*7.534*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.72*		*0.744*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.78*	*1.21*		*6.728*	*Cum*
	TOTAL					**36.86**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR CHAPRI MINOR OFFTAKING FROM RD-6+060 KM (RT.) AT RUIR 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*	*1.92*	*1.73*	*3.311*	*22.010*	*Cum*
	Section B-B	*2*	*5.25*	*2.07*	*2.622*	*57.072*	*Cum*
	Section C-C	*2*	*0.50*	*1.89*	*2.622*	*4.963*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.31*	*1.76*	*3.311*	*25.136*	*Cum*
	Left Bank Sec a to d	*1*	*3.67*	*2.92*	*2.204*	*23.595*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*1.10*	*2.95*	*3.180*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.61*	*1.86*	*2.95*	*28.634*	*Cum*
	Floor						
	U/S key	*1*	*1.465*	*2.14*	*0.850*	*2.665*	*Cum*
	Floor	*1*	*3.78*	*2.14*	*0.650*	*5.258*	*Cum*
		1	*0.518*	*1*	*0.650*	*0.337*	*Cum*
		1	*1.018*	*1*	*0.407*	*0.414*	*Cum*
		1	*0.255*	*1*	*0.150*	*0.255*	*Cum*
		1	*3.079*	*1*	*0.650*	*2.001*	*Cum*
		1	*0.135*	*1*	*0.000*	*0.135*	*Cum*
		1	*0.9*	*1*	*0.350*	*0.900*	*Cum*
		1	*0.1461*	*1*	*0.000*	*0.146*	*Cum*
		1	*1.22*	*1*	*0.650*	*0.793*	*Cum*
		1	*0.725*	*1*	*0.650*	*0.471*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.000*	*0.400*	*0.600*	*0.480*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.000*	*0.850*	*1.200*	*1.020*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*0.400*	*3.000*	*0.900*	*1.080*	*Cum*
						180.54	**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	*0.618*	*2.619*	*0.150*	*0.24*	*Cum*
		1	*1.867*	*1.479*	*0.150*	*0.41*	*Cum*
		1	*1.374*	*1.000*	*0.150*	*0.21*	*Cum*
		1	*1.692*	*1.000*	*0.150*	*0.25*	*Cum*
		1	*3.238*	*1.000*	*0.150*	*0.49*	*Cum*
		1	*0.948*	*1.000*	*0.150*	*0.14*	*Cum*
		1	*0.174*	*1.000*	*0.150*	*0.03*	*Cum*
		1	*0.559*	*1.000*	*0.150*	*0.08*	*Cum*
		1	*0.692*	*1.000*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.919*	*1.732*	*0.300*	*1.99*	*Cum*
	Section B-B	*2*	*5.250*	*2.073*	*0.300*	*6.53*	*Cum*
	Section C-C	*2*	*0.500*	*1.893*	*0.300*	*0.57*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.308*	*1.762*	*0.300*	*2.28*	*Cum*
	Left Bank Sec a to d	*1*	*3.670*	*2.917*	*0.150*	*1.61*	*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*	*2.610*	*1.860*	*0.300*	*2.91*	*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*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Portion C.C. Blocks (600x600x300)mm	*5*	*0.600*	*0.600*	*0.300*	*0.54*	*Cum*
	TOTAL					**19.37**	**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 A-A	*2*	*1.92*	*0.82*	*0.50*	*1.57*	*Cum*
		2	*1.92*	*1.08*	*0.85*	*3.53*	*Cum*
		2	*1.92*	*1.33*	*1.66*	*8.47*	*Cum*
	Section B-B	*2*	*5.25*	*1.25*	*1.42*	*18.61*	*Cum*
		2	*5.25*	*1.67*	*0.90*	*15.81*	*Cum*
	Section C-C	*2*	*0.50*	*1.16*	*1.12*	*1.30*	*Cum*
		2	*0.50*	*1.49*	*1.20*	*1.79*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*4.31*	*0.45*	*0.50*	*0.97*	*Cum*
		1	*4.31*	*0.71*	*0.85*	*2.60*	*Cum*
		1	*4.31*	*0.96*	*1.66*	*6.87*	*Cum*
	Left Bank						
	Section a-a	*1*		2.811	*0.50*	*1.41*	*Sqm*
		1		*2.66*	*0.20*	*0.53*	*Sqm*
		1		*1.50*	*1.35*	*2.02*	*Sqm*
						3.96	***Sqm***
	Section b-b	*1*		*2.81*	*0.50*	*1.41*	*Sqm*
		1		*2.20*	*0.20*	*0.44*	*Sqm*
		1		*1.34*	*1.35*	*1.81*	*Sqm*
						3.66	***Sqm***
	Section c-c	*1*		*2.81*	*0.50*	*1.41*	*Sqm*
		1		*1.82*	*0.20*	*0.36*	*Sqm*
		1		*1.15*	*1.35*	*1.55*	*Sqm*
						3.32	***Sqm***
	Section d-d	*1*		*2.81*	*0.50*	*1.41*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.35*	*0.65*	*Sqm*
						2.15	***Sqm***
	Bottom Key	*1*	*3.67*	*1.47*	*0.70*	*3.76*	*Cum*
	Top Stem Area	*1*	*3.67*	*3.27*		*12.01*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*0.90*	*0.62*	*Cum*
		2	*0.49*	*0.53*	*1.25*	*0.64*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.61*	*1.46*	*0.90*	*6.86*	*Cum*
		2	*2.61*	*1.19*	*1.25*	*7.77*	*Cum*
		2	*2.61*	*0.74*	*0.50*	*1.92*	*Cum*
	Floor						
	U/S key	*1*	*1.47*	*2.14*	*0.70*	*2.19*	*Cum*
	Floor	*1*	*3.78*	*2.14*	*0.50*	*4.04*	*Cum*
		1	*0.52*	*1.00*	*0.50*	*0.26*	*Cum*
		1	*1.02*	*1.00*	*0.26*	*0.26*	*Cum*
		1	*0.25*	*1.00*		*0.25*	*Cum*
		1	*3.08*	*1.00*	*0.50*	*1.54*	*Cum*
		1	*0.14*	*1.00*		*0.14*	*Cum*
		1	*0.90*	*1.00*	*0.20*	*0.18*	*Cum*
		1	*0.15*	*1.00*		*0.15*	*Cum*
		1	*1.22*	*1.00*	*0.50*	*0.61*	*Cum*
	D/S key	*1*	*0.73*	*1.00*	*0.50*	*0.36*	*Cum*
	TOTAL					**105.27**	**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*	*3.78*	*2.14*	*0.20*	*1.62*	*Cum*
		1	*1.69*	*1.00*	*0.20*	*0.34*	*Cum*
		1	*3.08*	*1.00*	*0.20*	*0.62*	*Cum*
		1	*0.95*	*1.00*	*0.20*	*0.19*	*Cum*
		1	*1.22*	*1.00*	*0.20*	*0.24*	*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					**14.85**	**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*	*2.260*	*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*	*6*		*0.616*	*8.063*	*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*	*2.501*	*28*		*0.888*	*62.164*	*Kg*
x2	*16*	*1.265*	*28*		*1.578*	*55.898*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*70.39*	*0.25%*	*0.18*	*7850*	*1381.32*	*Kg*
	TOTAL Weight of steel (in kg)					1896.86	Kg
	TOTAL Weight of Steel (in Tonne)					**1.90**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		1.87		**1.87**	**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*	*1.92*		*0.50*	*3.84*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.92*		*0.85*	*6.56*	*Sqm*
		4		*1.08*	*0.85*	*3.68*	*Sqm*
		4	*1.92*		*1.66*	*12.72*	*Sqm*
		4		*1.33*	*1.66*	*8.83*	*Sqm*
	Section B-B	*4*	*5.25*		*1.42*	*29.86*	*Sqm*
		4		*1.25*	*1.42*	*7.09*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*
		4		*1.67*	*0.90*	*6.02*	*Sqm*
	Section C-C	*4*	*0.50*		*1.12*	*2.24*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.16	1.12	5.19	Sqm
		4	0.50		1.20	2.40	Sqm
		4		1.49	1.20	7.17	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		0.85	7.36	Sqm
		2		0.71	0.85	1.21	Sqm
		2	4.31		1.66	14.28	Sqm
		2		0.96	1.66	3.19	Sqm
	Left Bank						
	Bottom Key	2	3.67		0.70	5.14	Sqm
		2		1.47	0.70	2.05	Sqm
	Section a-a	2	1.22		0.5	1.22	Sqm
		2		2.811	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		2.661	0.2	1.06	Sqm
		2	1.22		1.354	3.31	Sqm
		2		1.4955	1.354	4.05	Sqm
	Section b-b	2	1.22		0.5	1.22	Sqm
		2		2.811	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		2.198	0.2	0.88	Sqm
		2	1.22		1.354	3.31	Sqm
		2		1.339	1.354	3.63	Sqm
	Section c-c	2	1.22		0.5	1.22	Sqm
		2		2.811	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		1.815	0.2	0.73	Sqm
		2	1.22		1.354	3.31	Sqm
		2		1.1475	1.354	3.11	Sqm
	Section d-d	2	1.22		0.50	1.22	Sqm
		2		2.81	0.5	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.22		1.35	3.31	Sqm
		2		0.48	1.354	1.30	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		1.25	2.45	Sqm
		4		0.53	1.25	2.63	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	9.40	Sqm
		4		1.46	0.90	5.25	Sqm
		4	2.61		1.25	13.05	Sqm
		4		1.19	1.25	5.96	Sqm
		4	2.61		0.50	5.22	Sqm
		4		0.74	0.50	1.47	Sqm
	Floor						
	U/S key	2	1.47		0.70	2.05	Sqm
		2		2.14	0.70	3.00	Sqm
	Floor	2	3.78		0.50	3.78	Sqm
		2		2.14	0.50	2.14	Sqm
		2	0.52		0.50	0.52	Sqm
		2		1.00	0.50	1.00	Sqm
		2	1.02		0.26	0.52	Sqm
		2		1.00	0.26	0.51	Sqm
		2	0.25		0.00	0.51	Sqm
		2		1.00	0.00	2.00	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.08*		*0.50*	*3.08*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.14*		*0.00*	*0.27*	*Sqm*
		2		*1.00*	*0*	*2.00*	*Sqm*
		2	*0.90*		*0.50*	*0.90*	*Sqm*
		2		*1.00*	*0.5*	*1.00*	*Sqm*
		2	**0.15**			*0.29*	*Sqm*
		2		*1.00*		*2.00*	*Sqm*
		2	**1.22**		*0.50*	*1.22*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*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*
	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					**325.66**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Apron in D/S Portion	*1*	*0.40*	*3.00*	*0.90*	*1.08*	***Cum***
	TOTAL					**1.08**	**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. (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**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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 (WRD Part B 7.1.31)						
	Abutment						
	Section A-A	2	*1.92*	*1.31*		*5.011*	*Cum*
	Section B-B	2	*5.25*	*2.05*		*21.494*	*Cum*
	Section C-C	2	*0.50*	*1.72*		*1.721*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Transition wall						
	Right Bank (Section D-D)	1	*4.31*	*1.08*		*4.640*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.92*		*0.905*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.61*	*1.51*		*7.861*	*Cum*
	TOTAL					**41.63**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR BISHUNPUR SUB DY OFFTAKING FROM RD-7+220 KM (RT.) AT RUIR 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*	*2.18*	*3.100*	*13.516*	*Cum*
	Section B-B	*2*	*5.25*	*2.30*	*3.005*	*72.665*	*Cum*
	Section C-C	*2*	*1.80*	*2.12*	*3.005*	*22.967*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.81*	*1.81*	*3.600*	*24.852*	*Cum*
	Left Bank Sec a to d	*1*	*5.428*	*3.99*	*2.950*	*63.874*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.551*	*1.10*	*2.900*	*3.515*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*3.191*	*2.51*	*2.900*	*46.473*	*Cum*
	Floor						
	U/S key	*1*	*6.075*	*1.8225*	*0.750*	*8.304*	*Cum*
	Floor	*1*	*4.425*	*6.075*	*0.750*	*20.161*	*Cum*
		1	*1.077*	*3.6*	*0.750*	*2.326*	*Cum*
		1	*0.9245*	*3.6*	*0.750*	*2.496*	*Cum*
		1	*3.079*	*3.6*	*1.200*	*8.313*	*Cum*
		1	*0.871*	*3.6*	*0.500*	*1.568*	*Cum*
		1	*0.450*	*3.6*	*0.275*	*0.446*	*Cum*
		1	*1.9*	*3.6*	*0.700*	*3.762*	*Cum*
		1	*0.7125*	*3.6*	*0.600*	*1.154*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.000*	*2.150*	*0.600*	*2.580*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.200*	*0.850*	*1.200*	*2.244*	*Cum*
	Boulder Apron in D/S Portion	*1*	*3.000*	*1.900*	*0.900*	*5.130*	*Cum*
						306.35	**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	*0.618*	*7.215*	*0.150*	*0.67*	*Cum*
		1	*2.934*	*4.744*	*0.150*	*2.09*	*Cum*
		1	*1.280*	*3.600*	*0.150*	*0.69*	*Cum*
		1	*1.352*	*3.600*	*0.150*	*0.73*	*Cum*
		1	*3.338*	*3.600*	*0.150*	*1.80*	*Cum*
		1	*0.948*	*3.600*	*0.150*	*0.51*	*Cum*
		1	*0.859*	*3.600*	*0.150*	*0.46*	*Cum*
		1	*0.559*	*3.600*	*0.150*	*0.30*	*Cum*
		1	*0.692*	*3.600*	*0.150*	*0.37*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*2.180*	*0.300*	*1.31*	*Cum*
	Section B-B	*2*	*5.250*	*2.303*	*0.300*	*7.25*	*Cum*
	Section C-C	*2*	*1.800*	*2.123*	*0.300*	*2.29*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.814*	*1.810*	*0.300*	*2.07*	*Cum*
	Left Bank Sec a to d	*1*	*5.428*	*3.989*	*0.150*	*3.25*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.551*	*1.100*	*0.300*	*0.36*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*3.191*	*2.511*	*0.300*	*4.81*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.200*	*0.850*	*0.300*	*0.56*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.200*	*0.450*	*0.900*	*0.89*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*11*	*0.600*	*0.600*	*0.300*	*1.19*	*Cum*
	TOTAL					**31.62**	**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*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.30*	*1.10*	*2.86*	*Cum*
		2	*1.00*	*1.78*	*1.20*	*4.27*	*Cum*
	Section B-B	*2*	*5.25*	*1.36*	*1.81*	*25.80*	*Cum*
		2	*5.25*	*1.90*	*0.90*	*17.96*	*Cum*
	Section C-C	*2*	*1.80*	*1.27*	*1.51*	*6.89*	*Cum*
		2	*1.80*	*1.72*	*1.20*	*7.44*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.81*	*0.45*	*0.50*	*0.86*	*Cum*
		1	*3.81*	*0.93*	*1.60*	*5.68*	*Cum*
		1	*3.81*	*1.41*	*1.20*	*6.45*	*Cum*
	Left Bank						
	Section a-a	*1*		*3.93*	*0.50*	*1.97*	*Sqm*
		1		*3.78*	*0.20*	*0.76*	*Sqm*
		1		*2.06*	*2.10*	*4.32*	*Sqm*
						7.04	***Sqm***
	Section b-b	*1*		*3.93*	*0.50*	*1.97*	*Sqm*
		1		*3.47*	*0.20*	*0.69*	*Sqm*
		1		*1.97*	*2.10*	*4.14*	*Sqm*
						6.80	***Sqm***
	Section c-c	*1*		*3.93*	*0.50*	*1.97*	*Sqm*
		1		*2.91*	*0.20*	*0.58*	*Sqm*
		1		*1.70*	*2.10*	*3.56*	*Sqm*
						6.11	***Sqm***
	Section d-d	*1*		*3.93*	*0.50*	*1.97*	*Sqm*
		1		*2.18*	*0.20*	*0.44*	*Sqm*
		1		*1.33*	*2.10*	*2.80*	*Sqm*
						5.20	***Sqm***
	Section e-e	*1*		*3.93*	*0.50*	*1.97*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*2.10*	*1.01*	*Sqm*
						3.07	***Sqm***
	Bottom Key	*1*	*5.43*	*2.03*	*0.70*	*7.69*	*Cum*
	Top Stem Area	*1*	*5.43*	*7.05*		*38.29*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.55*	*0.70*	*0.90*	*0.69*	*Cum*
		2	*0.55*	*0.53*	*1.20*	*0.69*	*Cum*
		2	*0.55*	*0.35*	*0.50*	*0.19*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*3.19*	*2.11*	*0.90*	*12.13*	*Cum*
		2	*3.19*	*1.54*	*1.20*	*11.79*	*Cum*
		2	*3.19*	*0.78*	*0.50*	*2.49*	*Cum*
	Floor						
	U/S key	*1*	*1.82*	*6.08*	*0.60*	*6.64*	*Cum*
	Floor	*1*	*4.43*	*6.08*	*0.60*	*16.13*	*Cum*
		1	*1.08*	*3.60*	*0.60*	*2.33*	*Cum*
		1	*0.92*	*3.60*	*0.75*	*2.50*	*Cum*
		1	*3.08*	*3.60*	*0.75*	*8.31*	*Cum*
		1	*0.87*	*3.60*	*0.50*	*1.57*	*Cum*
		1	*0.90*	*3.60*	*0.25*	*0.81*	*Cum*
		1	*0.45*	*3.60*	*0.28*	*0.45*	*Cum*
		1	*1.90*	*3.60*	*0.55*	*3.76*	*Cum*
	D/S key	*1*	*0.71*	*3.60*	*0.45*	*1.15*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**194.49**	**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*	*4.90*	*6.08*	*0.20*	*5.95*	*Cum*
		1	*1.35*	*3.60*	*0.20*	*0.97*	*Cum*
		1	*3.08*	*3.60*	*0.20*	*2.22*	*Cum*
		1	*0.95*	*3.60*	*0.20*	*0.68*	*Cum*
		1	*1.83*	*3.60*	*0.20*	*1.31*	*Cum*
	Top Slab	*1*	*5.25*	*4.40*	*0.38*	*8.70*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*4.40*	*0.08*	*1.40*	*Cum*
	Dirt wall	*2*	*7.05*	0.82	*0.50*	*5.78*	*Cum*
		2	*7.05*	*0.40*	*0.43*	*2.40*	*Cum*
	Parapet	*2*	*5.24*	*0.45*	*0.18*	*0.82*	*Cum*
		2	*5.24*	*0.35*	*0.25*	*0.92*	*Cum*
		2	*5.24*	*0.22*	*0.55*	*1.26*	*Cum*
	TOTAL					**32.42**	**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*	*4.860*	*36*		*1.578*	*276.111*	*Kg*
a2	*10*	*5.650*	*22*		*0.616*	*76.626*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*4.780*	*21*		*0.616*	*61.880*	*Kg*
a5	*10*	*5.550*	*18*		*0.616*	*61.584*	*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*	*72*		*0.888*	*159.850*	*Kg*
x2	*16*	*1.265*	*72*		*1.578*	*143.737*	*Kg*
x3	*10*	*4.300*	*24*		*0.616*	*63.619*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*143.39*	*0.25%*	*0.36*	*7850*	*2814.11*	*Kg*
	TOTAL Weight of steel (in kg)					3835.78	Kg
	TOTAL Weight of Steel (in Tonne)					**3.84**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		7.29		**7.29**	**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*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*1.10*	*4.40*	*Sqm*
		4		*1.30*	*1.10*	*5.72*	*Sqm*
		4	*1.00*		*1.20*	*4.80*	*Sqm*
		4		*1.78*	*1.20*	*8.54*	*Sqm*
	Section B-B	*4*	*5.25*		*1.81*	*37.91*	*Sqm*
		4		*1.36*	*1.81*	*9.83*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*
		4		*1.90*	*0.90*	*6.84*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section C-C	*4*	*1.80*		*1.51*	*10.84*	*Sqm*
		4		*1.27*	*1.51*	*7.65*	*Sqm*
		4	*1.80*		*1.20*	*8.64*	*Sqm*
		4		*1.72*	*1.20*	*8.27*	*Sqm*
	U/S Transition wall						
	Right Bank (Section D-D)	*2*	*3.81*		*0.50*	*3.81*	*Sqm*
		2		*0.45*	*0.50*	*0.45*	*Sqm*
		2	*3.81*		*1.60*	*12.20*	*Sqm*
		2		*0.93*	*1.60*	*2.98*	*Sqm*
		2	*3.81*		*1.20*	*9.15*	*Sqm*
		2		*1.41*	*1.20*	*3.38*	*Sqm*
	Left Bank						
	Bottom Key	*2*	*5.43*		*0.70*	*7.60*	*Sqm*
		2		*2.03*	*0.70*	*2.84*	*Sqm*
	Section a-a	*2*	*1.36*		*0.5*	*1.36*	*Sqm*
		2		*3.93*	*0.5*	*3.93*	*Sqm*
		2	*1.36*		*0.2*	*0.54*	*Sqm*
		2		*3.78*	0.2	*1.51*	*Sqm*
		2	*1.36*		*2.1*	*5.70*	*Sqm*
		2		*2.055*	2.1	*8.63*	*Sqm*
	Section b-b	*2*	*1.36*		*0.5*	*1.36*	*Sqm*
		2		*3.93*	0.5	*3.93*	*Sqm*
		2	*1.36*		*0.2*	*0.54*	*Sqm*
		2		*3.467*	0.2	*1.39*	*Sqm*
		2	*1.36*		*2.1*	*5.70*	*Sqm*
		2		*1.9735*	2.1	*8.29*	*Sqm*
	Section c-c	*2*	*1.36*		*0.5*	*1.36*	*Sqm*
		2		*3.93*	0.5	*3.93*	*Sqm*
		2	*1.36*		*0.2*	*0.54*	*Sqm*
		2		*2.914*	0.2	*1.17*	*Sqm*
		2	*1.36*		*2.1*	*5.70*	*Sqm*
		2		*1.697*	2.1	*7.13*	*Sqm*
	Section d-d	*2*	*1.36*		0.50	*1.36*	*Sqm*
		2		*3.93*	0.50	*3.93*	*Sqm*
		2	*1.36*		0.20	*0.54*	*Sqm*
		2		*2.18*	0.20	*0.87*	*Sqm*
		2	*1.36*		2.10	*5.70*	*Sqm*
		2		*1.33*	2.10	*5.59*	*Sqm*
	Section e-e	*2*	*1.36*		0.50	*1.36*	*Sqm*
		2		*3.93*	0.50	*3.93*	*Sqm*
		2	*1.36*		0.20	*0.54*	*Sqm*
		2		*0.48*	0.20	*0.19*	*Sqm*
		2	*1.36*		2.10	*5.70*	*Sqm*
		2		*0.48*	2.10	*2.02*	*Sqm*
	D/S Transition wall						
	Sec 4-4	*4*	*0.55*		*0.90*	*1.98*	*Sqm*
		4		*0.70*	*0.90*	*2.52*	*Sqm*
		4	*0.55*		*1.20*	*2.64*	*Sqm*
		4		*0.53*	*1.20*	*2.52*	*Sqm*
		4	*0.55*		*0.50*	*1.10*	*Sqm*
		4		*0.35*	*0.50*	*0.70*	*Sqm*
	Avg. of Sec 1-1 & 3-3	*4*	*3.19*		*0.90*	*11.49*	*Sqm*
		4		*2.11*	*0.90*	*7.60*	*Sqm*
		4	*3.19*		*1.20*	*15.32*	*Sqm*
		4		*1.54*	*1.20*	*7.39*	*Sqm*
		4	*3.19*		*0.50*	*6.38*	*Sqm*
		4		*0.78*	*0.50*	*1.56*	*Sqm*
	Floor						
	U/S key	*2*	*6.08*		*0.60*	*7.29*	*Sqm*
		2		*1.82*	*0.60*	*2.19*	*Sqm*
	Floor	*2*	*4.43*		*0.60*	*5.31*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*6.08*	*0.60*	*7.29*	*Sqm*
		2	*1.08*		*0.60*	*1.29*	*Sqm*
		2		*3.60*	*0.60*	*4.32*	*Sqm*
		2	*0.92*		*0.75*	*1.39*	*Sqm*
		2		*3.60*	*0.75*	*5.40*	*Sqm*
		2	*3.08*		*0.75*	*4.62*	*Sqm*
		2		*3.60*	*0.75*	*5.40*	*Sqm*
		2	*0.87*		*0.50*	*0.87*	*Sqm*
		2		*3.60*	*0.5*	*3.60*	*Sqm*
		2	*0.90*		*0.25*	*0.45*	*Sqm*
		2		*3.60*	*0.25*	*1.80*	*Sqm*
		2	*0.45*		*0.275*	*0.25*	*Sqm*
		2		*3.6*	*0.275*	*1.98*	*Sqm*
		2	*1.90*		*0.55*	*2.09*	*Sqm*
		2		*3.60*	*0.55*	*3.96*	*Sqm*
	D/S key	*2*	*0.71*		*0.45*	*0.64*	*Sqm*
		2		*3.60*	*0.45*	*3.24*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.20*		*0.30*	*1.32*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.20*		*0.90*	*3.96*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*4.40*	*0.38*	*3.31*	*Sqm*
	Dirt wall	*4*	*7.05*		*0.50*	*14.10*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*7.05*		*0.43*	*11.99*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*5.24*		*0.18*	*3.67*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*5.24*		*0.25*	*5.24*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*5.24*		*0.55*	*11.53*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**461.26**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.90*	*0.90*	*5.13*	***Cum***
	TOTAL					**5.13**	**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.						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*3.60*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*3.60*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4	1			**4.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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						
	Abutment						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section A-A	2	*1.00*	*2.01*		*4.020*	*Cum*
	Section B-B	2	*5.25*	*2.79*		*29.295*	*Cum*
	Section C-C	2	*1.80*	*1.84*		*6.624*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.81*	*1.81*		*6.900*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.55*	*0.90*		*0.996*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*3.19*	*1.57*		*10.045*	*Cum*
	TOTAL					**57.88**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR TETRIA MINOR OFFTAKING FROM RD 5.363 KM (RT.) FROM BISHUNPUR SUB 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*	*1.64*	*2.898*	*9.500*	*Cum*
	Section B-B	*2*	*5.25*	*1.72*	*2.040*	*36.928*	*Cum*
	Section C-C	*2*	*0.65*	*1.54*	*2.040*	*4.114*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.29*	*1.27*	*2.889*	*12.069*	*Cum*
	Left Bank Sec a to d	*1*	*3.30*	*2.70*	*2.048*	*18.272*	*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*	*1.4655*	*2.975*	*0.850*	*3.706*	*Cum*
	Floor	*1*	*3.331*	*2.975*	*0.650*	*6.441*	*Cum*
		1	*1.465*	*2.2085*	*0.850*	*2.265*	*Cum*
		1	*0.618*	*1.73*	*0.350*	*0.214*	*Cum*
		2	*0.318*	*1.73*	*0.300*	*0.330*	*Cum*
		1	*3.028*	*1.73*	*0.950*	*2.619*	*Cum*
		1	*0.9*	*1.73*	*0.200*	*0.311*	*Cum*
		2	*0.145*	*1.73*	*0.200*	*0.502*	*Cum*
		1	*1.57*	*1.73*	*0.650*	*1.358*	*Cum*
		1	*0.69*	*1.73*	*0.650*	*0.597*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.730*	*0.600*	*2.284*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.730*	*0.850*	*1.200*	*1.765*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*1.130*	*0.900*	*3.051*	*Cum*
						131.93	**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*	*3.454*	*0.150*	*0.32*	*Cum*
		1	*1.867*	*2.209*	*0.150*	*0.62*	*Cum*
		1	*0.940*	*1.730*	*0.150*	*0.24*	*Cum*
		1	*0.670*	*1.730*	*0.150*	*0.17*	*Cum*
		1	*3.088*	*1.730*	*0.150*	*0.80*	*Cum*
		1	*0.948*	*1.730*	*0.150*	*0.25*	*Cum*
		1	*0.728*	*1.730*	*0.150*	*0.19*	*Cum*
		1	*0.531*	*1.730*	*0.150*	*0.14*	*Cum*
		1	*0.705*	*1.730*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.639*	*0.300*	*0.98*	*Cum*
	Section B-B	*2*	*5.250*	*1.724*	*0.300*	*5.43*	*Cum*
	Section C-C	*2*	*0.653*	*1.544*	*0.300*	*0.60*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.292*	*1.269*	*0.300*	*1.25*	*Cum*
	Left Bank Sec a to d	*1*	*3.302*	*2.702*	*0.150*	*1.34*	*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*	*1.730*	*0.850*	*0.300*	*0.44*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.730*	*0.450*	*0.900*	*0.70*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*9*	*0.600*	*0.600*	*0.300*	*0.97*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**18.07**	**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*	*1.03*	*0.70*	*1.44*	*Cum*
		2	*1.00*	*1.24*	*1.40*	*3.47*	*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*	*0.65*	*0.98*	*0.54*	*0.69*	*Cum*
		2	*0.65*	*1.32*	*1.20*	*2.07*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.29*	*0.45*	*0.50*	*0.74*	*Cum*
		1	*3.29*	*0.66*	*0.69*	*1.50*	*Cum*
		1	*3.29*	*0.87*	*1.40*	*4.01*	*Cum*
	Left Bank						
	Section a-a	*1*		2.577	*0.50*	*1.29*	*Sqm*
		1		*2.44*	*0.20*	*0.49*	*Sqm*
		1		*1.39*	*1.20*	*1.66*	*Sqm*
						3.44	***Sqm***
	Section b-b	*1*		*2.58*	*0.50*	*1.29*	*Sqm*
		1		*2.19*	*0.20*	*0.44*	*Sqm*
		1		*1.34*	*1.20*	*1.60*	*Sqm*
						3.33	***Sqm***
	Section c-c	*1*		*2.58*	*0.50*	*1.29*	*Sqm*
		1		*1.72*	*0.20*	*0.34*	*Sqm*
		1		*0.96*	*1.20*	*1.15*	*Sqm*
						2.79	***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*	*3.30*	*1.35*	*0.70*	*3.12*	*Cum*
	Top Stem Area	*1*	*3.30*	*2.88*		*9.50*	*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*
	Floor						
	U/S key	*1*	*1.47*	*2.98*	*0.70*	*3.05*	*Cum*
	Floor	*1*	*3.33*	*2.98*	*0.50*	*4.95*	*Cum*
		1	*1.47*	*2.21*	*0.70*	*2.26*	*Cum*
		1	*0.62*	*1.73*	*0.20*	*0.21*	*Cum*
		2	*0.32*	*1.73*	*0.30*	*0.33*	*Cum*
		1	*3.03*	*1.73*	*0.50*	*2.62*	*Cum*
		1	*0.90*	*1.73*	*0.20*	*0.31*	*Cum*
		2	*0.15*	*1.73*		*0.50*	*Cum*
		1	*1.57*	*1.73*	*0.50*	*1.36*	*Cum*
	D/S key	*1*	*0.69*	*1.73*	*0.50*	*0.60*	*Cum*
	TOTAL					**77.47**	**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*	*3.35*	*3.09*	*0.20*	*2.07*	*Cum*
		1	*0.67*	*1.73*	*0.20*	*0.23*	*Cum*
		1	*3.08*	*1.73*	*0.20*	*1.07*	*Cum*
		1	*0.95*	*1.73*	*0.20*	*0.33*	*Cum*
		1	*1.57*	*1.73*	*0.20*	*0.54*	*Cum*
	Top Slab	*1*	*5.25*	*2.53*	*0.33*	*4.34*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.53*	*0.08*	*0.81*	*Cum*
	Dirt wall	*2*	*5.90*	0.82	*0.50*	*4.84*	*Cum*
		2	*5.90*	*0.40*	*0.43*	*2.01*	*Cum*
	Parapet	*2*	*3.37*	*0.45*	*0.18*	*0.53*	*Cum*
		2	*3.37*	*0.35*	*0.25*	*0.59*	*Cum*
		2	*3.37*	*0.22*	*0.55*	*0.81*	*Cum*
	TOTAL					**18.16**	**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*	*2.990*	*29*		*1.578*	*136.840*	*Kg*
a2	*10*	*5.710*	*13*		*0.616*	*45.760*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.910*	*18*		*0.616*	*32.290*	*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*	*2.501*	*42*		*0.888*	*93.246*	*Kg*
x2	*16*	*1.265*	*42*		*1.578*	*83.847*	*Kg*
x3	*10*	*2.855*	*24*		*0.616*	*42.240*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*55.88*	*0.25%*	*0.14*	*7850*	*1096.66*	*Kg*
	TOTAL Weight of steel (in kg)					1743.36	Kg
	TOTAL Weight of Steel (in Tonne)					**1.74**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.25		**2.25**	**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*		*0.70*	*2.79*	*Sqm*
		4		*1.03*	*0.70*	*2.87*	*Sqm*
		4	*1.00*		*1.40*	*5.60*	*Sqm*
		4		*1.24*	*1.40*	*6.94*	*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*
		4		*1.32*	*0.90*	*4.77*	*Sqm*
	Section C-C	*4*	*0.65*		*0.54*	*1.41*	*Sqm*
		4		*0.98*	*0.54*	*2.12*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	0.65		1.20	3.13	Sqm
		4		1.32	1.20	6.36	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.29		0.50	3.29	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.29		0.69	4.54	Sqm
		2		0.66	0.69	0.91	Sqm
		2	3.29		1.40	9.22	Sqm
		2		0.87	1.40	2.43	Sqm
	Left Bank						
	Bottom Key	2	3.30		0.70	4.62	Sqm
		2		1.35	0.70	1.89	Sqm
	Section a-a	2	1.10		0.5	1.10	Sqm
		2		2.577	0.5	2.58	Sqm
		2	1.10		0.2	0.44	Sqm
		2		2.437	0.2	0.97	Sqm
		2	1.10		1.198	2.64	Sqm
		2		1.3885	1.198	3.33	Sqm
	Section b-b	2	1.10		0.5	1.10	Sqm
		2		2.577	0.5	2.58	Sqm
		2	1.10		0.2	0.44	Sqm
		2		2.194	0.2	0.88	Sqm
		2	1.10		1.198	2.64	Sqm
		2		1.337	1.198	3.20	Sqm
	Section c-c	2	1.10		0.5	1.10	Sqm
		2		2.577	0.5	2.58	Sqm
		2	1.10		0.2	0.44	Sqm
		2		1.724	0.2	0.69	Sqm
		2	1.10		1.198	2.64	Sqm
		2		0.962	1.198	2.30	Sqm
	Section d-d	2	1.10		0.50	1.10	Sqm
		2		2.58	0.5	2.58	Sqm
		2	1.10		0.20	0.44	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.10		1.20	2.64	Sqm
		2		0.48	1.198	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		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	1.47		0.70	2.05	Sqm
		2		2.98	0.70	4.17	Sqm
	Floor	2	3.33		0.50	3.33	Sqm
		2		2.98	0.50	2.98	Sqm
		2	1.47		0.70	2.05	Sqm
		2		2.21	0.70	3.09	Sqm
		4	0.62		0.20	0.49	Sqm
		4		1.73	0.20	1.38	Sqm
		2	0.32		0.30	0.19	Sqm
		2		1.73	0.30	1.04	Sqm
		2	3.03		0.50	3.03	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.73*	*0.50*	*1.73*	*Sqm*
		2	*0.90*		*0.20*	*0.36*	*Sqm*
		2		*1.73*	*0.2*	*0.69*	*Sqm*
		2	*1.57*		*0.50*	*1.57*	*Sqm*
		2		*1.73*	*0.5*	*1.73*	*Sqm*
	D/S key	*2*	*0.69*		*0.50*	*0.69*	*Sqm*
		2		*1.73*	*0.50*	*1.73*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.73*		*0.30*	*1.04*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.73*		*0.90*	*3.11*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.53*	*0.33*	*1.65*	*Sqm*
	Dirt wall	*4*	*5.90*		*0.50*	*11.81*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.90*		*0.43*	*10.04*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.37*		*0.18*	*2.36*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.37*		*0.25*	*3.37*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.37*		*0.55*	*7.41*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**266.78**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Apron in D/S Portion	*1*	*3.00*	*1.13*	*0.90*	*3.05*	***Cum***
	TOTAL					**3.05**	**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.						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.73*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.73*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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.						
	Abutment						
	Section A-A	2	*1.00*	*0.99*		*1.970*	*Cum*
	Section B-B	2	*5.25*	*1.02*		*10.731*	*Cum*
	Section C-C	2	*0.65*	*0.85*		*1.110*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.29*	*0.88*		*2.881*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.66*		*0.657*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.67*	*0.77*		*4.127*	*Cum*
	TOTAL					**21.48**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR KARMARI MINOR OFFTAKING FROM RD-8+650 KM (RT.) AT RUIR 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*	*1.73*	*2.854*	*9.924*	*Cum*
	Section B-B	*2*	*5.25*	*2.10*	*2.660*	*58.513*	*Cum*
	Section C-C	*2*	*0.42*	*1.92*	*2.659*	*4.277*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.88*	*1.36*	*2.850*	*15.039*	*Cum*
	Left Bank Sec a to d	*1*	*3.67*	*2.91*	*2.204*	*23.546*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*1.10*	*2.99*	*3.220*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.61*	*1.86*	*2.99*	*28.994*	*Cum*
	Floor						
	U/S key	*1*	*1.46*	*2.279*	*0.850*	*2.833*	*Cum*
	Floor	*1*	*3.78*	*2.279*	*0.650*	*5.597*	*Cum*
		1	*0.32*	*1.00*	*0.450*	*0.143*	*Cum*
		1	*0.60*	*1.00*	*0.350*	*0.210*	*Cum*
		1	*0.09*	*1.00*	*0.150*	*0.090*	*Cum*
		1	*3.10*	*1.00*	*0.650*	*2.013*	*Cum*
		1	*0.14*	*1.00*	*0.000*	*0.135*	*Cum*
		1	*0.90*	*1.00*	*0.350*	*0.900*	*Cum*
		1	*0.15*	*1.00*	*0.000*	*0.146*	*Cum*
		1	*1.14*	*1.00*	*0.650*	*0.742*	*Cum*
		1	*0.73*	*1.00*	*0.650*	*0.471*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.00*	*0.400*	*0.600*	*0.480*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.00*	*0.850*	*1.200*	*1.020*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*0.40*	*3.000*	*0.900*	*1.080*	*Cum*
						159.37	**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	*0.624*	*2.813*	*0.150*	*0.26*	*Cum*
		1	*1.861*	*1.534*	*0.150*	*0.43*	*Cum*
		1	*1.374*	*1.000*	*0.150*	*0.21*	*Cum*
		1	*0.670*	*1.000*	*0.150*	*0.10*	*Cum*
		1	*3.238*	*1.000*	*0.150*	*0.49*	*Cum*
		1	*0.948*	*1.000*	*0.150*	*0.14*	*Cum*
		1	*0.094*	*1.000*	*0.150*	*0.01*	*Cum*
		1	*0.559*	*1.000*	*0.150*	*0.08*	*Cum*
		1	*0.692*	*1.000*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.005*	*1.730*	*0.300*	*1.04*	*Cum*
	Section B-B	*2*	*5.250*	*2.095*	*0.300*	*6.60*	*Cum*
	Section C-C	*2*	*0.420*	*1.915*	*0.300*	*0.48*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.880*	*1.360*	*0.300*	*1.58*	*Cum*
	Left Bank Sec a to d	*1*	*3.670*	*2.911*	*0.150*	*1.60*	*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*	*2.610*	*1.860*	*0.300*	*2.91*	*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*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Portion C.C. Blocks (600x600x300)mm	*5*	*0.600*	*0.600*	*0.300*	*0.54*	*Cum*
	TOTAL					**17.57**	**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 A-A	*2*	*1.01*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.01*	*1.08*	*0.85*	*1.85*	*Cum*
		2	*1.01*	*1.33*	*1.20*	*3.21*	*Cum*
	Section B-B	*2*	*5.25*	*1.26*	*1.46*	*19.28*	*Cum*
		2	*5.25*	*1.70*	*0.90*	*16.02*	*Cum*
	Section C-C	*2*	*0.42*	*1.17*	*1.16*	*1.14*	*Cum*
		2	*0.42*	*1.52*	*1.20*	*1.53*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.88*	*0.45*	*0.50*	*0.87*	*Cum*
		1	*3.88*	*0.71*	*0.85*	*2.33*	*Cum*
		1	*3.88*	*0.96*	*1.20*	*4.47*	*Cum*
	Left Bank						
	Section a-a	*1*		2.805	*0.50*	*1.40*	*Sqm*
		1		*2.66*	*0.20*	*0.53*	*Sqm*
		1		*1.49*	*1.35*	*2.02*	*Sqm*
						3.95	***Sqm***
	Section b-b	*1*		*2.81*	*0.50*	*1.40*	*Sqm*
		1		*2.24*	*0.20*	*0.45*	*Sqm*
		1		*1.36*	*1.35*	*1.84*	*Sqm*
						3.70	***Sqm***
	Section c-c	*1*		*2.81*	*0.50*	*1.40*	*Sqm*
		1		*1.81*	*0.20*	*0.36*	*Sqm*
		1		*1.15*	*1.35*	*1.55*	*Sqm*
						3.32	***Sqm***
	Section d-d	*1*		*2.81*	*0.50*	*1.40*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.35*	*0.65*	*Sqm*
						2.15	***Sqm***
	Bottom Key	*1*	*3.67*	*1.49*	*0.70*	*3.84*	*Cum*
	Top Stem Area	*1*	*3.67*	*3.28*		*12.03*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*0.90*	*0.62*	*Cum*
		2	*0.49*	*0.53*	*1.29*	*0.66*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.61*	*1.46*	*0.90*	*6.86*	*Cum*
		2	*2.61*	*1.19*	*1.29*	*8.00*	*Cum*
		2	*2.61*	*0.74*	*0.50*	*1.92*	*Cum*
	Floor						
	U/S key	*1*	*1.46*	*2.28*	*0.70*	*2.33*	*Cum*
	Floor	*1*	*3.78*	*2.28*	*0.50*	*4.31*	*Cum*
		1	*0.32*	*1.00*	*0.30*	*0.10*	*Cum*
		1	*0.60*	*1.00*	*0.20*	*0.12*	*Cum*
		1	*0.09*	*1.00*		*0.09*	*Cum*
		1	*3.10*	*1.00*	*0.50*	*1.55*	*Cum*
		1	*0.14*	*1.00*		*0.14*	*Cum*
		1	*0.90*	*1.00*	*0.20*	*0.18*	*Cum*
		1	*0.15*	*1.00*		*0.15*	*Cum*
		1	*1.14*	*1.00*	*0.50*	*0.57*	*Cum*
	D/S key	*1*	*0.73*	*1.00*	*0.50*	*0.36*	*Cum*
	TOTAL					**95.50**	**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*	*3.77*	*2.28*	*0.20*	*1.72*	*Cum*
		1	*0.67*	*1.00*	*0.20*	*0.13*	*Cum*
		1	*3.08*	*1.00*	*0.20*	*0.62*	*Cum*
		1	*0.95*	*1.00*	*0.20*	*0.19*	*Cum*
		1	*1.14*	*1.00*	*0.20*	*0.23*	*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*	*5.67*	0.82	*0.50*	*4.65*	*Cum*
		2	*5.67*	*0.40*	*0.43*	*1.93*	*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					**14.63**	**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*	*2.260*	*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*	*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*	*2.501*	*28*		*0.888*	*62.164*	*Kg*
x2	*16*	*1.265*	*28*		*1.578*	*55.898*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*68.00*	*0.25%*	*0.17*	*7850*	*1334.56*	*Kg*
	TOTAL Weight of steel (in kg)					1852.55	Kg
	TOTAL Weight of Steel (in Tonne)					**1.85**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		1.87		**1.87**	**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*	*1.01*		*0.50*	*2.01*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.01*		*0.85*	*3.43*	*Sqm*
		4		*1.08*	*0.85*	*3.68*	*Sqm*
		4	*1.01*		*1.20*	*4.82*	*Sqm*
		4		*1.33*	*1.20*	*6.39*	*Sqm*
	Section B-B	*4*	*5.25*		*1.46*	*30.66*	*Sqm*
		4		*1.26*	*1.46*	*7.34*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*
		4		*1.70*	*0.90*	*6.10*	*Sqm*
	Section C-C	*4*	*0.42*		*1.16*	*1.95*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.17	1.16	5.41	Sqm
		4	0.42		1.20	2.02	Sqm
		4		1.52	1.20	7.27	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.88		0.50	3.88	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.88		0.85	6.60	Sqm
		2		0.71	0.85	1.20	Sqm
		2	3.88		1.20	9.31	Sqm
		2		0.96	1.20	2.30	Sqm
	Left Bank						
	Bottom Key	2	3.67		0.70	5.14	Sqm
		2		1.49	0.70	2.09	Sqm
	Section a-a	2	1.22		0.5	1.22	Sqm
		2		2.805	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		2.655	0.2	1.06	Sqm
		2	1.22		1.354	3.31	Sqm
		2		1.4925	1.354	4.04	Sqm
	Section b-b	2	1.22		0.5	1.22	Sqm
		2		2.805	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		2.244	0.2	0.90	Sqm
		2	1.22		1.354	3.31	Sqm
		2		1.362	1.354	3.69	Sqm
	Section c-c	2	1.22		0.5	1.22	Sqm
		2		2.805	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		1.812	0.2	0.72	Sqm
		2	1.22		1.354	3.31	Sqm
		2		1.146	1.354	3.10	Sqm
	Section d-d	2	1.22		0.50	1.22	Sqm
		2		2.81	0.5	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.22		1.35	3.31	Sqm
		2		0.48	1.354	1.30	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		1.29	2.52	Sqm
		4		0.53	1.29	2.70	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	9.40	Sqm
		4		1.46	0.90	5.25	Sqm
		4	2.61		1.29	13.44	Sqm
		4		1.19	1.29	6.13	Sqm
		4	2.61		0.50	5.22	Sqm
		4		0.74	0.50	1.47	Sqm
	Floor						
	U/S key	2	1.46		0.70	2.05	Sqm
		2		2.28	0.70	3.19	Sqm
	Floor	2	3.78		0.50	3.78	Sqm
		2		2.28	0.50	2.28	Sqm
		2	0.32		0.30	0.19	Sqm
		2		1.00	0.30	0.60	Sqm
		2	0.60		0.20	0.24	Sqm
		2		1.00	0.20	0.40	Sqm
		2	0.09		0.00	0.18	Sqm
		2		1.00	0.00	2.00	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.10*		*0.50*	*3.10*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.14*		*0.00*	*0.27*	*Sqm*
		2		*1.00*	*0*	*2.00*	*Sqm*
		2	*0.90*		*0.50*	*0.90*	*Sqm*
		2		*1.00*	*0.5*	*1.00*	*Sqm*
		2	**0.15**			*0.29*	*Sqm*
		2		*1.00*		*2.00*	*Sqm*
		2	**1.14**		*0.50*	*1.14*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*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*	*5.67*		*0.50*	*11.34*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.67*		*0.43*	*9.64*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	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					**303.43**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Apron in D/S Portion	*1*	*0.40*	*3.00*	*0.90*	*1.08*	***Cum***
	TOTAL					**1.08**	**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.						
	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**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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.						
	Abutment						
	Section A-A	2	*1.01*	*1.05*		*2.114*	*Cum*
	Section B-B	2	*5.25*	*2.11*		*22.124*	*Cum*
	Section C-C	2	*0.42*	*1.77*		*1.490*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.88*	*0.98*		*3.806*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.94*		*0.918*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.61*	*1.53*		*7.978*	*Cum*
	TOTAL					**38.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR MIRZAPUR MR OFFTAKING FROM RD-16+870 KM (RT.) AT RUIR 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*	*1.79*	*3.151*	*11.287*	*Cum*
	Section B-B	*2*	*5.25*	*2.07*	*2.808*	*60.884*	*Cum*
	Section C-C	*2*	*1.52*	*1.89*	*2.608*	*14.974*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.19*	*1.42*	*3.151*	*14.262*	*Cum*
	Left Bank Sec a to d	*1*	*3.899*	*3.27*	*2.300*	*29.324*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.500*	*1.10*	*2.250*	*2.475*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.675*	*1.95*	*2.250*	*23.413*	*Cum*
	Floor						
	U/S key	*1*	*1.538*	*3.1025*	*0.850*	*4.056*	*Cum*
	Floor	*1*	*3.811*	*3.1025*	*0.650*	*7.685*	*Cum*
		1	*0.618*	*1.72*	*0.650*	*0.691*	*Cum*
		1	*1.118*	*1.72*	*0.407*	*0.783*	*Cum*
		1	*0.423*	*1.72*	*0.150*	*0.727*	*Cum*
		1	*2.528*	*1.72*	*0.800*	*3.479*	*Cum*
		1	*0.304*	*1.72*	*0.000*	*0.522*	*Cum*
		1	*1.268*	*1.72*	*0.350*	*2.181*	*Cum*
		1	*0.135*	*1.72*	*0.000*	*0.232*	*Cum*
		1	*1.326*	*1.72*	*0.650*	*1.482*	*Cum*
		1	*0.725*	*1.72*	*0.650*	*0.811*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.000*	*2.200*	*0.600*	*2.640*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.720*	*0.850*	*1.200*	*1.754*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.200*	*4.860*	*0.900*	*9.623*	*Cum*
						193.29	**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	*0.618*	*3.698*	*0.150*	*0.34*	*Cum*
		1	*2.000*	*2.315*	*0.150*	*0.69*	*Cum*
		1	*1.280*	*1.720*	*0.150*	*0.33*	*Cum*
		1	*2.028*	*1.720*	*0.150*	*0.52*	*Cum*
		1	*2.588*	*1.720*	*0.150*	*0.67*	*Cum*
		1	*1.447*	*1.720*	*0.150*	*0.37*	*Cum*
		1	*0.251*	*1.720*	*0.150*	*0.06*	*Cum*
		1	*0.567*	*1.720*	*0.150*	*0.15*	*Cum*
		1	*0.692*	*1.720*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.791*	*0.300*	*1.07*	*Cum*
	Section B-B	*2*	*5.250*	*2.065*	*0.300*	*6.50*	*Cum*
	Section C-C	*2*	*1.523*	*1.885*	*0.300*	*1.72*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.185*	*1.421*	*0.300*	*1.36*	*Cum*
	Left Bank Sec a to d	*1*	*3.899*	*3.270*	*0.150*	*1.91*	*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*	*1.720*	*0.850*	*0.300*	*0.44*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.720*	*0.450*	*0.900*	*0.70*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Portion C.C. Blocks (600x600x300)mm	*9*	*0.600*	*0.600*	*0.300*	*0.97*	*Cum*
	TOTAL					**21.45**	**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*	*1.11*	*0.95*	*2.10*	*Cum*
		2	*1.00*	*1.39*	*1.40*	*3.89*	*Cum*
	Section B-B	*2*	*5.25*	*1.24*	*1.41*	*18.37*	*Cum*
		2	*5.25*	*1.67*	*1.10*	*19.23*	*Cum*
	Section C-C	*2*	*1.52*	*1.15*	*1.11*	*3.89*	*Cum*
		2	*1.52*	*1.49*	*1.20*	*5.43*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.19*	*0.45*	*0.50*	*0.72*	*Cum*
		1	*3.19*	*0.74*	*0.95*	*2.23*	*Cum*
		1	*3.19*	*1.02*	*1.40*	*4.55*	*Cum*
	Left Bank						
	Section a-a	*1*		2.957	*0.50*	*1.48*	*Sqm*
		1		*2.81*	*0.20*	*0.56*	*Sqm*
		1		*1.57*	*1.45*	*2.27*	*Sqm*
						4.31	***Sqm***
	Section b-b	*1*		*2.96*	*0.50*	*1.48*	*Sqm*
		1		*2.41*	*0.20*	*0.48*	*Sqm*
		1		*1.45*	*1.45*	*2.10*	*Sqm*
						4.06	***Sqm***
	Section c-c	*1*		*2.96*	*0.50*	*1.48*	*Sqm*
		1		*1.87*	*0.20*	*0.37*	*Sqm*
		1		*1.17*	*1.45*	*1.70*	*Sqm*
						3.55	***Sqm***
	Section d-d	*1*		*2.96*	*0.50*	*1.48*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.45*	*0.70*	*Sqm*
						2.27	***Sqm***
	Bottom Key	*1*	*3.90*	*1.54*	*0.70*	*4.20*	*Cum*
	Top Stem Area	*1*	*3.90*	*3.55*		*13.84*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*0.90*	*0.63*	*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*	*0.90*	*7.44*	*Cum*
		2	*2.68*	*1.24*	*0.55*	*3.64*	*Cum*
		2	*2.68*	*0.74*	*0.50*	*1.98*	*Cum*
	Floor						
	U/S key	*1*	*1.54*	*3.10*	*0.70*	*3.34*	*Cum*
	Floor	*1*	*3.81*	*3.10*	*0.50*	*5.91*	*Cum*
		1	*0.62*	*1.72*	*0.50*	*0.53*	*Cum*
		1	*1.12*	*1.72*	*0.26*	*0.49*	*Cum*
		1	*0.42*	*1.72*		*0.73*	*Cum*
		1	*2.53*	*1.72*	*0.65*	*2.83*	*Cum*
		1	*0.30*	*1.72*		*0.52*	*Cum*
		1	*1.27*	*1.72*	*0.20*	*0.44*	*Cum*
		1	*0.14*	*1.72*		*0.23*	*Cum*
		1	*1.33*	*1.72*	*0.50*	*1.14*	*Cum*
	D/S key	*1*	*0.73*	*1.72*	*0.50*	*0.62*	*Cum*
	TOTAL					**110.20**	**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*	*3.93*	*3.10*	*0.20*	*2.44*	*Cum*
		1	*1.69*	*1.72*	*0.20*	*0.58*	*Cum*
		1	*3.08*	*1.72*	*0.20*	*1.06*	*Cum*
		1	*0.95*	*1.72*	*0.20*	*0.33*	*Cum*
		1	*1.33*	*1.72*	*0.20*	*0.46*	*Cum*
	Top Slab	*1*	*5.25*	*2.52*	*0.33*	*4.32*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.52*	*0.08*	*0.80*	*Cum*
	Dirt wall	*2*	*6.77*	0.82	*0.50*	*5.55*	*Cum*
		2	*6.77*	*0.40*	*0.43*	*2.30*	*Cum*
	Parapet	*2*	*3.36*	*0.45*	*0.18*	*0.52*	*Cum*
		2	*3.36*	*0.35*	*0.25*	*0.59*	*Cum*
		2	*3.36*	*0.22*	*0.55*	*0.81*	*Cum*
	TOTAL					**19.76**	**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*	*2.980*	*29*		*1.578*	*136.383*	*Kg*
a2	*10*	*5.650*	*13*		*0.616*	*45.279*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.900*	*9*		*0.616*	*16.090*	*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*	*2.501*	*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*
	0.25 % Skin Reinforcement for Transition walls	*68.08*	*0.25%*	*0.17*	*7850*	*1336.12*	*Kg*
	TOTAL Weight of steel (in kg)					1965.61	Kg
	TOTAL Weight of Steel (in Tonne)					**1.97**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.90		**2.90**	**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*		*0.95*	*3.80*	*Sqm*
		4		*1.11*	*0.95*	*4.20*	*Sqm*
		4	*1.00*		*1.40*	*5.60*	*Sqm*
		4		*1.39*	*1.40*	*7.78*	*Sqm*
	Section B-B	*4*	*5.25*		*1.41*	*29.57*	*Sqm*
		4		*1.24*	*1.41*	*7.00*	*Sqm*
		4	*5.25*		*1.10*	*23.10*	*Sqm*
		4		*1.67*	*1.10*	*7.33*	*Sqm*
	Section C-C	*4*	*1.52*		*1.11*	*6.75*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.15	1.11	5.11	Sqm
		4	1.52		1.20	7.31	Sqm
		4		1.49	1.20	7.13	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.19		0.50	3.19	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.19		0.95	6.06	Sqm
		2		0.74	0.95	1.40	Sqm
		2	3.19		1.40	8.92	Sqm
		2		1.02	1.40	2.86	Sqm
	Left Bank						
	Bottom Key	2	3.90		0.70	5.46	Sqm
		2		1.54	0.70	2.15	Sqm
	Section a-a	2	1.30		0.5	1.30	Sqm
		2		2.957	0.5	2.96	Sqm
		2	1.30		0.2	0.52	Sqm
		2		2.8065	0.2	1.12	Sqm
		2	1.30		1.45	3.77	Sqm
		2		1.568	1.45	4.55	Sqm
	Section b-b	2	1.30		0.5	1.30	Sqm
		2		2.957	0.5	2.96	Sqm
		2	1.30		0.2	0.52	Sqm
		2		2.414	0.2	0.97	Sqm
		2	1.30		1.45	3.77	Sqm
		2		1.447	1.45	4.20	Sqm
	Section c-c	2	1.30		0.5	1.30	Sqm
		2		2.957	0.5	2.96	Sqm
		2	1.30		0.2	0.52	Sqm
		2		1.868	0.2	0.75	Sqm
		2	1.30		1.45	3.77	Sqm
		2		1.174	1.45	3.40	Sqm
	Section d-d	2	1.30		0.50	1.30	Sqm
		2		2.96	0.5	2.96	Sqm
		2	1.30		0.20	0.52	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.30		1.45	3.77	Sqm
		2		0.48	1.45	1.39	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		0.55	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		0.90	9.63	Sqm
		4		1.54	0.90	5.56	Sqm
		4	2.68		0.55	5.89	Sqm
		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	1.54		0.70	2.15	Sqm
		2		3.10	0.70	4.34	Sqm
	Floor	2	3.81		0.50	3.81	Sqm
		2		3.10	0.50	3.10	Sqm
		2	0.62		0.50	0.62	Sqm
		2		1.72	0.50	1.72	Sqm
		2	1.12		0.26	0.57	Sqm
		2		1.72	0.26	0.88	Sqm
		2	0.42		0.00	0.85	Sqm
		2		1.72	0.00	3.44	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.53*		*0.65*	*3.29*	*Sqm*
		2		*1.72*	*0.65*	*2.24*	*Sqm*
		2	*0.30*		*0.00*	*0.61*	*Sqm*
		2		*1.72*	*0*	*3.44*	*Sqm*
		2	*1.27*		*0.50*	*1.27*	*Sqm*
		2		*1.72*	*0.5*	*1.72*	*Sqm*
		2	**0.14**			*0.27*	*Sqm*
		2		*1.72*		*3.44*	*Sqm*
		2	**1.33**		*0.50*	*1.33*	*Sqm*
		2		*1.72*	*0.50*	*1.72*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*1.72*	*0.50*	*1.72*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.72*		*0.30*	*1.03*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.72*		*0.90*	*3.10*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.52*	*0.33*	*1.65*	*Sqm*
	Dirt wall	*4*	*6.77*		*0.50*	*13.55*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.77*		*0.43*	*11.51*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.36*		*0.18*	*2.35*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.36*		*0.25*	*3.36*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.36*		*0.55*	*7.39*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**333.86**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*2.20*	*4.86*	*0.90*	*9.62*	***Cum***
	TOTAL					**9.62**	**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.						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.72*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.72*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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.						
	Abutment						
	Section A-A	2	*1.00*	*1.23*		*2.460*	*Cum*
	Section B-B	2	*5.25*	*2.03*		*21.273*	*Cum*
	Section C-C	2	*1.52*	*1.27*		*3.878*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.19*	*1.18*		*3.752*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.66*		*0.661*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.68*	*1.10*		*5.860*	*Cum*
	TOTAL					**37.88**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR JASOEA MINOR OFFTAKING FROM RD-23+400 KM (RT.) AT RUIR 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*	*2.848*	*9.854*	*Cum*
	Section B-B	*2*	*5.25*	*1.73*	*2.050*	*37.238*	*Cum*
	Section C-C	*2*	*0.43*	*1.55*	*2.050*	*2.720*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.29*	*1.36*	*2.850*	*12.752*	*Cum*
	Left Bank Sec a to d	*1*	*3.66*	*2.91*	*2.204*	*23.439*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*2.38*	*2.614*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.68*	*1.94*	*2.38*	*24.718*	*Cum*
	Floor						
	U/S key	*1*	*1.46*	*2.279*	*0.850*	*2.833*	*Cum*
	Floor	*1*	*3.76*	*2.279*	*0.650*	*5.565*	*Cum*
		1	*0.32*	*1.46*	*0.450*	*0.209*	*Cum*
		1	*0.60*	*1.46*	*0.350*	*0.307*	*Cum*
		1	*0.09*	*1.46*	*0.150*	*0.131*	*Cum*
		1	*3.10*	*1.46*	*0.650*	*2.939*	*Cum*
		1	*0.14*	*1.46*	*0.000*	*0.197*	*Cum*
		1	*0.90*	*1.46*	*0.350*	*1.314*	*Cum*
		1	*0.15*	*1.46*	*0.000*	*0.213*	*Cum*
		1	*1.15*	*1.46*	*0.650*	*1.087*	*Cum*
		1	*0.73*	*1.46*	*0.650*	*0.688*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.00*	*0.860*	*0.600*	*1.032*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.46*	*0.850*	*1.200*	*1.489*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*0.86*	*3.000*	*0.900*	*2.322*	*Cum*
						133.66	**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*	*3.910*	*0.150*	*0.37*	*Cum*
		1	*1.858*	*2.166*	*0.150*	*0.60*	*Cum*
		1	*1.374*	*1.460*	*0.150*	*0.30*	*Cum*
		1	*0.670*	*1.460*	*0.150*	*0.15*	*Cum*
		1	*3.238*	*1.460*	*0.150*	*0.71*	*Cum*
		1	*0.948*	*1.460*	*0.150*	*0.21*	*Cum*
		1	*0.097*	*1.460*	*0.150*	*0.02*	*Cum*
		1	*0.559*	*1.460*	*0.150*	*0.12*	*Cum*
		1	*0.692*	*1.460*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.730*	*0.300*	*1.04*	*Cum*
	Section B-B	*2*	*5.250*	*1.730*	*0.300*	*5.45*	*Cum*
	Section C-C	*2*	*0.428*	*1.550*	*0.300*	*0.40*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.290*	*1.360*	*0.300*	*1.34*	*Cum*
	Left Bank Sec a to d	*1*	*3.657*	*2.908*	*0.150*	*1.60*	*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*	*1.460*	*0.850*	*0.300*	*0.37*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.460*	*0.450*	*0.900*	*0.59*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Portion C.C. Blocks (600x600x300)mm	*7*	*0.600*	*0.600*	*0.300*	*0.76*	*Cum*
	TOTAL					**17.62**	**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.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.08*	*0.85*	*1.82*	*Cum*
		2	*1.00*	*1.33*	*1.20*	*3.20*	*Cum*
	Section B-B	*2*	*5.25*	*1.08*	*0.85*	*9.59*	*Cum*
		2	*5.25*	*1.33*	*0.90*	*12.57*	*Cum*
	Section C-C	*2*	*0.43*	*0.99*	*0.55*	*0.46*	*Cum*
		2	*0.43*	*1.15*	*1.20*	*1.18*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.29*	*0.45*	*0.50*	*0.74*	*Cum*
		1	*3.29*	*0.71*	*0.85*	*1.97*	*Cum*
		1	*3.29*	*0.96*	*1.20*	*3.79*	*Cum*
	Left Bank						
	Section a-a	*1*		2.805	*0.50*	*1.40*	*Sqm*
		1		*2.66*	*0.20*	*0.53*	*Sqm*
		1		*1.49*	*1.35*	*2.02*	*Sqm*
						3.95	***Sqm***
	Section b-b	*1*		*2.81*	*0.50*	*1.40*	*Sqm*
		1		*2.24*	*0.20*	*0.45*	*Sqm*
		1		*1.36*	*1.35*	*1.84*	*Sqm*
						3.70	***Sqm***
	Section c-c	*1*		*2.81*	*0.50*	*1.40*	*Sqm*
		1		*1.81*	*0.20*	*0.36*	*Sqm*
		1		*1.15*	*1.35*	*1.55*	*Sqm*
						3.32	***Sqm***
	Section d-d	*1*		*2.81*	*0.50*	*1.40*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.35*	*0.65*	*Sqm*
						2.15	***Sqm***
	Bottom Key	*1*	*3.66*	*1.46*	*0.70*	*3.74*	*Cum*
	Top Stem Area	*1*	*3.66*	*3.28*		*11.99*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*0.90*	*0.63*	*Cum*
		2	*0.50*	*0.53*	*0.68*	*0.35*	*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*	*1.24*	*0.68*	*4.47*	*Cum*
		2	*2.68*	*0.74*	*0.50*	*1.98*	*Cum*
	Floor						
	U/S key	*1*	*1.46*	*2.28*	*0.70*	*2.33*	*Cum*
	Floor	*1*	*3.76*	*2.28*	*0.50*	*4.28*	*Cum*
		1	*0.32*	*1.46*	*0.30*	*0.14*	*Cum*
		1	*0.60*	*1.46*	*0.20*	*0.18*	*Cum*
		1	*0.09*	*1.46*		*0.13*	*Cum*
		1	*3.10*	*1.46*	*0.50*	*2.26*	*Cum*
		1	*0.14*	*1.46*		*0.20*	*Cum*
		1	*0.90*	*1.46*	*0.20*	*0.26*	*Cum*
		1	*0.15*	*1.46*		*0.21*	*Cum*
		1	*1.15*	*1.46*	*0.50*	*0.84*	*Cum*
	D/S key	*1*	*0.73*	*1.46*	*0.50*	*0.53*	*Cum*
	TOTAL					**78.29**	**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 Floor	*1*	*3.77*	*2.28*	*0.20*	*1.72*	*Cum*
		1	*0.67*	*1.46*	*0.20*	*0.20*	*Cum*
		1	*3.08*	*1.46*	*0.20*	*0.90*	*Cum*
		1	*0.95*	*1.46*	*0.20*	*0.28*	*Cum*
		1	*1.15*	*1.46*	*0.20*	*0.33*	*Cum*
	Top Slab	*1*	*5.25*	*2.26*	*0.33*	*3.87*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.26*	*0.08*	*0.72*	*Cum*
	Dirt wall	*2*	*5.68*	0.82	*0.50*	*4.66*	*Cum*
		2	*5.68*	*0.40*	*0.43*	*1.93*	*Cum*
	Parapet	*2*	*3.10*	*0.45*	*0.18*	*0.48*	*Cum*
		2	*3.10*	*0.35*	*0.25*	*0.54*	*Cum*
		2	*3.10*	*0.22*	*0.55*	*0.75*	*Cum*
	TOTAL					**16.38**	**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*	*2.720*	*29*		*1.578*	*124.484*	*Kg*
a2	*10*	*5.650*	*11*		*0.616*	*38.313*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.640*	*18*		*0.616*	*29.294*	*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*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*63.51*	*0.25%*	*0.16*	*7850*	*1246.43*	*Kg*
	TOTAL Weight of steel (in kg)					1838.12	Kg
	TOTAL Weight of Steel (in Tonne)					**1.84**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.01		**2.01**	**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*		*0.85*	*3.39*	*Sqm*
		4		*1.08*	*0.85*	*3.65*	*Sqm*
		4	*1.00*		*1.20*	*4.80*	*Sqm*
		4		*1.33*	*1.20*	*6.39*	*Sqm*
	Section B-B	*4*	*5.25*		*0.85*	*17.85*	*Sqm*
		4		*1.08*	*0.85*	*3.66*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*
		4		*1.33*	*0.90*	*4.79*	*Sqm*
	Section C-C	*4*	*0.43*		*0.55*	*0.94*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.99	0.55	2.17	Sqm
		4	0.43		1.20	2.05	Sqm
		4		1.15	1.20	5.52	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.29		0.50	3.29	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.29		0.85	5.59	Sqm
		2		0.71	0.85	1.20	Sqm
		2	3.29		1.20	7.90	Sqm
		2		0.96	1.20	2.30	Sqm
	Left Bank						
	Bottom Key	2	3.66		0.70	5.12	Sqm
		2		1.46	0.70	2.05	Sqm
	Section a-a	2	1.22		0.5	1.22	Sqm
		2		2.805	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		2.655	0.2	1.06	Sqm
		2	1.22		1.354	3.30	Sqm
		2		1.4925	1.354	4.04	Sqm
	Section b-b	2	1.22		0.5	1.22	Sqm
		2		2.805	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		2.244	0.2	0.90	Sqm
		2	1.22		1.354	3.30	Sqm
		2		1.362	1.354	3.69	Sqm
	Section c-c	2	1.22		0.5	1.22	Sqm
		2		2.805	0.5	2.81	Sqm
		2	1.22		0.2	0.49	Sqm
		2		1.812	0.2	0.72	Sqm
		2	1.22		1.354	3.30	Sqm
		2		1.146	1.354	3.10	Sqm
	Section d-d	2	1.22		0.50	1.22	Sqm
		2		2.81	0.5	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.22		1.35	3.30	Sqm
		2		0.48	1.354	1.30	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		0.68	1.35	Sqm
		4		0.53	0.68	1.42	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		0.68	7.23	Sqm
		4		1.24	0.68	3.34	Sqm
		4	2.68		0.50	5.35	Sqm
		4		0.74	0.50	1.48	Sqm
	Floor						
	U/S key	2	1.46		0.70	2.05	Sqm
		2		2.28	0.70	3.19	Sqm
	Floor	2	3.76		0.50	3.76	Sqm
		2		2.28	0.50	2.28	Sqm
		2	0.32		0.30	0.19	Sqm
		2		1.46	0.30	0.88	Sqm
		2	0.60		0.20	0.24	Sqm
		2		1.46	0.20	0.58	Sqm
		2	0.09		0.00	0.18	Sqm
		2		1.46	0.00	2.92	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.10*		*0.50*	*3.10*	*Sqm*
		2		*1.46*	*0.50*	*1.46*	*Sqm*
		2	*0.14*		*0.00*	*0.27*	*Sqm*
		2		*1.46*	*0*	*2.92*	*Sqm*
		2	*0.90*		*0.50*	*0.90*	*Sqm*
		2		*1.46*	*0.5*	*1.46*	*Sqm*
		2	**0.15**			*0.29*	*Sqm*
		2		*1.46*		*2.92*	*Sqm*
		2	**1.15**		*0.50*	*1.15*	*Sqm*
		2		*1.46*	*0.50*	*1.46*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*1.46*	*0.50*	*1.46*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.46*		*0.30*	*0.88*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.46*		*0.90*	*2.63*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.26*	*0.33*	*1.48*	*Sqm*
	Dirt wall	*4*	*5.68*		*0.50*	*11.36*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.68*		*0.43*	*9.65*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.10*		*0.18*	*2.17*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.10*		*0.25*	*3.10*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.10*		*0.55*	*6.82*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**273.96**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Apron in D/S Portion	*1*	*0.86*	*3.00*	*0.90*	*2.32*	***Cum***
	TOTAL					**2.32**	**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.						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.46*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.46*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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						
	Abutment						
	Section A-A	2	*1.00*	*1.05*		*2.100*	*Cum*
	Section B-B	2	*5.25*	*1.23*		*12.863*	*Cum*
	Section C-C	2	*0.43*	*1.00*		*0.857*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.29*	*0.98*		*3.224*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.71*		*0.708*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.68*	*1.17*		*6.266*	*Cum*
	TOTAL					**26.02**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF HR FOR SENDHOKHAP MINOR OFFTAKING FROM RD-25+470 KM (RT.) AT RUIR 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*	*0.80*	*1.75*	*2.896*	*8.100*	*Cum*
	Section B-B	*2*	*5.25*	*1.69*	*1.990*	*35.396*	*Cum*
	Section C-C	*2*	*0.56*	*1.51*	*1.990*	*3.350*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.31*	*1.38*	*2.896*	*13.211*	*Cum*
	Left Bank Sec a to d	*1*	*3.77*	*2.98*	*2.246*	*25.177*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*1.10*	*2.19*	*2.380*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.64*	*1.89*	*2.19*	*21.862*	*Cum*
	Floor						
	U/S key	*1*	*1.50*	*3.764*	*0.850*	*4.790*	*Cum*
	Floor	*1*	*3.63*	*3.764*	*0.650*	*8.876*	*Cum*
		1	*0.32*	*1.67*	*0.450*	*0.239*	*Cum*
		1	*0.60*	*1.67*	*0.350*	*0.351*	*Cum*
		1	*0.09*	*1.67*	*0.150*	*0.155*	*Cum*
		1	*3.08*	*1.67*	*0.650*	*3.342*	*Cum*
		1	*0.13*	*1.67*	*0.000*	*0.222*	*Cum*
		1	*0.89*	*1.67*	*0.350*	*1.478*	*Cum*
		1	*0.15*	*1.67*	*0.000*	*0.244*	*Cum*
		1	*1.27*	*1.67*	*0.650*	*1.382*	*Cum*
		1	*0.73*	*1.67*	*0.650*	*0.787*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.00*	*1.070*	*0.600*	*1.284*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.67*	*0.850*	*1.200*	*1.703*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*1.07*	*3.000*	*0.900*	*2.889*	*Cum*
						137.22	**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*	*4.553*	*0.150*	*0.43*	*Cum*
		1	*1.925*	*2.459*	*0.150*	*0.71*	*Cum*
		1	*1.174*	*1.670*	*0.150*	*0.29*	*Cum*
		1	*0.670*	*1.670*	*0.150*	*0.17*	*Cum*
		1	*3.238*	*1.670*	*0.150*	*0.81*	*Cum*
		1	*0.948*	*1.670*	*0.150*	*0.24*	*Cum*
		1	*0.225*	*1.670*	*0.150*	*0.06*	*Cum*
		1	*0.559*	*1.670*	*0.150*	*0.14*	*Cum*
		1	*0.692*	*1.670*	*0.150*	*0.17*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*0.800*	*1.748*	*0.300*	*0.84*	*Cum*
	Section B-B	*2*	*5.250*	*1.694*	*0.300*	*5.34*	*Cum*
	Section C-C	*2*	*0.556*	*1.514*	*0.300*	*0.51*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.311*	*1.378*	*0.300*	*1.37*	*Cum*
	Left Bank Sec a to d	*1*	*3.768*	*2.975*	*0.150*	*1.68*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.494*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.636*	*1.894*	*0.300*	*2.99*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.670*	*0.850*	*0.300*	*0.43*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.670*	*0.450*	*0.900*	*0.68*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Portion C.C. Blocks (600x600x300)mm	*8*	*0.600*	*0.600*	*0.300*	*0.86*	*Cum*
	TOTAL					**18.03**	**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*	*0.80*	*0.82*	*0.50*	*0.66*	*Cum*
		2	*0.80*	*1.08*	*0.90*	*1.55*	*Cum*
		2	*0.80*	*1.35*	*1.20*	*2.59*	*Cum*
	Section B-B	*2*	*5.25*	*1.06*	*0.79*	*8.77*	*Cum*
		2	*5.25*	*1.29*	*0.90*	*12.23*	*Cum*
	Section C-C	*2*	*0.56*	*0.97*	*0.49*	*0.53*	*Cum*
		2	*0.56*	*1.11*	*1.20*	*1.49*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.31*	*0.45*	*0.50*	*0.74*	*Cum*
		1	*3.31*	*0.71*	*0.90*	*2.12*	*Cum*
		1	*3.31*	*0.98*	*1.20*	*3.89*	*Cum*
	Left Bank						
	Section a-a	*1*		2.875	*0.50*	*1.44*	*Sqm*
		1		*2.73*	*0.20*	*0.55*	*Sqm*
		1		*1.53*	*1.40*	*2.13*	*Sqm*
						4.11	***Sqm***
	Section b-b	*1*		*2.88*	*0.50*	*1.44*	*Sqm*
		1		*2.32*	*0.20*	*0.46*	*Sqm*
		1		*1.40*	*1.40*	*1.95*	*Sqm*
						3.86	***Sqm***
	Section c-c	*1*		*2.88*	*0.50*	*1.44*	*Sqm*
		1		*1.84*	*0.20*	*0.37*	*Sqm*
		1		*1.16*	*1.40*	*1.62*	*Sqm*
						3.42	***Sqm***
	Section d-d	*1*		*2.88*	*0.50*	*1.44*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.40*	*0.67*	*Sqm*
						2.20	***Sqm***
	Bottom Key	*1*	*3.77*	*1.50*	*0.70*	*3.95*	*Cum*
	Top Stem Area	*1*	*3.77*	*3.40*		*12.81*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*0.90*	*0.62*	*Cum*
		2	*0.49*	*0.53*	*0.49*	*0.25*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.64*	*1.49*	*0.90*	*7.09*	*Cum*
		2	*2.64*	*1.21*	*0.49*	*3.12*	*Cum*
		2	*2.64*	*0.74*	*0.50*	*1.95*	*Cum*
	Floor						
	U/S key	*1*	*1.50*	*3.76*	*0.70*	*3.94*	*Cum*
	Floor	*1*	*3.63*	*3.76*	*0.50*	*6.83*	*Cum*
		1	*0.32*	*1.67*	*0.30*	*0.16*	*Cum*
		1	*0.60*	*1.67*	*0.20*	*0.20*	*Cum*
		1	*0.09*	*1.67*		*0.15*	*Cum*
		1	*3.08*	*1.67*	*0.50*	*2.57*	*Cum*
		1	*0.13*	*1.67*		*0.22*	*Cum*
		1	*0.89*	*1.67*	*0.20*	*0.30*	*Cum*
		1	*0.15*	*1.67*		*0.24*	*Cum*
		1	*1.27*	*1.67*	*0.50*	*1.06*	*Cum*
	D/S key	*1*	*0.73*	*1.67*	*0.50*	*0.61*	*Cum*
	TOTAL					**80.81**	**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 Floor	*1*	*3.63*	*3.76*	*0.20*	*2.73*	*Cum*
		1	*0.67*	*1.67*	*0.20*	*0.22*	*Cum*
		1	*3.08*	*1.67*	*0.20*	*1.03*	*Cum*
		1	*0.95*	*1.67*	*0.20*	*0.32*	*Cum*
		1	*1.27*	*1.67*	*0.20*	*0.43*	*Cum*
	Top Slab	*1*	*5.25*	*2.47*	*0.33*	*4.23*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.47*	*0.08*	*0.79*	*Cum*
	Dirt wall	*2*	*5.81*	0.82	*0.50*	*4.76*	*Cum*
		2	*5.81*	*0.40*	*0.43*	*1.97*	*Cum*
	Parapet	*2*	*3.31*	*0.45*	*0.18*	*0.52*	*Cum*
		2	*3.31*	*0.35*	*0.25*	*0.58*	*Cum*
		2	*3.31*	*0.22*	*0.55*	*0.80*	*Cum*
	TOTAL					**18.37**	**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*	*2.930*	*29*		*1.578*	*134.094*	*Kg*
a2	*10*	*5.650*	*12*		*0.616*	*41.796*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.850*	*18*		*0.616*	*31.624*	*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*	*40*		*0.888*	*88.806*	*Kg*
x2	*16*	*1.265*	*40*		*1.578*	*79.854*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*63.90*	*0.25%*	*0.16*	*7850*	*1254.07*	*Kg*
	TOTAL Weight of steel (in kg)					1881.47	Kg
	TOTAL Weight of Steel (in Tonne)					**1.88**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.15		**2.15**	**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*	*0.80*		*0.50*	*1.60*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*0.80*		*0.90*	*2.87*	*Sqm*
		4		*1.08*	*0.90*	*3.89*	*Sqm*
		4	*0.80*		*1.20*	*3.84*	*Sqm*
		4		*1.35*	*1.20*	*6.47*	*Sqm*
	Section B-B	*4*	*5.25*		*0.79*	*16.59*	*Sqm*
		4		*1.06*	*0.79*	*3.34*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*
		4		*1.29*	*0.90*	*4.66*	*Sqm*
	Section C-C	*4*	*0.56*		*0.49*	*1.09*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.97	0.49	1.90	Sqm
		4	0.56		1.20	2.67	Sqm
		4		1.11	1.20	5.35	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.31		0.50	3.31	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.31		0.90	5.93	Sqm
		2		0.71	0.90	1.28	Sqm
		2	3.31		1.20	7.95	Sqm
		2		0.98	1.20	2.35	Sqm
	Left Bank						
	Bottom Key	2	3.77		0.70	5.28	Sqm
		2		1.50	0.70	2.10	Sqm
	Section a-a	2	1.26		0.5	1.26	Sqm
		2		2.875	0.5	2.88	Sqm
		2	1.26		0.2	0.50	Sqm
		2		2.725	0.2	1.09	Sqm
		2	1.26		1.396	3.51	Sqm
		2		1.5275	1.396	4.26	Sqm
	Section b-b	2	1.26		0.5	1.26	Sqm
		2		2.875	0.5	2.88	Sqm
		2	1.26		0.2	0.50	Sqm
		2		2.319	0.2	0.93	Sqm
		2	1.26		1.396	3.51	Sqm
		2		1.3995	1.396	3.91	Sqm
	Section c-c	2	1.26		0.5	1.26	Sqm
		2		2.875	0.5	2.88	Sqm
		2	1.26		0.2	0.50	Sqm
		2		1.837	0.2	0.73	Sqm
		2	1.26		1.396	3.51	Sqm
		2		1.1585	1.396	3.23	Sqm
	Section d-d	2	1.26		0.50	1.26	Sqm
		2		2.88	0.5	2.88	Sqm
		2	1.26		0.20	0.50	Sqm
		2		0.48	0.2	0.19	Sqm
		2	1.26		1.40	3.51	Sqm
		2		0.48	1.396	1.34	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.49		0.90	1.78	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.49		0.49	0.97	Sqm
		4		0.53	0.49	1.03	Sqm
		4	0.49		0.50	0.99	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.64		0.90	9.49	Sqm
		4		1.49	0.90	5.38	Sqm
		4	2.64		0.49	5.17	Sqm
		4		1.21	0.49	2.37	Sqm
		4	2.64		0.50	5.27	Sqm
		4		0.74	0.50	1.48	Sqm
	Floor						
	U/S key	2	1.50		0.70	2.10	Sqm
		2		3.76	0.70	5.27	Sqm
	Floor	2	3.63		0.50	3.63	Sqm
		2		3.76	0.50	3.76	Sqm
		2	0.32		0.30	0.19	Sqm
		2		1.67	0.30	1.00	Sqm
		2	0.60		0.20	0.24	Sqm
		2		1.67	0.20	0.67	Sqm
		2	0.09		0.00	0.19	Sqm
		2		1.67	0.00	3.34	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.08*		*0.50*	*3.08*	*Sqm*
		2		*1.67*	*0.50*	*1.67*	*Sqm*
		2	*0.13*		*0.00*	*0.27*	*Sqm*
		2		*1.67*	*0*	*3.34*	*Sqm*
		2	*0.89*		*0.50*	*0.89*	*Sqm*
		2		*1.67*	*0.5*	*1.67*	*Sqm*
		2	**0.15**			*0.29*	*Sqm*
		2		*1.67*		*3.34*	*Sqm*
		2	**1.27**		*0.50*	*1.27*	*Sqm*
		2		*1.67*	*0.50*	*1.67*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*1.67*	*0.50*	*1.67*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.67*		*0.30*	*1.00*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.67*		*0.90*	*3.01*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.47*	*0.33*	*1.61*	*Sqm*
	Dirt wall	*4*	*5.81*		*0.50*	*11.61*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.81*		*0.43*	*9.87*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.31*		*0.18*	*2.32*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.31*		*0.25*	*3.31*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.31*		*0.55*	*7.28*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**277.30**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Apron in D/S Portion	*1*	*1.07*	*3.00*	*0.90*	*2.89*	***Cum***
	TOTAL					**2.89**	**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. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.67*	*0.15*	*0.33*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.67*	*0.15*	*0.33*	*Cum*
	TOTAL					**0.66**	**Cum**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
11	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**.**	2	5.25	0.40		**4.20**	**Sqm**
12	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	2	5.25			**10.50**	**RM**
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.						
	Abutment						
	Section A-A	2	*0.80*	*1.08*		*1.728*	*Cum*
	Section B-B	2	*5.25*	*1.15*		*12.075*	*Cum*
	Section C-C	2	*0.56*	*0.94*		*1.042*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.31*	*1.02*		*3.373*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.64*		*0.630*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.64*	*1.05*		*5.560*	*Cum*
	TOTAL					**24.41**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR RUIR 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)**
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.400 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.	309.172	Cum	**195.20**	60350.46			
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.	40.35	Cum	**6381.70**	257527.85	13.07	18.16	36.32
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.	207.58	Cum	**6914.20**	1435219.35	85.62	89.26	178.52
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.	2.74	Cum	**8151.40**	22314.58	1.55	1.07	2.16
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.	3.26	MT	**73574.90**	239775.98			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	468.91	Sqm	**578.60**	271309.39			
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.	65.84	Sqm	**680.10**	44780.84			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	12.11	Cum	**694.61**	8413.46			
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.	12.11	Cum	**1237.00**	14983.16			
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.	12.11	Cum	**1377.70**	16687.39			12.11
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.	12.11	Cum	**516.50**	6256.11			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.63	Sqm	**63.20**	1303.52			
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	9.15	Cum	**149.30**	1366.62			

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(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	108.484	Cum	**1075.00**	116620.84			
	Coarse Aggregates (60 Km lead)	229.109	Cum	**1398.00**	320294.21			
	Cement (30 km lead)	100.252	MT	**742.00**	74386.87			
	Boulder (60 Km lead)	12.11	Cum	**1159.00**	14038.39			
	Brick (30 km lead)	3950.00	No.	**3.18**	12561.00			
	Steel (30 Km lead)	3.26	MT	**742.00**	2418.13			
	TOTAL (In Rs.)				**2942962.95**			
	TOTAL (In Rs.)				**2942962.95**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	108.48	Cum	**584.64**	63424.38	6342.44		
	Coarse Aggregate	229.11	Cum	**944.26**	216338.34	21633.83		
	Boulders	12.11	Cum	**694.61**	8413.46	841.35		
	Total					28817.62		
	For 1 nos. fall, Total Seigniorage charges					**28817.62**		

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. 3.630 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.	322.444	Cum	**195.20**	62941.09			
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.	41.73	Cum	**6381.70**	266316.13	13.52	18.78	37.56
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.	214.98	Cum	**6914.20**	1486421.08	88.68	92.44	184.88
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.	2.56	Cum	**8151.40**	20892.20	1.45	1.00	2.02
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.	3.38	MT	**73574.90**	248330.04			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	500.45	Sqm	**578.60**	289563.03			
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.	70.13	Sqm	**680.10**	47694.73			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	10.69	Cum	**694.61**	7423.64			
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.	10.69	Cum	**1237.00**	13220.44			
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.	10.69	Cum	**1377.70**	14724.17			
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.	10.69	Cum	**516.50**	5520.09			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	22.10	Sqm	**63.20**	1396.75			
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	10.60	Cum	**149.30**	1583.18			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	112.220	Cum	**1075.00**	120636.95			
	Coarse Aggregates (60 Km lead)	235.154	Cum	**1398.00**	328745.26			
	Cement (30 km lead)	103.654	MT	**742.00**	76911.10			
	Boulder (60 Km lead)	10.69	Cum	**1159.00**	12386.81			
	Brick (30 km lead)	4207.00	No.	**3.18**	13378.26			
	Steel (30 Km lead)	3.38	MT	**742.00**	2504.40			
	TOTAL (In Rs.)				**3042944.15**			
	TOTAL (In Rs.)				**3042944.15**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	112.22	Cum	**584.64**	65608.55	6560.85		
	Coarse Aggregate	235.15	Cum	**944.26**	222046.49	22204.65		
	Boulders	10.69	Cum	**694.61**	7423.64	742.36		
	Total					29507.87		
	For 1 nos. fall, Total Seigniorage charges					**29507.87**		

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. 8.070 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.	478.627	Cum	**195.20**	93427.99			
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.	38.80	Cum	**6381.70**	247628.35	12.57	17.46	34.92
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.	287.33	Cum	**6914.20**	1986677.50	118.52	123.55	247.11
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.	2.32	Cum	**8151.40**	18939.66	1.32	0.91	1.84
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.	4.51	MT	**73574.90**	331905.74			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	549.01	Sqm	**578.60**	317659.99			
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.	50.54	Sqm	**680.10**	34369.53			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	7.27	Cum	**694.61**	5051.20			
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.	7.27	Cum	**1237.00**	8995.46			
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.	7.27	Cum	**1377.70**	10018.63			7.27
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.	7.27	Cum	**516.50**	3755.99			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	21.49	Sqm	**63.20**	1358.47			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	3.00	No.	**5588.70**	16766.10			
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	24.03	Cum	**149.30**	3587.35			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	141.921	Cum	**1075.00**	152564.67			
	Coarse Aggregates (60 Km lead)	291.136	Cum	**1398.00**	407008.81			
	Cement (30 km lead)	132.414	MT	**742.00**	98251.48			
	Boulder (60 Km lead)	7.27	Cum	**1159.00**	8428.25			
	Brick (30 km lead)	3032.00	No.	**3.18**	9641.76			
	Steel (30 Km lead)	4.51	MT	**742.00**	3347.26			
	TOTAL (In Rs.)				**3759384.19**			
	TOTAL (In Rs.) For RUIR BRANCH CANAL				**3668384.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	141.92	Cum	**584.64**	82972.47	8297.25		
	Coarse Aggregate	291.14	Cum	**944.26**	274908.54	27490.85		
	Boulders	7.27	Cum	**694.61**	5051.20	505.12		
	Total					36293.22		
	For 1 nos. fall, Total Seigniorage charges					**36293.22**		

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 1.676 METER AT CH. 8.410 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.	882.326	Cum	**195.20**	172230.10			
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.	45.84	Cum	**6381.70**	292529.04	14.85	20.63	41.25
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.	485.48	Cum	**6914.20**	3356723.54	200.26	208.76	417.52
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.	36.33	Cum	**8151.40**	296141.01	20.60	14.17	28.70
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.	10.31	MT	**73574.90**	758383.71			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	855.40	Sqm	**578.60**	494934.52			
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.	3.74	Sqm	**680.10**	2543.57			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	10.32	Cum	**694.61**	7170.46			
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.	10.32	Cum	**1237.00**	12769.55			
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.	3.24	Cum	**1377.70**	4463.75			3.24
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.	3.24	Cum	**516.50**	1673.46			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.38	Sqm	**63.20**	592.92			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	6.50	No.	**5588.70**	36326.55			
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	0.54	Cum	**149.30**	80.62			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	243.554	Cum	**1075.00**	261820.19			
	Coarse Aggregates (60 Km lead)	490.711	Cum	**1398.00**	686013.46			
	Cement (30 km lead)	235.712	MT	**742.00**	174898.65			
	Boulder (60 Km lead)	10.32	Cum	**1159.00**	11964.36			
	Brick (30 km lead)	224.00	No.	**3.18**	712.32			
	Steel (30 Km lead)	10.31	MT	**742.00**	7648.27			
	TOTAL (In Rs.)				**6579620.04**			
	TOTAL (In Rs.)				**6579620.04**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	243.55	Cum	**584.64**	142391.21	14239.12		
	Coarse Aggregate	490.71	Cum	**944.26**	463358.42	46335.84		
	Boulders	10.32	Cum	**694.61**	7170.46	717.05		
	Total					61292.01		
	For 1 nos. fall, Total Seigniorage charges					**61292.01**		

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 0.457 METER AT CH. 8.950 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.	426.439	Cum	**195.20**	83240.89			
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.	48.54	Cum	**6381.70**	309798.16	15.73	21.85	43.69
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.	212.90	Cum	**6914.20**	1472023.47	87.82	91.55	183.09
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.	28.33	Cum	**8151.40**	230953.62	16.06	11.05	22.38
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.	7.31	MT	**73574.90**	537467.90			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	520.55	Sqm	**578.60**	301190.57			
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.	47.38	Sqm	**680.10**	32221.44			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	6.82	Cum	**694.61**	4735.50			
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.	6.82	Cum	**1237.00**	8433.25			
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.	6.82	Cum	**1377.70**	9392.47			6.82
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.	6.82	Cum	**516.50**	3521.24			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.66	Sqm	**63.20**	926.58			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	3.00	No.	**5588.70**	16766.10			
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	101.89	Cum	**149.30**	15212.61			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	124.441	Cum	**1075.00**	133774.52			
	Coarse Aggregates (60 Km lead)	255.984	Cum	**1398.00**	357865.15			
	Cement (30 km lead)	119.614	MT	**742.00**	88753.58			
	Boulder (60 Km lead)	6.82	Cum	**1159.00**	7901.48			
	Brick (30 km lead)	2842.00	No.	**3.18**	9037.56			
	Steel (30 Km lead)	7.31	MT	**742.00**	5420.34			
	TOTAL (In Rs.)				**3628636.43**			
	TOTAL (In Rs.) For RUIR BRANCH CANAL				**3628636.43**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	124.44	Cum	**584.64**	72753.43	7275.34		
	Coarse Aggregate	255.98	Cum	**944.26**	241715.13	24171.51		
	Boulders	6.82	Cum	**694.61**	4735.50	473.55		
	Total					31920.41		
	For 1 nos. fall, Total Seigniorage charges					**31920.41**		

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)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 11.760 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.	345.704	Cum	**195.20**	67481.38			
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.	35.54	Cum	**6381.70**	226830.98	11.52	15.99	31.99
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.	223.75	Cum	**6914.20**	1547032.68	92.30	96.21	192.42
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.	2.09	Cum	**8151.40**	17005.45	1.18	0.81	1.65
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.	3.51	MT	**73574.90**	258456.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	464.94	Sqm	**578.60**	269014.17			
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.	47.80	Sqm	**680.10**	32508.78			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	6.48	Cum	**694.61**	4501.07			
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.	6.48	Cum	**1237.00**	8015.76			
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.	6.48	Cum	**1377.70**	8927.50			6.48
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.	6.48	Cum	**516.50**	3346.92			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	21.02	Sqm	**63.20**	1328.72			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	3.00	No.	**5588.70**	16766.10			
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	15.50	Cum	**149.30**	2313.99			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	113.020	Cum	**1075.00**	121496.17			
	Coarse Aggregates (60 Km lead)	232.540	Cum	**1398.00**	325091.26			
	Cement (30 km lead)	104.995	MT	**742.00**	77906.16			
	Boulder (60 Km lead)	6.48	Cum	**1159.00**	7510.32			
	Brick (30 km lead)	2868.00	No.	**3.18**	9120.24			
	Steel (30 Km lead)	3.51	Cum	**742.00**	2606.52			
	TOTAL (In Rs.)				**3007260.31**			
	TOTAL (In Rs.)				**3007260.31**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	113.02	Cum	**584.64**	66075.83	6607.58		
	Coarse Aggregate	232.54	Cum	**944.26**	219578.45	21957.84		
	Boulders	6.48	Cum	**694.61**	4501.07	450.11		
	Total					29015.54		
	For 1 nos. fall, Total Seigniorage charges					**29015.54**		

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 0.305 METER AT CH. 18.325 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.	127.581	Cum	**195.20**	24903.88			
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.	24.81	Cum	**6381.70**	158349.21	8.04	11.17	22.33
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.	108.69	Cum	**6914.20**	751473.59	44.83	46.73	93.47
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.	1.50	Cum	**8151.40**	12225.88	0.85	0.58	1.18
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.	1.71	MT	**73574.90**	125545.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	303.15	Sqm	**578.60**	175403.02			
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.	35.13	Sqm	**680.10**	23889.19			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.74	Cum	**694.61**	3291.41			
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.	4.74	Cum	**1237.00**	5861.52			
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.	4.74	Cum	**1377.70**	6528.23			4.74
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.	4.74	Cum	**516.50**	2447.44			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	16.07	Sqm	**63.20**	1015.88			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	3.00	No.	**5588.70**	16766.10			
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	13.82	Cum	**149.30**	2063.98			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	58.486	Cum	**1075.00**	62872.00			
	Coarse Aggregates (60 Km lead)	121.725	Cum	**1398.00**	170171.08			
	Cement (30 km lead)	53.723	MT	**742.00**	39862.18			
	Boulder (60 Km lead)	4.74	Cum	**1159.00**	5491.92			
	Brick (30 km lead)	2107.00	No.	**3.18**	6700.26			
	Steel (30 Km lead)	1.71	Cum	**742.00**	1266.12			
	TOTAL (In Rs.)				**1596128.38**			
	TOTAL (In Rs.)				**1596128.38**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	58.49	Cum	**584.64**	34193.01	3419.30		
	Coarse Aggregate	121.72	Cum	**944.26**	114939.73	11493.97		
	Boulders	4.74	Cum	**694.61**	3291.41	329.14		
	Total					15242.41		
	For 1 nos. fall, Total Seigniorage charges					**15242.41**		

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)
	SHARDA TYPE FALL OF HEIGHT 1.676 METER AT CH. 27.340 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.	312.244	Cum	**195.20**	60949.94			
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.	20.57	Cum	**6381.70**	131252.03	6.66	9.26	18.51
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.	163.57	Cum	**6914.20**	1130937.04	67.47	70.33	140.67
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.	13.13	Cum	**8151.40**	106993.85	7.44	5.12	10.37
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.	4.51	MT	**73574.90**	332033.06			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	400.93	Sqm	**578.60**	231980.73			
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.	14.01	Sqm	**680.10**	9529.56			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.96	Cum	**694.61**	666.83			
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.	0.96	Cum	**1237.00**	1187.52			
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.	0.96	Cum	**1377.70**	1322.59			0.96
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.	0.96	Cum	**516.50**	495.84			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.02	Sqm	**63.20**	380.24			
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	17.22	Cum	**149.30**	2570.37			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	84.708	Cum	**1075.00**	91061.24			
	Coarse Aggregates (60 Km lead)	170.508	Cum	**1398.00**	238369.52			
	Cement (30 km lead)	81.578	MT	**742.00**	60530.54			
	Boulder (60 Km lead)	0.96	Cum	**1159.00**	1112.64			
	Brick (30 km lead)	840.00	No.	**3.18**	2671.20			
	Steel (30 Km lead)	4.51	MT	**742.00**	3348.54			
	TOTAL (In Rs.)				**2418570.68**			
	TOTAL (In Rs.) For RUIR BRANCH CANAL				**2418570.68**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	84.71	Cum	**584.64**	49523.76	4952.38		
	Coarse Aggregate	170.51	Cum	**944.26**	161003.44	16100.34		
	Boulders	0.96	Cum	**694.61**	666.83	66.68		
	Total					21119.40		
	For 1 nos. fall, Total Seigniorage charges					**21119.40**		

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. 28.170 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.	199.651	Cum	**195.20**	38971.91			
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.	16.12	Cum	**6381.70**	102876.65	5.22	7.25	14.51
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.	110.84	Cum	**6914.20**	766404.27	45.72	47.66	95.33
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.	11.46	Cum	**8151.40**	93392.91	6.50	4.47	9.05
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.	3.15	MT	**73574.90**	231665.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	310.81	Sqm	**578.60**	179835.03			
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.	9.37	Sqm	**680.10**	6369.82			
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			0.45
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.	5.47	Sqm	**63.20**	345.43			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	45225.81			
15	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	8.09	Cum	**149.30**	1208.19			
16	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	59.386	Cum	**1075.00**	63839.88			
	Coarse Aggregates (60 Km lead)	119.336	Cum	**1398.00**	166832.34			
	Cement (30 km lead)	57.443	MT	**742.00**	42622.63			
	Boulder (60 Km lead)	0.45	Cum	**1159.00**	521.55			
	Brick (30 km lead)	562.00	No.	**3.18**	1787.16			
	Steel (30 Km lead)	3.15	MT	**742.00**	2336.34			
	TOTAL (In Rs.)				**1745957.02**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	59.39	Cum	**584.64**	34719.39	3471.94		
	Coarse Aggregate	119.34	Cum	**944.26**	112684.63	11268.46		
	Boulders	0.45	Cum	**694.61**	312.57	31.26		
	Total					14771.66		
	For 1 nos. fall, Total Seigniorage charges					**14771.66**		

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)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR PANTI MINOR							
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.890 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.	228.914	Cum	**195.20**	44684.02			
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.	15.55	Cum	**6381.70**	99206.97	5.04	7.00	13.99
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.	95.46	Cum	**6914.20**	660007.80	39.38	41.05	82.09
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.	1.06	Cum	**8151.40**	8630.50	0.60	0.41	0.84
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.	2.25	MT	**73574.90**	165397.04			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	264.52	Sqm	**578.60**	153050.32			
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.	12.07	Sqm	**680.10**	8205.41			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.43	Cum	**694.61**	989.82			
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.	1.43	Cum	**1237.00**	1762.73			
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.	1.43	Cum	**1377.70**	1963.22			1.43
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.	1.43	Cum	**516.50**	736.01			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.55	Sqm	**63.20**	793.19			
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	17.67	Cum	**149.30**	2637.74			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	48.455	Cum	**1075.00**	52088.98			
	Coarse Aggregates (60 Km lead)	98.345	Cum	**1398.00**	137486.75			
	Cement (30 km lead)	45.013	MT	**742.00**	33399.67			
	Boulder (60 Km lead)	1.43	Cum	**1159.00**	1651.58			
	Brick (30 km lead)	723.00	No.	**3.18**	2299.14			
	Steel (30 Km lead)	2.25	MT	**742.00**	1668.02			
	TOTAL (In Rs.)				**1387836.31**			
	TOTAL (In Rs.) For PANTI MINOR				**1387836.31**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	48.45	Cum	**584.64**	28328.65	2832.87		
	Coarse Aggregate	98.35	Cum	**944.26**	92863.55	9286.35		
	Boulders	1.43	Cum	**694.61**	989.82	98.98		
	Total					12218.20		

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)
	For 1 nos. fall, Total Seigniorage charges					12218.20		

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. 1.800 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.	75.320	Cum	**195.20**	14702.44			
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.	12.04	Cum	**6381.70**	76863.97	3.90	5.42	10.84
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.	44.96	Cum	**6914.20**	310843.42	18.54	19.33	38.66
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**	6728.82	0.47	0.32	0.65
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.	1.06	MT	**73574.90**	77896.93			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	161.54	Sqm	**578.60**	93466.95			
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.	12.07	Sqm	**680.10**	8205.41			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.43	Cum	**694.61**	989.82			
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.	1.43	Cum	**1237.00**	1762.73			
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.	1.43	Cum	**1377.70**	1963.22			1.43
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.	1.43	Cum	**516.50**	736.01			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.76	Sqm	**63.20**	616.81			
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	1.89	Cum	**149.30**	282.79			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	25.074	Cum	**1075.00**	26954.07			
	Coarse Aggregates (60 Km lead)	51.580	Cum	**1398.00**	72109.34			
	Cement (30 km lead)	22.915	MT	**742.00**	17003.16			
	Boulder (60 Km lead)	1.43	Cum	**1159.00**	1651.58			
	Brick (30 km lead)	723.00	No.	**3.18**	2299.14			
	Steel (30 Km lead)	1.06	MT	**742.00**	785.59			
	TOTAL (In Rs.)				**727039.57**			
	TOTAL (In Rs.) For PANTI MINOR				**727039.57**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.07	Cum	**584.64**	14659.00	1465.90		
	Coarse Aggregate	51.58	Cum	**944.26**	48705.27	4870.53		
	Boulders	1.43	Cum	**694.61**	989.82	98.98		
	Total					6435.41		
	For 1 nos. fall, Total Seigniorage charges					**6435.41**		

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)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.550 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.	113.096	Cum	**195.20**	22076.36			
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**	77917.27	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.	53.24	Cum	**6914.20**	368139.63	21.96	22.89	45.79
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.	0.89	Cum	**8151.40**	7280.50	0.51	0.35	0.71
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.	1.25	MT	**73574.90**	92255.28			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	180.22	Sqm	**578.60**	104276.84			
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.	11.70	Sqm	**680.10**	7957.17			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.05	Cum	**694.61**	729.34			
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.	1.05	Cum	**1237.00**	1298.85			
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.	1.05	Cum	**1377.70**	1446.59			1.05
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.	1.05	Cum	**516.50**	542.33			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.66	Sqm	**63.20**	673.91			
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	5.29	Cum	**149.30**	790.02			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	28.738	Cum	**1075.00**	30892.83			
	Coarse Aggregates (60 Km lead)	58.534	Cum	**1398.00**	81830.49			
	Cement (30 km lead)	26.425	MT	**742.00**	19607.68			
	Boulder (60 Km lead)	1.05	Cum	**1159.00**	1216.95			
	Brick (30 km lead)	702.00	No.	**3.18**	2232.36			
	Steel (30 Km lead)	1.25	MT	**742.00**	930.39			
	TOTAL (In Rs.)				**833272.19**			
	TOTAL (In Rs.) For PANTI MINOR				**833272.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	28.74	Cum	**584.64**	16801.10	1680.11		
	Coarse Aggregate	58.53	Cum	**944.26**	55271.29	5527.13		
	Boulders	1.05	Cum	**694.61**	729.34	72.93		

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)
	Total					7280.17		
	For 1 nos. fall, Total Seigniorage charges					**7280.17**		

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 1.067 METER AT CH. 3.000 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.	133.290	Cum	**195.20**	26018.17			
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.	13.06	Cum	**6381.70**	83328.06	4.23	5.88	11.75
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.	62.42	Cum	**6914.20**	431590.74	25.75	26.84	53.68
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.	0.98	Cum	**8151.40**	8025.46	0.56	0.38	0.78
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.	1.47	MT	**73574.90**	108156.04			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	198.08	Sqm	**578.60**	114608.60			
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.	11.70	Sqm	**680.10**	7957.17			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.05	Cum	**694.61**	729.34			
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.	1.05	Cum	**1237.00**	1298.85			
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.	1.05	Cum	**1377.70**	1446.59			1.05
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.	1.05	Cum	**516.50**	542.33			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.69	Sqm	**63.20**	738.87			
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	5.19	Cum	**149.30**	774.13			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	33.101	Cum	**1075.00**	35583.33			
	Coarse Aggregates (60 Km lead)	67.261	Cum	**1398.00**	94031.44			
	Cement (30 km lead)	30.537	MT	**742.00**	22658.79			
	Boulder (60 Km lead)	1.05	Cum	**1159.00**	1216.95			
	Brick (30 km lead)	702.00	No.	**3.18**	2232.36			
	Steel (30 Km lead)	1.47	MT	**742.00**	1090.75			
	TOTAL (In Rs.)				**953205.36**			
	TOTAL (In Rs.) For PANTI MINOR				**953205.36**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	33.10	Cum	**584.64**	19352.04	1935.20		
	Coarse Aggregate	67.26	Cum	**944.26**	63512.25	6351.22		
	Boulders	1.05	Cum	**694.61**	729.34	72.93		
	Total					8359.36		
	For 1 nos. fall, Total Seigniorage charges					**8359.36**		

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 CHAPRI MINOR							
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.000 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.	43.652	Cum	**195.20**	8520.95			
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.	7.78	Cum	**6381.70**	49672.37	2.52	3.50	7.01
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.	27.72	Cum	**6914.20**	191631.11	11.43	11.92	23.84
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.	0.54	Cum	**8151.40**	4420.10	0.31	0.21	0.43
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.	0.65	MT	**73574.90**	48022.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	119.86	Sqm	**578.60**	69352.72			
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.	5.88	Sqm	**680.10**	4001.03			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	**694.61**	125.03			
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.	0.18	Cum	**1237.00**	222.66			
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.	0.18	Cum	**1377.70**	247.99			0.18
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.	0.18	Cum	**516.50**	92.97			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.05	Sqm	**63.20**	571.64			
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	0.78	Cum	**149.30**	116.20			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	15.632	Cum	**1075.00**	16804.17			
	Coarse Aggregates (60 Km lead)	31.449	Cum	**1398.00**	43965.69			
	Cement (30 km lead)	14.262	MT	**742.00**	10582.41			
	Boulder (60 Km lead)	0.18	Cum	**1159.00**	208.62			
	Brick (30 km lead)	353.00	No.	**3.18**	1122.54			
	Steel (30 Km lead)	0.65	MT	**742.00**	484.30			
	TOTAL (In Rs.)				**461342.39**			
	TOTAL (In Rs.) For CHAPRI MINOR				***461342.39***			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.63	Cum	**584.64**	9138.97	913.90		
	Coarse Aggregate	31.45	Cum	**944.26**	29696.02	2969.60		
	Boulders	0.18	Cum	**694.61**	125.03	12.50		
	Total					3896.00		

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)
	For 1 no. fall, Total Seigniorage charges					**3896.00**		

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)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 1.850 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.	68.159	Cum	**195.20**	13304.73			
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.	5.88	Cum	**6381.70**	37528.64	1.91	2.65	5.29
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.	26.17	Cum	**6914.20**	180924.93	10.79	11.25	22.50
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**	4033.35	0.28	0.19	0.39
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.	0.62	MT	**73574.90**	45339.54			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	125.19	Sqm	**578.60**	72436.46			
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.	8.10	Sqm	**680.10**	5508.81			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.23	Cum	**694.61**	156.29			
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.	0.23	Cum	**1237.00**	278.33			
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.	0.23	Cum	**1377.70**	309.98			0.23
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.	0.23	Cum	**516.50**	116.21			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.22	Sqm	**63.20**	519.26			
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	2.01	Cum	**149.30**	299.93			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	14.091	Cum	**149.30**	2103.81			
	Coarse Aggregates (60 Km lead)	28.412	Cum	**0.00**	0.00			
	Cement (30 km lead)	12.980	MT	**1075.00**	13953.33			
	Boulder (60 Km lead)	0.23	Cum	**1398.00**	314.55			
	Brick (30 km lead)	486.00	No.	**3.18**	1545.48			
	Steel (30 Km lead)	0.62	MT	**742.00**	457.25			
	TOTAL (In Rs.)				**390308.27**			
	TOTAL (In Rs.) For CHAPRI MINOR				**390308.27**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	14.09	Cum	**584.64**	8238.25	823.82		
	Coarse Aggregate	28.41	Cum	**944.26**	26828.55	2682.85		
	Boulders	0.23	Cum	**694.61**	156.29	15.63		
	Total					3522.31		
	For 1 no. fall, Total Seigniorage charges					**3522.31**		

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)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR BISHUNPUR SUB-DY.							
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 0.000 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.	180.240	Cum	**195.20**	35182.76			
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.	25.99	Cum	**6381.70**	165860.98	8.42	11.70	23.39
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.	147.94	Cum	**6914.20**	1022855.87	61.02	63.61	127.22
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.	18.62	Cum	**8151.40**	151753.64	10.56	7.26	14.71
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.	4.52	MT	**73574.90**	332277.22			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	399.84	Sqm	**578.60**	231346.68			
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**	29145.69			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.38	Cum	**694.61**	2344.31			
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.	3.38	Cum	**1237.00**	4174.88			
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.	3.38	Cum	**1377.70**	4649.74			3.38
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.	3.38	Cum	**516.50**	1743.19			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.16	Sqm	**63.20**	515.56			
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	17.81	Cum	**149.30**	2659.64			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	82.568	Cum	**1075.00**	88761.04			
	Coarse Aggregates (60 Km lead)	168.698	Cum	**1398.00**	235839.77			
	Cement (30 km lead)	80.000	MT	**742.00**	59359.98			
	Boulder (60 Km lead)	3.38	Cum	**1159.00**	3911.63			
	Brick (30 km lead)	2571.00	No.	**3.18**	8175.78			
	Steel (30 Km lead)	4.52	MT	**742.00**	3351.00			
	TOTAL (In Rs.)				**2395086.73**			
	TOTAL (In Rs.)				**2395086.73**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	82.57	Cum	**584.64**	48272.79	4827.28		
	Coarse Aggregate	168.70	Cum	**944.26**	159294.75	15929.48		
	Boulders	3.38	Cum	**694.61**	2344.31	234.43		
	Total					20991.19		

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)
	For 1 nos. fall, Total Seigniorage charges					**20991.19**		

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. 4.550 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.	530.394	Cum	**195.20**	103532.83			
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.	30.45	Cum	**6381.70**	194312.86	9.87	13.70	27.40
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.	288.90	Cum	**6914.20**	1997536.53	119.17	124.23	248.46
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.	18.37	Cum	**8151.40**	149777.98	10.42	7.17	14.52
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.	7.84	MT	**73574.90**	576623.54			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	603.38	Sqm	**578.60**	349117.74			
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.	41.43	Sqm	**680.10**	28176.54			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.21	Cum	**694.61**	2227.09			
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.	3.21	Cum	**1237.00**	3966.13			
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.	3.21	Cum	**1377.70**	4417.25			3.21
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.	3.21	Cum	**516.50**	1656.03			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	0.00	Sqm	**63.20**	0.00			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	0.00	No.	**5588.70**	0.00			
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	7.92	Cum	**149.30**	1182.22			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	145.096	Cum	**1075.00**	155978.59			
	Coarse Aggregates (60 Km lead)	293.583	Cum	**1398.00**	410428.64			
	Cement (30 km lead)	139.456	MT	**742.00**	103476.60			
	Boulder (60 Km lead)	3.21	Cum	**1159.00**	3716.04			
	Brick (30 km lead)	2485.00	No.	**3.18**	7902.30			
	Steel (30 Km lead)	7.84	MT	**742.00**	5815.23			
	TOTAL (In Rs.)				**4099844.16**			
	TOTAL (In Rs.)				**4099844.16**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	145.10	Cum	**584.64**	84829.14	8482.91		
	Coarse Aggregate	293.58	Cum	**944.26**	277218.42	27721.84		
	Boulders	3.21	Cum	**694.61**	2227.09	222.71		
	Total					36427.46		
	For 1 nos. fall, Total Seigniorage charges					**36427.46**		

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)
	SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH. 5.880 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.	612.718	Cum	**195.20**	119602.55			
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.	29.70	Cum	**6381.70**	189510.75	9.62	13.36	26.73
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.	317.25	Cum	**6914.20**	2193517.00	130.86	136.42	272.83
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.	17.19	Cum	**8151.40**	140090.08	9.74	6.70	13.58
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.	8.42	MT	**73574.90**	619849.17			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	632.53	Sqm	**578.60**	365979.04			
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.	35.46	Sqm	**680.10**	24117.71			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.99	Cum	**694.61**	2078.62			
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.	2.99	Cum	**1237.00**	3701.72			
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.	2.99	Cum	**1377.70**	4122.77			2.99
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.	2.99	Cum	**516.50**	1545.63			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	0.00	Sqm	**63.20**	0.00			
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	33.99	Cum	**149.30**	5075.01			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	156.482	Cum	**1075.00**	168218.61			
	Coarse Aggregates (60 Km lead)	316.129	Cum	**1398.00**	441948.64			
	Cement (30 km lead)	150.231	MT	**742.00**	111471.27			
	Boulder (60 Km lead)	2.99	Cum	**1159.00**	3468.31			
	Brick (30 km lead)	2127.00	No.	**3.18**	6763.86			
	Steel (30 Km lead)	8.42	MT	**742.00**	6251.15			
	TOTAL (In Rs.)				**4418489.27**			
	TOTAL (In Rs.)				**4418489.27**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	156.48	Cum	**584.64**	91485.89	9148.59		
	Coarse Aggregate	316.13	Cum	**944.26**	298508.17	29850.82		
	Boulders	2.99	Cum	**694.61**	2078.62	207.86		
	Total					39207.27		
	For 1 nos. fall, Total Seigniorage charges					**39207.27**		

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)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR TETARIA MINOR							
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 1.220 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.	117.183	Cum	**195.20**	22874.12			
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.	10.60	Cum	**6381.70**	67665.56	3.44	4.77	9.54
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.	209.80	Cum	**6914.20**	1450632.53	86.54	90.22	180.43
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.	17.93	Cum	**8151.40**	146188.35	10.17	6.99	14.17
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.	5.97	MT	**73574.90**	439570.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	487.25	Sqm	**578.60**	281923.68			
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.	22.10	Sqm	**680.10**	15027.49			
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			0.36
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.	0.00	Sqm	**63.20**	0.00			
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	33.99	Cum	**149.30**	5075.01			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	101.982	Cum	**1075.00**	109630.40			
	Coarse Aggregates (60 Km lead)	204.503	Cum	**1398.00**	285895.02			
	Cement (30 km lead)	100.149	MT	**742.00**	74310.22			
	Boulder (60 Km lead)	0.36	Cum	**1159.00**	417.24			
	Brick (30 km lead)	1325.00	No.	**3.18**	4213.50			
	Steel (30 Km lead)	5.97	MT	**742.00**	4433.05			
	TOTAL (In Rs.)				**2920411.01**			
	TOTAL (In Rs.)				**2920411.01**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	101.98	Cum	**584.64**	59622.62	5962.26		
	Coarse Aggregate	204.50	Cum	**944.26**	193103.89	19310.39		
	Boulders	0.36	Cum	**694.61**	250.06	25.01		
	Total					25297.66		

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)
	For 1 nos. fall, Total Seigniorage charges					**25297.66**		

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)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KARMARI MINOR							
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 1.050 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.	61.083	Cum	**195.20**	11923.41			
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.	7.07	Cum	**6381.70**	45093.67	2.29	3.18	6.36
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.	32.19	Cum	**6914.20**	222553.09	13.28	13.84	27.68
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.	0.54	Cum	**8151.40**	4403.83	0.31	0.21	0.43
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.	0.76	MT	**73574.90**	55771.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	130.87	Sqm	**578.60**	75720.22			
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.	8.69	Sqm	**680.10**	5912.18			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.31	Cum	**694.61**	212.55			
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.	0.31	Cum	**1237.00**	378.52			0.31
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.	0.31	Cum	**1377.70**	421.58			
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.	0.31	Cum	**516.50**	158.05			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	0.00	Sqm	**63.20**	0.00			
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	2.01	Cum	**149.30**	299.93			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	17.231	Cum	**1075.00**	18523.55			
	Coarse Aggregates (60 Km lead)	34.774	Cum	**1398.00**	48613.79			
	Cement (30 km lead)	15.873	MT	**742.00**	11777.93			
	Boulder (60 Km lead)	0.31	Cum	**1159.00**	354.65			
	Brick (30 km lead)	521.00	No.	**3.18**	1656.78			
	Steel (30 Km lead)	0.76	MT	**742.00**	562.45			
	TOTAL (In Rs.)				**515515.07**			
	TOTAL (In Rs.)				**515515.07**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.23	Cum	**584.64**	10074.05	1007.41		
	Coarse Aggregate	34.77	Cum	**944.26**	32835.52	3283.55		
	Boulders	0.31	Cum	**694.61**	212.55	21.26		
	Total					4312.21		

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)
	For 1 nos. fall, Total Seigniorage charges					4312.21		

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)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR MIRZAPUR MINOR							
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.000 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.	61.170	Cum	**195.20**	11940.31			
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.	9.75	Cum	**6381.70**	62221.30	3.16	4.39	8.77
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.	35.25	Cum	**6914.20**	243705.10	14.54	15.16	30.31
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.	0.59	Cum	**8151.40**	4811.73	0.33	0.23	0.47
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.	0.83	MT	**73574.90**	61072.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	137.27	Sqm	**578.60**	79426.96			
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.	8.57	Sqm	**680.10**	5827.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.67	Cum	**694.61**	466.78			
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.	0.67	Cum	**1237.00**	831.26			
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.	0.67	Cum	**1377.70**	925.81			0.67
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.	0.67	Cum	**516.50**	347.09			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.45	Sqm	**63.20**	534.16			
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	2.24	Cum	**149.30**	334.21			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	19.774	Cum	**1075.00**	21256.97			
	Coarse Aggregates (60 Km lead)	40.226	Cum	**1398.00**	56235.60			
	Cement (30 km lead)	18.033	MT	**742.00**	13380.55			
	Boulder (60 Km lead)	0.67	Cum	**1159.00**	778.85			
	Brick (30 km lead)	514.00	No.	**3.18**	1634.52			
	Steel (30 Km lead)	0.83	MT	**742.00**	615.91			
	TOTAL (In Rs.)				**577523.76**			
	TOTAL (In Rs.)				**577523.76**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.77	Cum	**584.64**	11560.63	1156.06		
	Coarse Aggregate	40.23	Cum	**944.26**	37983.57	3798.36		
	Boulders	0.67	Cum	**694.61**	466.78	46.68		
	Total					5001.10		

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)
	For 1 no. fall, Total Seigniorage charges					5001.10		

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 OF HEIGHT 0.914 METER AT CH. 0.990 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.	89.072	Cum	**195.20**	17386.87			
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.	9.85	Cum	**6381.70**	62866.05	3.19	4.43	8.87
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.	40.26	Cum	**6914.20**	278347.33	16.61	17.31	34.62
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.	0.64	Cum	**8151.40**	5232.34	0.36	0.25	0.51
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.	0.95	MT	**73574.90**	69753.45			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	152.66	Sqm	**578.60**	88328.78			
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.	8.57	Sqm	**680.10**	5827.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.67	Cum	**694.61**	466.78			
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.	0.67	Cum	**1237.00**	831.26			
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.	0.67	Cum	**1377.70**	925.81			0.67
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.	0.67	Cum	**516.50**	347.09			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.45	Sqm	**63.20**	534.16			
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	4.94	Cum	**149.30**	736.88			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	21.994	Cum	**1075.00**	23643.49			
	Coarse Aggregates (60 Km lead)	44.666	Cum	**1398.00**	62443.49			
	Cement (30 km lead)	20.162	MT	**742.00**	14960.08			
	Boulder (60 Km lead)	0.67	Cum	**1159.00**	778.85			
	Brick (30 km lead)	514.00	No.	**3.18**	1634.52			
	Steel (30 Km lead)	0.95	MT	**742.00**	703.46			
	TOTAL (In Rs.)				**646925.19**			
	TOTAL (In Rs.)				**646925.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	21.99	Cum	**584.64**	12858.54	1285.85		
	Coarse Aggregate	44.67	Cum	**944.26**	42176.60	4217.66		
	Boulders	0.67	Cum	**694.61**	466.78	46.68		
	Total					5550.19		
	For 1 no. fall, Total Seigniorage charges					**5550.19**		

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 JASOEA MINOR							
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.150 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.	66.086	Cum	**195.20**	12899.95			
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.	9.49	Cum	**6381.70**	60575.82	3.08	4.27	8.54
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.	37.04	Cum	**6914.20**	256081.34	15.28	15.93	31.85
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.	0.61	Cum	**8151.40**	4966.53	0.35	0.24	0.48
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.	0.87	MT	**73574.90**	64173.63			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	142.19	Sqm	**578.60**	82271.58			
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.	8.57	Sqm	**680.10**	5827.10			
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			0.52
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.	9.12	Sqm	**63.20**	576.37			
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	2.32	Cum	**149.30**	346.67			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	20.435	Cum	**1075.00**	21967.61			
	Coarse Aggregates (60 Km lead)	41.392	Cum	**1398.00**	57866.12			
	Cement (30 km lead)	18.699	MT	**742.00**	13874.42			
	Boulder (60 Km lead)	0.52	Cum	**1159.00**	598.04			
	Brick (30 km lead)	514.00	No.	**3.18**	1634.52			
	Steel (30 Km lead)	0.87	MT	**742.00**	647.19			
	TOTAL (In Rs.)				**597458.39**			
	TOTAL (In Rs.)				**597458.39**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	20.43	Cum	**584.64**	11947.11	1194.71		
	Coarse Aggregate	41.39	Cum	**944.26**	39084.88	3908.49		
	Boulders	0.52	Cum	**694.61**	358.42	35.84		
	Total					5139.04		

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)
	For 1 nos. fall, Total Seigniorage charges					**5139.04**		

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)
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.050 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.	58.357	Cum	**195.20**	11391.26			
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.	9.31	Cum	**6381.70**	59409.54	3.02	4.19	8.38
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.	35.35	Cum	**6914.20**	244390.39	14.58	15.20	30.40
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**	4732.25	0.33	0.23	0.46
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.	0.83	MT	**73574.90**	61243.89			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	137.88	Sqm	**578.60**	79778.46			
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.	8.57	Sqm	**680.10**	5827.10			
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			0.52
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.	8.98	Sqm	**63.20**	567.72			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	3.00	No.	**5588.70**	16766.10			
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	2.20	Cum	**149.30**	329.19			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	19.614	Cum	**1075.00**	21085.56			
	Coarse Aggregates (60 Km lead)	39.751	Cum	**1398.00**	55571.55			
	Cement (30 km lead)	17.926	MT	**742.00**	13300.86			
	Boulder (60 Km lead)	0.52	Cum	**1159.00**	598.04			
	Brick (30 km lead)	514.00	No.	**3.18**	1634.52			
	Steel (30 Km lead)	0.83	MT	**742.00**	617.64			
	TOTAL (In Rs.)				**579218.19**			
	TOTAL (In Rs.)				**579218.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.61	Cum	**584.64**	11467.40	1146.74		
	Coarse Aggregate	39.75	Cum	**944.26**	37535.04	3753.50		
	Boulders	0.52	Cum	**694.61**	358.42	35.84		
	Total					4936.09		
	For 1 nos. fall, Total Seigniorage charges					**4936.09**		

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. 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.	135.597	Cum	**195.20**	26468.46			
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.	10.27	Cum	**6381.70**	65525.43	3.33	4.62	9.24
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.	58.62	Cum	**6914.20**	405336.42	24.18	25.21	50.42
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**	6352.26	0.44	0.30	0.62
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.	1.38	MT	**73574.90**	101576.74			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	192.91	Sqm	**578.60**	111617.11			
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.	6.93	Sqm	**680.10**	4710.71			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.33	Cum	**694.61**	226.10			
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.	0.33	Cum	**1237.00**	402.64			
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.	0.33	Cum	**1377.70**	448.44			0.33
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.	0.33	Cum	**516.50**	168.12			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.22	Sqm	**63.20**	645.76			
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	8.68	Cum	**149.30**	1296.51			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	30.133	Cum	**1075.00**	32392.55			
	Coarse Aggregates (60 Km lead)	60.599	Cum	**1398.00**	84716.71			
	Cement (30 km lead)	27.951	MT	**742.00**	20739.56			
	Boulder (60 Km lead)	0.33	Cum	**1159.00**	377.25			
	Brick (30 km lead)	415.00	No.	**3.18**	1319.70			
	Steel (30 Km lead)	1.38	MT	**742.00**	1024.40			
	TOTAL (In Rs.)				**876522.29**			
	TOTAL (In Rs.)				**876522.29**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	30.13	Cum	**584.64**	17616.73	1761.67		
	Coarse Aggregate	60.60	Cum	**944.26**	57220.75	5722.07		
	Boulders	0.33	Cum	**694.61**	226.10	22.61		
	Total					7506.36		
	For 1 nos. fall, Total Seigniorage charges					**7506.36**		

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. 2.150 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.	49.460	Cum	**195.20**	9654.59			
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.	7.25	Cum	**6381.70**	46286.30	2.35	3.26	6.53
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.	25.59	Cum	**6914.20**	176946.33	10.56	11.00	22.01
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.	0.50	Cum	**8151.40**	4072.72	0.28	0.19	0.39
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.	0.60	MT	**73574.90**	44342.50			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	112.84	Sqm	**578.60**	65287.72			
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.	5.21	Sqm	**680.10**	3541.96			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.14	Cum	**694.61**	93.77			
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.	0.14	Cum	**1237.00**	167.00			
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.	0.14	Cum	**1377.70**	185.99			0.14
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.	0.14	Cum	**516.50**	69.73			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.97	Sqm	**63.20**	503.56			
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	1.79	Cum	**149.30**	267.84			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	14.463	Cum	**1075.00**	15547.87			
	Coarse Aggregates (60 Km lead)	29.066	Cum	**1398.00**	40634.65			
	Cement (30 km lead)	13.190	MT	**742.00**	9786.86			
	Boulder (60 Km lead)	0.14	Cum	**1159.00**	156.47			
	Brick (30 km lead)	312.00	No.	**3.18**	992.16			
	Steel (30 Km lead)	0.60	MT	**742.00**	447.19			
	TOTAL (In Rs.)				**430162.62**			
	TOTAL (In Rs.)				**430162.62**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	14.46	Cum	**584.64**	8455.73	845.57		
	Coarse Aggregate	29.07	Cum	**944.26**	27446.12	2744.61		
	Boulders	0.14	Cum	**694.61**	93.77	9.38		
	Total					3599.56		
	For 1 nos. fall, Total Seigniorage charges					**3599.56**		

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 0.914 METER AT CH. 2.350 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.	63.983	Cum	**195.20**	12489.48			
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.	7.61	Cum	**6381.70**	48586.30	2.47	3.43	6.85
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.	30.13	Cum	**6914.20**	208349.71	12.43	12.96	25.91
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.	0.54	Cum	**8151.40**	4398.09	0.31	0.21	0.43
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.	0.71	MT	**73574.90**	52212.15			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	124.09	Sqm	**578.60**	71798.99			
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.	5.21	Sqm	**680.10**	3541.96			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.14	Cum	**694.61**	93.77			
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.	0.14	Cum	**1237.00**	167.00			
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.	0.14	Cum	**1377.70**	185.99			0.14
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.	0.14	Cum	**516.50**	69.73			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.23	Sqm	**63.20**	519.88			
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	3.79	Cum	**149.30**	565.85			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	16.594	Cum	**1075.00**	17838.43			
	Coarse Aggregates (60 Km lead)	33.328	Cum	**1398.00**	46592.79			
	Cement (30 km lead)	15.203	MT	**742.00**	11280.45			
	Boulder (60 Km lead)	0.14	Cum	**1159.00**	156.47			
	Brick (30 km lead)	312.00	No.	**3.18**	992.16			
	Steel (30 Km lead)	0.71	MT	**742.00**	526.56			
	TOTAL (In Rs.)				**491016.59**			
	TOTAL (In Rs.)				**491016.59**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	16.59	Cum	**584.64**	9701.45	970.15		
	Coarse Aggregate	33.33	Cum	**944.26**	31470.46	3147.05		
	Boulders	0.14	Cum	**694.61**	93.77	9.38		
	Total					4126.57		
	For 1 nos. fall, Total Seigniorage charges					**4126.57**		

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)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR SENDHOKHAP MINOR							
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 1.600 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.	48.231	Cum	**195.20**	9414.67			
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.	6.77	Cum	**6381.70**	43176.60	2.19	3.04	6.09
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.	25.34	Cum	**6914.20**	175176.74	10.45	10.89	21.79
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.	0.47	Cum	**8151.40**	3829.53	0.27	0.18	0.37
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.	0.60	MT	**73574.90**	43899.05			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	110.97	Sqm	**578.60**	64208.01			
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.	5.40	Sqm	**680.10**	3670.50			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	**694.61**	125.03			
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.	0.18	Cum	**1237.00**	222.66			
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.	0.18	Cum	**1377.70**	247.99			0.18
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.	0.18	Cum	**516.50**	92.97			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.60	Sqm	**63.20**	480.07			
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	1.48	Cum	**149.30**	221.30			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	14.122	Cum	**1075.00**	15181.34			
	Coarse Aggregates (60 Km lead)	28.429	Cum	**1398.00**	39743.80			
	Cement (30 km lead)	12.909	MT	**742.00**	9578.83			
	Boulder (60 Km lead)	0.18	Cum	**1159.00**	208.62			
	Brick (30 km lead)	323.00	No.	**3.18**	1027.14			
	Steel (30 Km lead)	0.60	MT	**742.00**	442.72			
	TOTAL (In Rs.)				**422124.95**			
	TOTAL (In Rs.)				**422124.95**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	14.12	Cum	**584.64**	8256.39	825.64		
	Coarse Aggregate	28.43	Cum	**944.26**	26844.41	2684.44		
	Boulders	0.18	Cum	**694.61**	125.03	12.50		
	Total					3522.58		

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)
	For 1 nos. fall, Total Seigniorage charges					**3522.58**		

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 1.220 METER AT CH. 2.060 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.	136.781	Cum	**195.20**	26699.73			
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.	12.29	Cum	**6381.70**	78436.86	3.98	5.53	11.06
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.	67.04	Cum	**6914.20**	463555.58	27.66	28.83	57.66
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.	12.09	Cum	**8151.40**	98535.93	6.85	4.71	9.55
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.	1.94	MT	**73574.90**	142590.43			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	221.23	Sqm	**578.60**	128002.98			
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.	5.07	Sqm	**680.10**	3450.15			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.14	Cum	**694.61**	93.77			
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.	0.14	Cum	**1237.00**	167.00			0.14
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.	0.14	Cum	**1377.70**	185.99			
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.	0.14	Cum	**516.50**	69.73			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.96	Sqm	**63.20**	692.46			
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	9.01	Cum	**149.30**	1345.61			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	39.074	Cum	**1075.00**	42004.80			
	Coarse Aggregates (60 Km lead)	78.404	Cum	**1398.00**	109609.27			
	Cement (30 km lead)	38.492	MT	**742.00**	28561.01			
	Boulder (60 Km lead)	0.14	Cum	**1159.00**	156.47			
	Brick (30 km lead)	304.00	No.	**3.18**	966.72			
	Steel (30 Km lead)	1.94	MT	**742.00**	1438.02			
	TOTAL (In Rs.)				**1137739.88**			
	TOTAL (In Rs.)				**1137739.88**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	39.07	Cum	**584.64**	22844.36	2284.44		
	Coarse Aggregate	78.40	Cum	**944.26**	74034.08	7403.41		
	Boulders	0.14	Cum	**694.61**	93.77	9.38		
	Total					9697.22		

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)
	For 1 nos. fall, Total Seigniorage charges					**9697.22**		

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)
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL (1.219 M) FOR RUIR BRANCH CANAL AT RD 2.720 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.	524.091	Cum	**195.20**	102302.51			
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.	40.15	Cum	**6381.70**	256210.26	13.01	18.07	36.13
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.	323.33	Cum	**6914.20**	2235546.71	133.37	139.03	278.06
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.	2.25	Cum	**8151.40**	18378.06	1.28	0.88	1.78
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.	5.08	MT	**73574.90**	373483.26			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	583.80	Sqm	**578.60**	337788.34			
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.	69.78	Sqm	**680.10**	47455.68			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	51.89	Cum	**694.61**	36044.28			
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.	51.89	Cum	**1237.00**	64189.65			
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.	10.69	Cum	**1377.70**	14724.17			10.69
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.	10.69	Cum	**516.50**	5520.09			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.79	Sqm	**63.20**	1314.04			
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	173.20	Cum	**149.30**	25858.82			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	157.976	Cum	**1075.00**	169824.51			
	Coarse Aggregates (60 Km lead)	326.663	Cum	**1398.00**	456674.35			
	Cement (30 km lead)	147.659	MT	**742.00**	109562.63			
	Boulder (60 Km lead)	51.89	Cum	**1159.00**	60142.12			
	Brick (30 km lead)	4186.00	No.	**3.18**	13311.48			
	Steel (30 Km lead)	5.08	MT	**742.00**	3766.56			
	TOTAL (In Rs.)				**4343274.93**			
	TOTAL (In Rs.)				**4343274.93**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	157.98	Cum	**584.64**	92359.26	9235.93		
	Coarse Aggregate	326.66	Cum	**944.26**	308454.45	30845.45		
	Boulders	51.89	Cum	**694.61**	36044.28	3604.43		
	Total					43685.80		
	For 1 nos. fall, Total Seigniorage charges					**43685.80**		

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 SHARDA TYPE FALL (1.219 M) FOR RUIR BRANCH CANAL AT RD 7.220 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.	519.153	Cum	**195.20**	101338.58			
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.	39.28	Cum	**6381.70**	250650.58	12.73	17.67	35.35
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.	291.46	Cum	**6914.20**	2015238.76	120.23	125.33	250.66
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.	1.98	Cum	**8151.40**	16178.29	1.13	0.77	1.57
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.	4.58	MT	**73574.90**	336677.35			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	554.21	Sqm	**578.60**	320664.22			
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.	50.53	Sqm	**680.10**	34364.09			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	48.19	Cum	**694.61**	33471.26			
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.	48.19	Cum	**1237.00**	59607.47			
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.	7.27	Cum	**1377.70**	10018.63			
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.	7.27	Cum	**516.50**	3755.99			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	19.71	Sqm	**63.20**	1245.96			
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	142.30	Cum	**149.30**	21245.50			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	143.778	Cum	**1075.00**	154561.21			
	Coarse Aggregates (60 Km lead)	294.848	Cum	**1398.00**	412196.92			
	Cement (30 km lead)	134.080	MT	**742.00**	99487.15			
	Boulder (60 Km lead)	48.19	Cum	**1159.00**	55848.88			
	Brick (30 km lead)	3031.00	No.	**3.18**	9638.58			
	Steel (30 Km lead)	4.58	MT	**742.00**	3395.38			
	TOTAL (In Rs.)				**3950762.19**			
	TOTAL (In Rs.)				**3950762.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	143.78	Cum	**584.64**	84058.29	8405.83		
	Coarse Aggregate	294.85	Cum	**944.26**	278412.78	27841.28		
	Boulders	48.19	Cum	**694.61**	33471.26	3347.13		
	Total					39594.23		
	For 1 nos. fall, Total Seigniorage charges					**39594.23**		

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 SHARDA TYPE FALL (1.830 M) FOR RUIR BRANCH CANAL AT RD 16.870 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.	413.080	Cum	**195.20**	80633.24			
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.	37.23	Cum	**6381.70**	237568.28	12.06	16.75	33.50
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.	273.11	Cum	**6914.20**	1888332.48	112.66	117.44	234.87
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.	1.51	Cum	**8151.40**	12343.26	0.86	0.59	1.20
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.	4.29	MT	**73574.90**	315475.66			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	530.52	Sqm	**578.60**	306959.40			
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.	43.22	Sqm	**680.10**	29396.64			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	26.71	Cum	**694.61**	18554.42			
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.	26.71	Cum	**1237.00**	33042.74			
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.	5.83	Cum	**1377.70**	8034.75			5.83
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.	5.83	Cum	**516.50**	3012.23			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.91	Sqm	**63.20**	878.80			
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	120.02	Cum	**149.30**	17918.87			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	134.779	Cum	**1075.00**	144887.95			
	Coarse Aggregates (60 Km lead)	275.406	Cum	**1398.00**	385017.75			
	Cement (30 km lead)	125.578	MT	**742.00**	93178.55			
	Boulder (60 Km lead)	26.71	Cum	**1159.00**	30959.21			
	Brick (30 km lead)	2593.00	No.	**3.18**	8245.74			
	Steel (30 Km lead)	4.29	Cum	**742.00**	3181.56			
	TOTAL (In Rs.)				**3628798.92**			
	TOTAL (In Rs.)				**3628798.92**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	134.78	Cum	**584.64**	78797.48	7879.75		
	Coarse Aggregate	275.41	Cum	**944.26**	260054.98	26005.50		
	Boulders	26.71	Cum	**694.61**	18554.42	1855.44		
	Total					35740.69		
	For 1 nos. fall, Total Seigniorage charges					**35740.69**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR RIUR BRANCH CANAL.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.400 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.						
		1		309.17		**309.17**	**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*	*0.542*	*9.10*	*0.15*	*0.74*	*Cum*
		1	*0.671*	*9.10*	*0.15*	*0.92*	*Cum*
		1	*6.177*	*9.10*	*0.15*	*8.43*	*Cum*
		1	*0.424*	*9.10*	*0.15*	*0.58*	*Cum*
		1	*0.688*	*9.10*	*0.15*	*0.94*	*Cum*
		1	*1.006*	*9.10*	*0.15*	*1.37*	*Cum*
		1	*0.542*	*9.10*	*0.15*	*0.74*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.74*	*2.15*	*0.15*	*1.12*	*Cum*
	Section 2-2	*2*	*4.45*	*1.78*	*0.15*	*2.38*	*Cum*
	Section 3-3	*2*	*0.96*	*1.66*	*0.15*	*0.48*	*Cum*
	Section 5-5	*2*	*8.87*	*2.30*	*0.15*	*6.12*	*Cum*
	Section 6-6	*2*	*6.01*	*1.66*	*0.15*	*3.00*	*Cum*
	Toe Wall D/S Portion	*1*	*22.34*	*0.75*	*0.30*	*5.03*	*Cum*
	Toe Wall D/S Portion	*1*	*22.04*	*0.45*	*0.60*	*5.95*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.75*	*0.60*	*0.15*	*0.86*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.75*	*0.30*	*0.60*	*1.71*	*Cum*
	TOTAL					**40.35**	**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 1-1	*2*	*1.51*	*0.45*	*0.45*	*0.61*	*Cum*
		2	*1.51*	*1.15*	*2.33*	*8.10*	*Cum*
		2	*1.51*	*2.00*	*0.60*	*3.63*	*Cum*
	Section 2-2	*2*	*4.45*	*0.45*	*0.45*	*1.80*	*Cum*
		2	*4.45*	*0.97*	*1.72*	*14.79*	*Cum*
		2	*4.45*	*1.63*	*0.60*	*8.71*	*Cum*
	Section 3-3	*2*	*1.19*	*0.45*	*0.45*	*0.48*	*Cum*
		2	*1.19*	*0.91*	*1.52*	*3.26*	*Cum*
		2	*1.19*	*1.51*	*0.50*	*1.79*	*Cum*
	Section 5-5	*2*	*5.94*	*0.45*	*0.45*	*2.41*	*Cum*
		2	*5.94*	*1.15*	*2.33*	*31.80*	*Cum*
		2	*5.94*	*2.00*	*0.60*	*14.24*	*Cum*
	Section 6-6	*2*	*8.83*	*0.45*	*0.45*	*3.58*	*Cum*
		2	*8.83*	*0.91*	*1.52*	*24.32*	*Cum*
		2	*8.83*	*1.51*	*0.50*	*13.35*	*Cum*
	Floor	*1*	*0.60*	*9.10*	*0.60*	*3.28*	*Cum*
		1	*6.75*	*9.10*	*0.60*	*36.86*	*Cum*
		1	*0.36*	*9.10*	*0.30*	*0.97*	*Cum*
		1	*0.20*	*9.10*	*0.40*	*0.73*	*Cum*
		1	*2.05*	*9.10*	*0.50*	*9.33*	*Cum*
		1	*0.68*	*9.10*	*0.90*	*5.53*	*Cum*
	Crest	*1*	*1.47*	*9.10*	*1.35*	*18.02*	*Cum*
	TOTAL					**207.58**	**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*	*1.25*	*9.10*	*0.15*	*1.71*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*22.92*	*0.45*	*0.05*	*0.52*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*22.92*	*0.45*	*0.05*	*0.52*	*Cum*
	TOTAL					**2.74**	**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 @0.2% of M-20	**207.58**	**0.20%**	**0.42**	**7850**	**3258.94**	**Kg**
	Total Weight in Metric Tonne					**3.26**	**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*	*1.51*		*0.45*	*2.72*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.51*		*2.33*	*14.10*	*Sqm*
		4		*1.15*	*2.33*	*10.71*	*Sqm*
		4	*1.51*		*0.60*	*3.63*	*Sqm*
		4		*2.00*	*0.60*	*4.80*	*Sqm*
	Section 2-2	*4*	*4.45*		*0.45*	*8.01*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.45*		*1.72*	*30.62*	*Sqm*
		4		*0.97*	*1.72*	*6.65*	*Sqm*
		4	*4.45*		*0.60*	*10.68*	*Sqm*
		4		*1.63*	*0.60*	*3.92*	*Sqm*
	Section 3-3	*4*	*1.19*		*0.45*	*2.13*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.19*		*1.52*	*7.20*	*Sqm*
		4		*0.91*	*1.52*	*5.51*	*Sqm*
		4	*1.19*		*0.50*	*2.37*	*Sqm*
		4		*1.51*	*0.50*	*3.02*	*Sqm*
	Section 5-5	*4*	*5.94*		*0.45*	*10.69*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*5.94*		*2.33*	*55.35*	*Sqm*
		4		*1.15*	*2.33*	*10.71*	*Sqm*
		4	*5.94*		*0.60*	*14.25*	*Sqm*
		4		*2.00*	*0.60*	*4.80*	*Sqm*
	Section 6-6	*4*	*8.83*		*0.45*	*15.89*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*8.83*		*1.52*	*53.68*	*Sqm*
		4		*0.91*	*1.52*	*5.51*	*Sqm*
		4	*8.83*		*0.50*	*17.66*	*Sqm*
		4		*1.51*	*0.50*	*3.02*	*Sqm*
	Floor	*2*	*0.60*		*0.60*	*0.72*	*Sqm*
		2		*9.10*	*0.60*	*10.92*	*Sqm*
		2	*6.75*		*0.60*	*8.10*	*Sqm*
		2		*9.10*	*0.60*	*10.92*	*Sqm*
		2	*0.36*		*0.30*	*0.21*	*Sqm*
		2		*9.10*	*0.30*	*5.46*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*9.10*	*0.40*	*7.28*	*Sqm*
		2	*2.05*		*0.50*	*2.05*	*Sqm*
		2		*9.10*	*0.50*	*9.10*	*Sqm*
		2	*0.68*		*0.90*	*1.22*	*Sqm*
		2		*9.10*	*0.90*	*16.38*	*Sqm*
	Crest	*2*	*1.4665*		*1.35*	*3.96*	*Sqm*
		2		*9.1*	*1.35*	*24.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*22.34*		*0.30*	*13.40*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*22.04*		*0.60*	*26.45*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.75*		*0.15*	*2.85*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.75*		*0.60*	*11.40*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**468.91**	**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*	*4.75*	*6.93*		*65.84*	*Sqm*
	TOTAL					**65.84**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.75*	*8.50*	*0.30*	**12.11**	**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	*4.75*	*8.50*	*0.15*	**12.11**	**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*	*22.92*	*0.45*		*10.31*	*Sqm*
	On Abutment Top (Right Side)	*1*	*22.92*	*0.45*		*10.31*	*Sqm*
	TOTAL					**20.63**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4			**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						
		1		9.15		9.15	**Cum**
	TOTAL					**9.15**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL (1.219 M) FOR RUIR BRANCH CANAL AT RD 2.720 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*	*4.70*	*2.694*	*3.540*	*89.550*	*Cum*
	Section 2-2	*2*	*4.92*	*1.932*	*3.540*	*67.299*	*Cum*
	Section 3-3	*2*	*2.78*	*1.812*	*3.340*	*33.650*	*Cum*
	Section 5-5	*1*	*10.39*	*2.844*	*3.540*	*104.574*	*Cum*
	Section 6-6	*2*	*5.06*	*1.812*	*3.340*	*61.283*	*Cum*
	Floor	*1*	*0.68*	*8.100*	*1.050*	*5.741*	*Cum*
		1	*2.04*	*8.100*	*0.750*	*12.387*	*Cum*
		1	*0.75*	*8.100*	*0.450*	*2.734*	*Cum*
		1	*6.82*	*8.100*	*1.050*	*57.987*	*Cum*
		1	*0.45*	*8.100*	*0.557*	*2.030*	*Cum*
		1	*0.53*	*8.100*	*0.350*	*1.488*	*Cum*
		1	*2.75*	*8.100*	*0.800*	*17.820*	*Cum*
		1	*0.75*	*8.100*	*1.350*	*8.201*	*Cum*
	Toe Wall D/S Portion	*1*	*11.05*	*0.750*	*0.900*	*7.455*	*Cum*
	Boulder Pitching in U/S Portion	*1*	*10.06*	*9.100*	*0.450*	*41.204*	*Cum*
	Boulder Pitching in D/S Portion	*1*	*4.75*	*7.500*	*0.300*	*10.688*	*Cum*
						524.09	**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*	*8.100*	*0.150*	*0.66*	*Cum*
		1	*1.01*	*8.100*	*0.150*	*1.22*	*Cum*
		1	*0.98*	*8.100*	*0.150*	*1.20*	*Cum*
		1	*0.42*	*8.100*	*0.150*	*0.52*	*Cum*
		1	*6.94*	*8.100*	*0.150*	*8.43*	*Cum*
		1	*0.71*	*8.100*	*0.150*	*0.86*	*Cum*
		1	*0.94*	*8.100*	*0.150*	*1.14*	*Cum*
		1	*1.79*	*8.100*	*0.150*	*2.17*	*Cum*
		1	*0.54*	*8.100*	*0.150*	*0.66*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*4.70*	*2.694*	*0.150*	*3.79*	*Cum*
	Section 2-2	*2*	*4.92*	*1.932*	*0.150*	*2.85*	*Cum*
	Section 3-3	*2*	*2.78*	*1.812*	*0.150*	*1.51*	*Cum*
	Section 5-5	*1*	*10.39*	*2.844*	*0.150*	*4.43*	*Cum*
	Section 6-6	*2*	*5.06*	*1.812*	*0.150*	*2.75*	*Cum*
	Toe Wall D/S Portion	*1*	*11.05*	*0.750*	*0.300*	*2.49*	*Cum*
	Toe Wall D/S Portion	*1*	*10.75*	*0.450*	*0.600*	*2.90*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.75*	*0.600*	*0.150*	*0.86*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.75*	*0.300*	*0.600*	*1.71*	*Cum*
	TOTAL					**40.15**	**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*	*4.62*	*0.450*	*0.450*	*1.87*	*Cum*
		2	*4.62*	*1.422*	*3.240*	*42.57*	*Cum*
		2	*4.62*	*2.544*	*0.600*	*14.10*	*Cum*
	Section 2-2	*2*	*4.92*	*0.450*	*0.450*	*1.99*	*Cum*
		2	*4.92*	*1.041*	*1.970*	*20.18*	*Cum*
		2	*4.92*	*1.782*	*0.900*	*15.78*	*Cum*
	Section 3-3	*2*	*2.01*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.01*	*0.981*	*1.770*	*6.99*	*Cum*
		2	*2.01*	*1.662*	*0.650*	*4.35*	*Cum*
	Section 5-5	*1*	*10.39*	*0.450*	*0.450*	*2.10*	*Cum*
		1	*10.39*	*1.422*	*3.240*	*47.86*	*Cum*
		1	*10.39*	*2.544*	*0.600*	*15.85*	*Cum*
	Section 6-6	*2*	*5.96*	*0.450*	*0.450*	*2.41*	*Cum*
		2	*5.96*	*0.981*	*1.770*	*20.69*	*Cum*
		2	*5.96*	*1.662*	*0.650*	*12.87*	*Cum*
	Floor	*1*	*0.68*	*8.100*	*0.900*	*4.92*	*Cum*
		1	*2.04*	*8.100*	*0.600*	*9.91*	*Cum*
		1	*0.75*	*8.100*	*0.300*	*1.82*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*6.82*	*8.100*	*0.900*	*49.70*	*Cum*
		1	*0.45*	*8.100*	*0.407*	*1.48*	*Cum*
		1	*0.53*	*8.100*	*0.200*	*0.85*	*Cum*
		1	*2.75*	*8.100*	*0.650*	*14.48*	*Cum*
		1	*0.75*	*8.100*	*1.200*	*7.29*	*Cum*
	Crest	*1*	*1.33*	*8.100*	*2.082*	*22.44*	*Cum*
	TOTAL					**323.33**	**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*	*8.100*	*0.150*	*1.22*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*23.10*	*0.450*	*0.050*	*0.52*	*Cum*
	On Abutment Top (Right Side)	*1*	*23.10*	*0.450*	*0.050*	*0.52*	*Cum*
	TOTAL					**2.25**	**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 @0.2% of M-20	**323.33**	**0.002**	**0.647**	**7850.0**	**5076.23**	**Kg**
	Total Weight in Metric Tonne					**5.08**	**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*	*4.62*		*0.450*	*8.32*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.62*		*3.240*	*59.88*	*Sqm*
		4		*1.422*	*3.240*	*18.43*	*Sqm*
		4	*4.62*		*0.600*	*11.09*	*Sqm*
		4		*2.544*	*0.600*	*6.11*	*Sqm*
	Section 2-2	*4*	*4.92*		*0.450*	*8.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.92*		*1.970*	*38.77*	*Sqm*
		4		*1.041*	*1.970*	*8.20*	*Sqm*
		4	*4.92*		*0.900*	*17.71*	*Sqm*
		4		*1.782*	*0.900*	*6.42*	*Sqm*
	Section 3-3	*4*	*2.01*		*0.450*	*3.62*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.01*		*1.770*	*14.24*	*Sqm*
		4		*0.981*	*1.770*	*6.95*	*Sqm*
		4	*2.01*		*0.650*	*5.23*	*Sqm*
		4		*1.662*	*0.650*	*4.32*	*Sqm*
	Section 5-5	*2*	*10.39*		*0.450*	*9.35*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
		2	*10.39*		*3.240*	*67.31*	*Sqm*
		2		*1.422*	*3.240*	*9.21*	*Sqm*
		2	*10.39*		*0.600*	*12.46*	*Sqm*
		2		*2.544*	*0.600*	*3.05*	*Sqm*
	Section 6-6	*4*	*5.96*		*0.450*	*10.72*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.96*		*1.770*	*42.17*	*Sqm*
		4		*0.981*	*1.770*	*6.95*	*Sqm*
		4	*5.96*		*0.650*	*15.49*	*Sqm*
		4		*1.662*	*0.650*	*4.32*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*8.100*	*0.900*	*14.58*	*Sqm*
		2	*2.04*		*0.600*	*2.45*	*Sqm*
		2		*8.100*	*0.600*	*9.72*	*Sqm*
		2	*0.75*		*0.300*	*0.45*	*Sqm*
		2		*8.100*	*0.300*	*4.86*	*Sqm*
		2	*6.82*		*0.900*	*12.27*	*Sqm*
		2		*8.100*	*0.900*	*14.58*	*Sqm*
		2	*0.450*		*0.407*	*0.37*	*Sqm*
		2		*8.100*	*0.407*	*6.59*	*Sqm*
		2	*0.53*		*0.200*	*0.21*	*Sqm*
		2		*8.100*	*0.200*	*3.24*	*Sqm*
		2	*2.75*		*0.650*	*3.58*	*Sqm*
		2		*8.100*	*0.650*	*10.53*	*Sqm*
		2	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*8.100*	*1.200*	*19.44*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.33*		*2.082*	*5.54*	*Sqm*
		2		*8.100*	*2.082*	*33.73*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.05*		*0.300*	*6.63*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*10.75*		*0.600*	*12.89*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.75*		*0.150*	*2.85*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.75*		*0.600*	*11.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**583.80**	**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*	*4.75*	*7.345*		*69.78*	*Sqm*
	TOTAL					**69.78**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Pitching in U/S Portion	*1*	*10.06*	*9.100*	*0.450*	**41.20**	**Cum**
	Boulder Pitching in D/S Portion	*1*	*4.75*	*7.500*	*0.300*	**10.69**	**Cum**
	TOTAL					**51.89**	**Sqm**
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	*4.75*	*7.500*	*0.150*	**10.69**	**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*	*23.10*	*0.450*		*10.40*	*Sqm*
	On Abutment Top (Right Side)	*1*	*23.10*	*0.450*		*10.40*	*Sqm*
	TOTAL					**20.79**	**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		21.146		21.15	**Cum**
	Abutment						
	Section 1-1	2	*4.70*	*4.478*		*42.048*	*Cum*
	Section 2-2	2	*4.92*	*2.557*		*25.161*	*Cum*
	Section 3-3	2	*2.78*	*2.178*		*12.110*	*Cum*
	Section 5-5	1	*10.39*	*4.478*		*46.513*	*Cum*
	Section 6-6	2	*5.06*	*2.178*		*22.054*	*Cum*
	D/S protection						
	Toe wall	2	*11.05*	*0.150*	*0.600*	*3.314*	*Cum*
		2	*4.75*	0.150	*0.600*	*0.855*	*Cum*
	TOTAL					**173.20**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 3.630 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.						
		1		322.44		**322.44**	**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*	*0.542*	*8.10*	*0.15*	*0.66*	*Cum*
		1	*1.202*	*8.10*	*0.15*	*1.46*	*Cum*
		1	*6.000*	*8.10*	*0.15*	*7.29*	*Cum*
		1	*0.424*	*8.10*	*0.15*	*0.52*	*Cum*
		1	*1.438*	*8.10*	*0.15*	*1.75*	*Cum*
		1	*1.006*	*8.10*	*0.15*	*1.22*	*Cum*
		1	*0.542*	*8.10*	*0.15*	*0.66*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.60*	*2.30*	*0.15*	*1.10*	*Cum*
	Section 2-2	*2*	*4.20*	*1.93*	*0.15*	*2.43*	*Cum*
	Section 3-3	*2*	*2.50*	*1.81*	*0.15*	*1.36*	*Cum*
	Section 5-5	*2*	*9.28*	*2.45*	*0.15*	*6.81*	*Cum*
	Section 6-6	*2*	*5.18*	*1.96*	*0.15*	*3.05*	*Cum*
	Toe Wall D/S Portion	*1*	*22.09*	*0.75*	*0.30*	*4.97*	*Cum*
	Toe Wall D/S Portion	*1*	*21.79*	*0.45*	*0.60*	*5.88*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.75*	*0.60*	*0.15*	*0.86*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.75*	*0.30*	*0.60*	*1.71*	*Cum*
	TOTAL					**41.73**	**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 1-1	*2*	*1.37*	*0.45*	*0.45*	*0.56*	*Cum*
		2	*1.37*	*1.00*	*2.58*	*7.08*	*Cum*
		2	*1.37*	*2.15*	*0.60*	*3.54*	*Cum*
	Section 2-2	*2*	*4.20*	*0.45*	*0.45*	*1.70*	*Cum*
		2	*4.20*	*0.82*	*1.97*	*13.50*	*Cum*
		2	*4.20*	*1.78*	*0.60*	*8.98*	*Cum*
	Section 3-3	*2*	*1.82*	*0.45*	*0.45*	*0.74*	*Cum*
		2	*1.82*	*0.76*	*1.77*	*4.87*	*Cum*
		2	*1.82*	*1.66*	*0.50*	*3.02*	*Cum*
	Section 5-5	*2*	*9.24*	*0.45*	*0.45*	*3.74*	*Cum*
		2	*9.24*	*1.00*	*2.58*	*47.60*	*Cum*
		2	*9.24*	*2.15*	*0.50*	*19.84*	*Cum*
	Section 6-6	*2*	*6.01*	*0.45*	*0.45*	*2.44*	*Cum*
		2	*6.01*	*0.76*	*1.77*	*16.09*	*Cum*
		2	*6.01*	*1.66*	*0.50*	*10.00*	*Cum*
	Floor	*1*	*0.63*	*8.10*	*0.70*	*3.54*	*Cum*
		1	*7.00*	*8.10*	*0.50*	*28.35*	*Cum*
		1	*5.82*	*8.10*	*0.10*	*4.71*	*Cum*
		1	*0.36*	*8.10*	*0.30*	*0.87*	*Cum*
		1	*0.20*	*8.10*	*0.40*	*0.65*	*Cum*
		1	*2.80*	*8.10*	*0.50*	*11.34*	*Cum*
		1	*0.68*	*8.10*	*0.90*	*4.92*	*Cum*
	Crest	*1*	*1.43*	*8.10*	*1.46*	*16.90*	*Cum*
	TOTAL					**214.98**	**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*	*1.20*	*8.10*	*0.15*	*1.46*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*24.56*	*0.45*	*0.05*	*0.55*	*Cum*
	On Abutment Top (Right Side)	*1*	*24.56*	*0.45*	*0.05*	*0.55*	*Cum*
	TOTAL					**2.56**	**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		
	Taking Skin reinforcement @0.2% of M-20	**214.98**	**0.20%**	**0.43**	**7850**	**3375.20**	**Kg**
	Total Weight in Metric Tonne					**3.38**	**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*	*1.37*		*0.45*	*2.47*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.37*		*2.58*	*14.17*	*Sqm*
		4		*1.00*	*2.58*	*10.31*	*Sqm*
		4	*1.37*		*0.60*	*3.30*	*Sqm*
		4		*2.15*	*0.60*	*5.16*	*Sqm*
	Section 2-2	*4*	*4.20*		*0.45*	*7.56*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.20*		*1.97*	*33.10*	*Sqm*
		4		*0.82*	*1.97*	*6.43*	*Sqm*
		4	*4.20*		*0.60*	*10.08*	*Sqm*
		4		*1.78*	*0.60*	*4.28*	*Sqm*
	Section 3-3	*4*	*1.82*		*0.45*	*3.27*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.82*		*1.77*	*12.88*	*Sqm*
		4		*0.76*	*1.77*	*5.35*	*Sqm*
		4	*1.82*		*0.50*	*3.64*	*Sqm*
		4		*1.66*	*0.50*	*3.32*	*Sqm*
	Section 5-5	*4*	*9.24*		*0.45*	*16.62*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*9.24*		*2.58*	*95.31*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.00*	*2.58*	*10.31*	*Sqm*
		4	*9.24*		*0.50*	*18.47*	*Sqm*
		4		*2.15*	*0.50*	*4.30*	*Sqm*
	Section 6-6	*4*	*6.01*		*0.45*	*10.83*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*6.01*		*1.77*	*42.58*	*Sqm*
		4		*0.76*	*1.77*	*5.35*	*Sqm*
		4	*6.01*		*0.50*	*12.03*	*Sqm*
		4		*1.66*	*0.50*	*3.32*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*8.10*	*0.70*	*11.34*	*Sqm*
		2	*7.00*		*0.50*	*7.00*	*Sqm*
		2		*8.10*	*0.50*	*8.10*	*Sqm*
		2	*5.82*		*0.10*	*1.16*	*Sqm*
		2		*8.10*	*0.10*	*1.62*	*Sqm*
		2	*0.36*		*0.30*	*0.21*	*Sqm*
		2		*8.10*	*0.30*	*4.86*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*8.10*	*0.40*	*6.48*	*Sqm*
		2	*2.80*		*0.50*	*2.80*	*Sqm*
		2		*8.10*	*0.50*	*8.10*	*Sqm*
		2	*0.68*		*0.90*	*1.22*	*Sqm*
		2		*8.10*	*0.90*	*14.58*	*Sqm*
	Crest	*2*	*1.434*		*1.455*	*4.17*	*Sqm*
		2		*8.1*	*1.455*	*23.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*22.09*		*0.30*	*13.25*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*21.79*		*0.60*	*26.15*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.75*		*0.15*	*2.85*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.75*		*0.60*	*11.40*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**500.45**	**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*	*4.75*	*7.38*		*70.13*	*Sqm*
	TOTAL					**70.13**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.75*	*7.50*	*0.30*	**10.69**	**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	*4.75*	*7.50*	*0.15*	**10.69**	**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*	*24.56*	*0.45*		*11.05*	*Sqm*
	On Abutment Top (Right Side)	*1*	*24.56*	*0.45*		*11.05*	*Sqm*
	TOTAL					**22.10**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4			**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						
		1		10.60		10.60	**Cum**
	TOTAL					**10.60**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL (1.219 M) FOR RUIR BRANCH CANAL AT RD 7.220 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*	*4.30*	*2.682*	*3.970*	*91.569*	*Cum*
	Section 2-2	*2*	*5.00*	*1.794*	*3.970*	*71.193*	*Cum*
	Section 3-3	*2*	*2.70*	*1.644*	*3.770*	*33.469*	*Cum*
	Section 5-5	*1*	*10.70*	*2.832*	*3.970*	*120.278*	*Cum*
	Section 6-6	*2*	*4.37*	*1.644*	*3.770*	*54.169*	*Cum*
	Floor	*1*	*0.68*	*6.660*	*1.050*	*4.720*	*Cum*
		1	*2.10*	*6.660*	*0.750*	*10.490*	*Cum*
		1	*0.73*	*6.660*	*0.400*	*1.931*	*Cum*
		1	*7.15*	*6.660*	*1.000*	*47.612*	*Cum*
		1	*0.50*	*6.660*	*0.607*	*2.021*	*Cum*
		1	*0.50*	*6.660*	*0.400*	*1.332*	*Cum*
		1	*2.25*	*6.660*	*0.750*	*11.239*	*Cum*
		1	*0.80*	*6.660*	*1.550*	*8.258*	*Cum*
	Toe Wall D/S Portion	*1*	*18.79*	*0.750*	*0.900*	*12.683*	*Cum*
	Boulder Pitching in U/S Portion	*1*	*11.23*	*8.100*	*0.450*	*40.915*	*Cum*
	Boulder Pitching in D/S Portion	*1*	*4.00*	*6.060*	*0.300*	*7.272*	*Cum*
						519.15	**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*	*6.660*	*0.150*	*0.54*	*Cum*
		1	*1.01*	*6.660*	*0.150*	*1.00*	*Cum*
		1	*1.05*	*6.660*	*0.150*	*1.04*	*Cum*
		1	*0.35*	*6.660*	*0.150*	*0.35*	*Cum*
		1	*7.48*	*6.660*	*0.150*	*7.47*	*Cum*
		1	*0.71*	*6.660*	*0.150*	*0.71*	*Cum*
		1	*0.49*	*6.660*	*0.150*	*0.49*	*Cum*
		1	*1.57*	*6.660*	*0.150*	*1.56*	*Cum*
		1	*0.54*	*6.660*	*0.150*	*0.54*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*4.30*	*2.682*	*0.150*	*3.46*	*Cum*
	Section 2-2	*2*	*5.00*	*1.794*	*0.150*	*2.69*	*Cum*
	Section 3-3	*2*	*2.70*	*1.644*	*0.150*	*1.33*	*Cum*
	Section 5-5	*1*	*10.70*	*2.832*	*0.150*	*4.54*	*Cum*
	Section 6-6	*2*	*4.37*	*1.644*	*0.150*	*2.16*	*Cum*
	Toe Wall D/S Portion	*1*	*18.79*	*0.750*	*0.300*	*4.23*	*Cum*
	Toe Wall D/S Portion	*1*	*18.49*	*0.450*	*0.600*	*4.99*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.600*	*0.150*	*0.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.300*	*0.600*	*1.44*	*Cum*
	TOTAL					**39.28**	**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*	*4.23*	*0.450*	*0.450*	*1.71*	*Cum*
		2	*4.23*	*1.416*	*3.220*	*38.53*	*Cum*
		2	*4.23*	*2.532*	*0.850*	*18.19*	*Cum*
	Section 2-2	*2*	*5.00*	*0.450*	*0.450*	*2.02*	*Cum*
		2	*5.00*	*0.972*	*1.740*	*16.91*	*Cum*
		2	*5.00*	*1.644*	*0.850*	*13.97*	*Cum*
	Section 3-3	*2*	*2.10*	*0.450*	*0.450*	*0.85*	*Cum*
		2	*2.10*	*0.897*	*1.490*	*5.62*	*Cum*
		2	*2.10*	*1.494*	*0.600*	*3.77*	*Cum*
	Section 5-5	*1*	*10.70*	*0.450*	*0.450*	*2.17*	*Cum*
		1	*10.70*	*1.416*	*3.220*	*48.78*	*Cum*
		1	*10.70*	*2.532*	*0.850*	*23.02*	*Cum*
	Section 6-6	*2*	*5.12*	*0.450*	*0.450*	*2.07*	*Cum*
		2	*5.12*	*0.897*	*1.490*	*13.68*	*Cum*
		2	*5.12*	*1.494*	*0.600*	*9.18*	*Cum*
	Floor	*1*	*0.68*	*6.660*	*0.900*	*4.05*	*Cum*
		1	*2.10*	*6.660*	*0.600*	*8.39*	*Cum*
		1	*0.73*	*6.660*	*0.250*	*1.21*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*7.15*	*6.660*	*0.850*	*40.47*	*Cum*
		1	*0.50*	*6.660*	*0.457*	*1.52*	*Cum*
		1	*0.50*	*6.660*	*0.250*	*0.83*	*Cum*
		1	*2.25*	*6.660*	*0.600*	*8.99*	*Cum*
		1	*0.80*	*6.660*	*1.400*	*7.46*	*Cum*
	Crest	*1*	*1.33*	*6.660*	*2.048*	*18.07*	*Cum*
	TOTAL					**291.46**	**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*	*1.00*	*6.660*	*0.150*	*1.00*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*21.91*	*0.450*	*0.050*	*0.49*	*Cum*
	On Abutment Top (Right Side)	*1*	*21.91*	*0.450*	*0.050*	*0.49*	*Cum*
	TOTAL					**1.98**	**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 @0.20% of M-20	**291.46**	**0.00**	**0.583**	**7850.0**	**4575.98**	**Kg**
	Total Weight in Metric Tonne					**4.58**	**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*	*4.23*		*0.450*	*7.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.23*		*3.220*	*54.42*	*Sqm*
		4		*1.416*	*3.220*	*18.24*	*Sqm*
		4	*4.23*		*0.850*	*14.37*	*Sqm*
		4		*2.532*	*0.850*	*8.61*	*Sqm*
	Section 2-2	*4*	*5.00*		*0.450*	*9.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.00*		*1.740*	*34.79*	*Sqm*
		4		*0.972*	*1.740*	*6.77*	*Sqm*
		4	*5.00*		*0.850*	*16.99*	*Sqm*
		4		*1.644*	*0.850*	*5.59*	*Sqm*
	Section 3-3	*4*	*2.10*		*0.450*	*3.79*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.10*		*1.490*	*12.53*	*Sqm*
		4		*0.897*	*1.490*	*5.35*	*Sqm*
		4	*2.10*		*0.600*	*5.05*	*Sqm*
		4		*1.494*	*0.600*	*3.59*	*Sqm*
	Section 5-5	*2*	*10.70*		*0.450*	*9.63*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
		2	*10.70*		*3.220*	*68.90*	*Sqm*
		2		*1.416*	*3.220*	*9.12*	*Sqm*
		2	*10.70*		*0.850*	*18.19*	*Sqm*
		2		*2.532*	*0.850*	*4.30*	*Sqm*
	Section 6-6	*4*	*5.12*		*0.450*	*9.21*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.12*		*1.490*	*30.50*	*Sqm*
		4		*0.897*	*1.490*	*5.35*	*Sqm*
		4	*5.12*		*0.600*	*12.28*	*Sqm*
		4		*1.494*	*0.600*	*3.59*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*6.660*	*0.900*	*11.99*	*Sqm*
		2	*2.10*		*0.600*	*2.52*	*Sqm*
		2		*6.660*	*0.600*	*7.99*	*Sqm*
		2	*0.73*		*0.250*	*0.36*	*Sqm*
		2		*6.660*	*0.250*	*3.33*	*Sqm*
		2	*7.15*		*0.850*	*12.15*	*Sqm*
		2		*6.660*	*0.850*	*11.32*	*Sqm*
		2	*0.500*		*0.457*	*0.46*	*Sqm*
		2		*6.660*	*0.457*	*6.09*	*Sqm*
		2	*0.50*		*0.250*	*0.25*	*Sqm*
		2		*6.660*	*0.250*	*3.33*	*Sqm*
		2	*2.25*		*0.600*	*2.70*	*Sqm*
		2		*6.660*	*0.600*	*7.99*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*
		2		*6.660*	*1.400*	*18.65*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.33*		*2.048*	*5.43*	*Sqm*
		2		*6.660*	*2.048*	*27.28*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.79*		*0.300*	*11.27*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.49*		*0.600*	*22.19*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.150*	*2.40*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.600*	*9.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**554.21**	**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*	*4.00*	*6.316*		*50.53*	*Sqm*
	TOTAL					**50.53**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Pitching in U/S Portion	*1*	*11.23*	*8.100*	*0.450*	**40.92**	**Cum**
	Boulder Pitching in D/S Portion	*1*	*4.00*	*6.060*	*0.300*	**7.27**	**Cum**
	TOTAL					**48.19**	**Sqm**
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	*4.00*	*6.060*	*0.150*	**7.27**	**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*	*21.91*	*0.450*		*9.86*	*Sqm*
	On Abutment Top (Right Side)	*1*	*21.91*	*0.450*		*9.86*	*Sqm*
	TOTAL					**19.71**	**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		19.317		19.32	**Cum**
	Abutment						
	Section 1-1	2	*4.30*	*3.656*		*31.442*	*Cum*
	Section 2-2	2	*5.00*	*2.162*		*21.611*	*Cum*
	Section 3-3	2	*2.70*	*1.730*		*9.342*	*Cum*
	Section 5-5	1	*10.70*	*3.656*		*39.112*	*Cum*
	Section 6-6	2	*4.37*	*1.730*		*15.120*	*Cum*
	D/S protection						
	Toe wall	2	*18.79*	*0.150*	*0.600*	*5.637*	*Cum*
		2	*4.00*	0.150	*0.600*	*0.720*	*Cum*
	TOTAL					**142.30**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 8.070 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.						
		1		478.63		**478.63**	**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*	*0.543*	*6.66*	*0.15*	*0.54*	*Cum*
		1	*0.670*	*6.66*	*0.15*	*0.67*	*Cum*
		1	*8.427*	*6.66*	*0.15*	*8.42*	*Cum*
		1	*0.778*	*6.66*	*0.15*	*0.78*	*Cum*
		1	*0.938*	*6.66*	*0.15*	*0.94*	*Cum*
		1	*1.565*	*6.66*	*0.15*	*1.56*	*Cum*
		1	*0.543*	*6.66*	*0.15*	*0.54*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.53*	*2.53*	*0.15*	*1.16*	*Cum*
	Section 2-2	*2*	*5.71*	*1.79*	*0.15*	*3.07*	*Cum*
	Section 3-3	*2*	*2.70*	*1.64*	*0.15*	*1.33*	*Cum*
	Section 5-5	*2*	*7.85*	*2.68*	*0.15*	*6.30*	*Cum*
	Section 6-6	*2*	*4.37*	*1.64*	*0.15*	*2.16*	*Cum*
	Toe Wall D/S Portion	*1*	*18.69*	*0.75*	*0.30*	*4.21*	*Cum*
	Toe Wall D/S Portion	*1*	*18.39*	*0.45*	*0.60*	*4.97*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.60*	*0.15*	*0.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.30*	*0.60*	*1.44*	*Cum*
	TOTAL					**38.80**	**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.						
	Abutment						
	Section 1-1	*2*	*1.42*	*0.45*	*0.45*	*0.57*	*Cum*
		2	*1.42*	*1.34*	*2.96*	*11.21*	*Cum*
		2	*1.42*	*2.38*	*0.90*	*6.05*	*Cum*
	Section 2-2	*2*	*5.71*	*0.45*	*0.45*	*2.31*	*Cum*
		2	*5.71*	*0.97*	*1.74*	*19.31*	*Cum*
		2	*5.71*	*1.64*	*0.90*	*16.90*	*Cum*
	Section 3-3	*2*	*2.10*	*0.45*	*0.45*	*0.85*	*Cum*
		2	*2.10*	*0.90*	*1.49*	*5.62*	*Cum*
		2	*2.10*	*1.49*	*0.60*	*3.77*	*Cum*
	Section 5-5	*2*	*7.80*	*0.45*	*0.45*	*3.16*	*Cum*
		2	*7.80*	*1.34*	*2.96*	*61.80*	*Cum*
		2	*7.80*	*2.38*	*0.90*	*33.37*	*Cum*
	Section 6-6	*2*	*5.12*	*0.45*	*0.45*	*2.07*	*Cum*
		2	*5.12*	*0.90*	*1.49*	*13.68*	*Cum*
		2	*5.12*	*1.49*	*0.60*	*9.18*	*Cum*
	Floor	*1*	*0.60*	*6.66*	*0.60*	*2.40*	*Cum*
		1	*9.00*	*6.66*	*0.90*	*53.95*	*Cum*
		1	*0.48*	*6.66*	*0.55*	*1.77*	*Cum*
		1	*0.25*	*6.66*	*0.48*	*0.79*	*Cum*
		1	*2.75*	*6.66*	*0.60*	*10.99*	*Cum*
		1	*0.80*	*6.66*	*1.40*	*7.46*	*Cum*
	Crest	*1*	*1.56*	*6.66*	*1.94*	*20.12*	*Cum*
	TOTAL					**287.33**	**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*	*1.25*	*6.66*	*0.15*	*1.25*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*23.88*	*0.45*	*0.05*	*0.54*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*23.88*	*0.45*	*0.05*	*0.54*	*Cum*
	TOTAL					**2.32**	**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 @0.2% of M-20	**287.33**	**0.20%**	**0.57**	**7850**	**4511.13**	**Kg**
	Total Weight in Metric Tonne					**4.51**	**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*	*1.42*		*0.45*	*2.55*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.42*		*2.96*	*16.75*	*Sqm*
		4		*1.34*	*2.96*	*15.84*	*Sqm*
		4	*1.42*		*0.90*	*5.09*	*Sqm*
		4		*2.38*	*0.90*	*8.55*	*Sqm*
	Section 2-2	*4*	*5.71*		*0.45*	*10.28*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*5.71*		*1.74*	*39.74*	*Sqm*
		4		*0.97*	*1.74*	*6.77*	*Sqm*
		4	*5.71*		*0.90*	*20.56*	*Sqm*
		4		*1.64*	*0.90*	*5.92*	*Sqm*
	Section 3-3	*4*	*2.10*		*0.45*	*3.79*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.10*		*1.49*	*12.53*	*Sqm*
		4		*0.90*	*1.49*	*5.35*	*Sqm*
		4	*2.10*		*0.60*	*5.05*	*Sqm*
		4		*1.49*	*0.60*	*3.59*	*Sqm*
	Section 5-5	*4*	*7.80*		*0.45*	*14.04*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*7.80*		*2.96*	*92.38*	*Sqm*
		4		*1.34*	*2.96*	*15.84*	*Sqm*
		4	*7.80*		*0.90*	*28.09*	*Sqm*
		4		*2.38*	*0.90*	*8.55*	*Sqm*
	Section 6-6	*4*	*5.12*		*0.45*	*9.21*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*5.12*		*1.49*	*30.50*	*Sqm*
		4		*0.90*	*1.49*	*5.35*	*Sqm*
		4	*5.12*		*0.60*	*12.28*	*Sqm*
		4		*1.49*	*0.60*	*3.59*	*Sqm*
	Floor	*2*	*0.60*		*0.60*	*0.72*	*Sqm*
		2		*6.66*	*0.60*	*7.99*	*Sqm*
		2	*9.00*		*0.90*	*16.20*	*Sqm*
		2		*6.66*	*0.90*	*11.99*	*Sqm*
		2	*0.48*		*0.55*	*0.53*	*Sqm*
		2		*6.66*	*0.55*	*7.33*	*Sqm*
		2	*0.25*		*0.48*	*0.24*	*Sqm*
		2		*6.66*	*0.48*	*6.33*	*Sqm*
		2	*2.75*		*0.60*	*3.30*	*Sqm*
		2		*6.66*	*0.60*	*7.99*	*Sqm*
		2	*0.80*		*1.40*	*2.24*	*Sqm*
		2		*6.66*	*1.40*	*18.65*	*Sqm*
	Crest	*2*	*1.555*		*1.943*	*6.04*	*Sqm*
		2		*6.66*	*1.943*	*25.88*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.69*		*0.30*	*11.21*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.39*		*0.60*	*22.07*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.15*	*2.40*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.60*	*9.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**549.01**	**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*	*4.00*	*6.32*		*50.54*	*Sqm*
	TOTAL					**50.54**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.00*	*6.06*	*0.30*	**7.27**	**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	*4.00*	*6.06*	*0.15*	**7.27**	**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*	*23.88*	*0.45*		*10.75*	*Sqm*
	On Abutment Top (Right Side)	*1*	*23.88*	*0.45*		*10.75*	*Sqm*
	TOTAL					**21.49**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	3			**3.00**	**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						
		1		24.03		24.03	Cum
	TOTAL					**24.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.676 METER AT CH. 8.410 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.						
		1		882.33		**882.33**	**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*	*0.543*	*6.66*	*0.15*	*0.54*	*Cum*
		1	*0.615*	*6.66*	*0.15*	*0.61*	*Cum*
		1	*9.720*	*6.66*	*0.15*	*9.71*	*Cum*
		1	*0.849*	*6.66*	*0.15*	*0.85*	*Cum*
		1	*2.481*	*6.66*	*0.15*	*2.48*	*Cum*
		1	*2.013*	*6.66*	*0.15*	*2.01*	*Cum*
		1	*0.543*	*6.66*	*0.15*	*0.54*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.84*	*2.83*	*0.15*	*1.56*	*Cum*
	Section 2-2	*2*	*6.00*	*2.34*	*0.15*	*4.22*	*Cum*
	Section 3-3	*2*	*4.70*	*2.16*	*0.15*	*3.05*	*Cum*
	Section 5-5	*2*	*7.78*	*2.98*	*0.15*	*6.96*	*Cum*
	Section 6-6	*2*	*4.00*	*1.64*	*0.15*	*1.97*	*Cum*
	Toe Wall D/S Portion	*1*	*18.69*	*0.75*	*0.30*	*4.21*	*Cum*
	Toe Wall D/S Portion	*1*	*18.39*	*0.45*	*0.60*	*4.97*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.60*	*0.15*	*0.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.30*	*0.60*	*1.44*	*Cum*
	TOTAL					**45.84**	**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*	*1.72*	*0.45*	*0.45*	*0.70*	*Cum*
		2	*1.72*	*1.49*	*3.47*	*17.73*	*Cum*
		2	*1.72*	*2.68*	*1.15*	*10.58*	*Cum*
	Section 2-2	*2*	*6.00*	*0.82*	*0.50*	*4.92*	*Cum*
		2	*6.00*	*1.36*	*1.79*	*29.15*	*Cum*
		2	*6.00*	*2.04*	*2.20*	*53.96*	*Cum*
	Section 3-3	*2*	*4.10*	*0.82*	*0.50*	*3.36*	*Cum*
		2	*4.10*	*1.27*	*1.49*	*15.49*	*Cum*
		2	*4.10*	*1.86*	*2.50*	*38.24*	*Cum*
	Section 5-5	*2*	*7.74*	*0.45*	*0.45*	*3.13*	*Cum*
		2	*7.74*	*1.49*	*3.47*	*79.94*	*Cum*
		2	*7.74*	*2.68*	*1.15*	*47.71*	*Cum*
	Section 6-6	*2*	*4.93*	*0.45*	*0.50*	*2.22*	*Cum*
		2	*4.93*	*1.79*	*1.49*	*26.37*	*Cum*
		2	*4.93*	*1.49*	*0.70*	*10.32*	*Cum*
	deduction for M25 Grade concrete	*2*	*0.82*	*6.50*	*0.30*	*-3.20*	*Cum*
	Floor	*1*	*0.59*	*6.66*	*0.55*	*2.15*	*Cum*
		1	*10.00*	*6.66*	*1.15*	*76.59*	*Cum*
		1	*0.78*	*6.66*	*0.60*	*3.10*	*Cum*
		1	*0.30*	*6.66*	*0.70*	*1.40*	*Cum*
		1	*2.20*	*6.66*	*0.85*	*12.45*	*Cum*
		1	*0.15*	*6.66*	*0.78*	*0.77*	*Cum*
		1	*2.35*	*6.66*	*0.70*	*10.96*	*Cum*
		1	*0.90*	*6.66*	*1.80*	*10.79*	*Cum*
	Crest	*1*	*1.63*	*6.66*	*2.45*	*26.63*	*Cum*
	TOTAL					**485.48**	**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*	*1.25*	*6.66*	*0.15*	*1.25*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Coping over Abutment Top	*2*	*10.42*	*0.45*	*0.05*	*0.47*	*Cum*
	Slab Bridge						
	Slab	*1*	*7.46*	*6.5*	*0.54*	*25.94*	*Cum*
	Wearing coat	*1*	*7.46*	*5.50*	*0.07*	*2.87*	*Cum*
	Dirt wall	*2*	*0.40*	*6.5*	*0.50*	*2.60*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	TOTAL					**36.33**	*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.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*20*	*59*	*8.32*		*2.466*	*1210.4*	*Kg*
a2	*12*	*49*	*7.30*		*0.888*	*317.5*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*31*	*8.24*		*0.616*	*157.5*	*Kg*
a5	*10*	*37*	*7.20*		*0.616*	*164.2*	*Kg*
x1	*12*	*128*	*2.55*		*0.888*	*289.9*	*Kg*
x2	*16*	*128*	*1.99*		*1.578*	*402.0*	*Kg*
x3	*12*	*20*	*7.67*		*0.888*	*136.2*	*Kg*
	Total Reinforcement Steel (in kg)					*2685.6*	*Kg*
	Taking Skin reinforcement @0.2% of M-20	485.48	0.20%	0.97	7850	7622.08	Kg
						7.62	MT
	TOTAL REINFORCEMENT STEEL (in MT)					**10.3**	**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*	*1.72*		*0.45*	*3.09*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.72*		*3.47*	*23.80*	*Sqm*
		4		*1.49*	*3.47*	*20.66*	*Sqm*
		4	*1.72*		*1.15*	*7.90*	*Sqm*
		4		*2.68*	*1.15*	*12.33*	*Sqm*
	Section 2-2	*4*	*6.00*		*0.50*	*12.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*6.00*		*1.79*	*42.96*	*Sqm*
		4		*1.36*	*1.79*	*9.72*	*Sqm*
		4	*6.00*		*2.20*	*52.80*	*Sqm*
		4		*2.04*	*2.20*	*17.99*	*Sqm*
	Section 3-3	*4*	*4.10*		*0.50*	*8.21*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*4.10*		*1.49*	*24.45*	*Sqm*
		4		*1.27*	*1.49*	*7.55*	*Sqm*
		4	*4.10*		*2.50*	*41.03*	*Sqm*
		4		*1.86*	*2.50*	*18.64*	*Sqm*
	Section 5-5	*4*	*7.74*		*0.45*	*13.93*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*7.74*		*3.47*	*107.30*	*Sqm*
		4		*1.49*	*3.47*	*20.66*	*Sqm*
		4	*7.74*		*1.15*	*35.60*	*Sqm*
		4		*2.68*	*1.15*	*12.33*	*Sqm*
	Section 6-6	*4*	*4.93*		*0.50*	*9.87*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*4.93*		*1.49*	*29.40*	*Sqm*
		4		*1.79*	*1.49*	*10.69*	*Sqm*
		4	*4.93*		*0.70*	*13.81*	*Sqm*
		4		*1.49*	*0.70*	*4.18*	*Sqm*
	Floor	*2*	*0.59*		*0.55*	*0.65*	*Sqm*
		2		*6.66*	*0.55*	*7.33*	*Sqm*
		2	*10.00*		*1.15*	*23.00*	*Sqm*
		2		*6.66*	*1.15*	*15.32*	*Sqm*
		2	*0.78*		*0.60*	*0.93*	*Sqm*
		2		*6.66*	*0.60*	*7.99*	*Sqm*
		2	*0.30*		*0.70*	*0.42*	*Sqm*
		2		*6.66*	*0.70*	*9.32*	*Sqm*
		2	*2.20*		*0.85*	*3.74*	*Sqm*
		2		*6.66*	*0.85*	*11.32*	*Sqm*
		2	*0.15*		*0.78*	*0.23*	*Sqm*
		2		*6.66*	*0.78*	*10.32*	*Sqm*
		2	*2.35*		*0.70*	*3.29*	*Sqm*
		2		*6.66*	*0.70*	*9.32*	*Sqm*
		2	*0.90*		*1.80*	*3.24*	*Sqm*
		2		*6.66*	*1.80*	*23.98*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.633*		*2.449*	*8.00*	*Sqm*
		2		*6.66*	*2.449*	*32.62*	*Sqm*
	Slab	*2*	*7.46*		*0.535*	*7.98*	*Sqm*
		2		*6.5*	*0.535*	*6.96*	*Sqm*
		1	*7.46*	*6.5*		*48.49*	*Sqm*
	Dirt wall	*2*	*0.4*		*0.5*	*0.40*	*Sqm*
		2		*6.5*	*0.5*	*6.50*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.69*		*0.30*	*11.21*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.39*		*0.60*	*22.07*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.15*	*2.40*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.60*	*9.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**855.40**	**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*	*4.00*	*6.32*		*50.54*	*Sqm*
	TOTAL					**50.54**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.00*	*6.06*	*0.30*	**7.27**	**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	*4.00*	*6.06*	*0.15*	**7.27**	**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*	*10.42*	*0.45*		*4.69*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.42*	*0.45*		*4.69*	*Sqm*
	TOTAL					**9.38**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	3			**3.00**	**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						
		1		43.31		43.31	Cum
	TOTAL					**43.31**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 8.950 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.						
	TOTAL					**426.44**	***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*	*6.660*	*0.150*	*0.54*	*Cum*
		1	*0.78*	*6.660*	*0.150*	*0.78*	*Cum*
		1	*4.75*	*6.660*	*0.150*	*4.74*	*Cum*
		1	*0.28*	*6.660*	*0.150*	*0.28*	*Cum*
		1	*3.12*	*6.660*	*0.150*	*3.11*	*Cum*
		1	*1.12*	*6.660*	*0.150*	*1.12*	*Cum*
		1	*0.54*	*6.660*	*0.150*	*0.54*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.75*	*2.038*	*0.300*	*0.92*	*Cum*
	Section 2-2	*2*	*3.95*	*2.284*	*0.300*	*5.41*	*Cum*
	Section 3-3	*2*	*4.25*	*2.164*	*0.300*	*5.52*	*Cum*
	Section 5-5	*2*	*7.95*	*2.188*	*0.300*	*10.43*	*Cum*
	Section 6-6	*2*	*4.00*	*1.644*	*0.300*	*3.95*	*Cum*
	Toe Wall D/S Portion	*1*	*18.69*	*0.75*	*0.30*	*4.21*	*Cum*
	Toe Wall D/S Portion	*1*	*18.39*	*0.45*	*0.60*	*4.97*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.60*	*0.15*	*0.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.30*	*0.60*	*1.35*	*Cum*
	TOTAL					**48.54**	**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*	*0.75*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.75*	*1.094*	*2.147*	*3.53*	*Cum*
		2	*0.75*	*1.888*	*0.550*	*1.56*	*Cum*
	Section 2-2	*2*	*3.95*	*0.820*	*0.500*	*3.24*	*Cum*
		2	*3.95*	*1.327*	*1.690*	*17.72*	*Cum*
		2	*3.95*	*1.984*	*1.300*	*20.38*	*Cum*
	Section 3-3	*2*	*3.65*	*0.820*	*0.500*	*2.99*	*Cum*
		2	*3.65*	*1.267*	*1.490*	*13.79*	*Cum*
		2	*3.65*	*1.864*	*1.500*	*20.42*	*Cum*
	Section 5-5	*2*	*7.90*	*0.450*	*0.450*	*3.20*	*Cum*
		2	*7.90*	*1.094*	*2.147*	*37.13*	*Cum*
		2	*7.90*	*1.888*	*0.550*	*16.41*	*Cum*
	Section 6-6	*2*	*5.01*	*0.450*	*0.450*	*2.03*	*Cum*
		2	*5.01*	*0.897*	*1.490*	*13.39*	*Cum*
		2	*5.01*	*1.494*	*0.500*	*7.48*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.61*	*6.660*	*0.650*	*2.65*	*Cum*
		1	*5.10*	*6.660*	*0.550*	*18.68*	*Cum*
		1	*0.58*	*6.660*	*0.200*	*0.77*	*Cum*
		1	*0.20*	*6.660*	*0.400*	*0.53*	*Cum*
		1	*4.70*	*6.660*	*0.500*	*15.65*	*Cum*
		1	*0.70*	*6.660*	*1.000*	*4.66*	*Cum*
	Crest	*1*	*1.18*	*6.660*	*1.152*	*9.08*	*Cum*
	TOTAL					**212.90**	**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*	*6.660*	*0.150*	*1.00*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*16.29*	*0.450*	*0.050*	*0.37*	*Cum*
	On Abutment Top (Right Side)	*1*	*16.29*	*0.450*	*0.050*	*0.37*	*Cum*
	Slab Bridge						
	Slab	*1*	*6.66*	*5.500*	*0.535*	*19.60*	*Cum*
	Wearing coat	*1*	*6.66*	*4.500*	*0.070*	*2.10*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
	300 mm thick pedastal	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**28.33**	**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.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*20*	*59*	*18.26*		*2.466*	*2656.6*	*Kg*
a2	*12*	*49*	*7.30*		*0.888*	*317.5*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*31*	*8.24*		*0.616*	*157.5*	*Kg*
a5	*10*	*37*	*7.20*		*0.616*	*164.2*	*Kg*
x1	*12*	*128*	*2.55*		*0.888*	*289.9*	*Kg*
x2	*16*	*128*	*1.27*		*1.578*	*255.5*	*Kg*
x3	*10*	*24*	*7.67*		*0.616*	*113.5*	*Kg*
	Taking Skin reinforcement @0.2% of M-20	**212.90**	**0.002**	**0.426**	**7850.0**	**3342.5**	**Kg**
	Total Reinforcement Steel (in kg)					*7305.0*	*Kg*
	Total Weight in Metric Tonne					**7.31**	**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*	*0.75*		*0.450*	*1.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.75*		*2.147*	*6.45*	*Sqm*
		4		*1.094*	*2.147*	*9.40*	*Sqm*
		4	*0.75*		*0.550*	*1.65*	*Sqm*
		4		*1.888*	*0.550*	*4.15*	*Sqm*
	Section 2-2	*4*	*3.95*		*0.500*	*7.90*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.95*		*1.690*	*26.71*	*Sqm*
		4		*1.327*	*1.690*	*8.97*	*Sqm*
		4	*3.95*		*1.300*	*20.55*	*Sqm*
		4		*1.984*	*1.300*	*10.32*	*Sqm*
	Section 3-3	*4*	*3.65*		*0.500*	*7.30*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.65*		*1.490*	*21.77*	*Sqm*
		4		*1.267*	*1.490*	*7.55*	*Sqm*
		4	*3.65*		*1.500*	*21.91*	*Sqm*
		4		*1.864*	*1.500*	*11.18*	*Sqm*
	Section 5-5	*4*	*7.90*		*0.450*	*14.23*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.90*		*2.147*	*67.88*	*Sqm*
		4		*1.094*	*2.147*	*9.40*	*Sqm*
		4	*7.90*		*0.550*	*17.39*	*Sqm*
		4		*1.888*	*0.550*	*4.15*	*Sqm*
	Section 6-6	*4*	*5.01*		*0.450*	*9.01*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.01*		*1.490*	*29.85*	*Sqm*
		4		*0.897*	*1.490*	*5.35*	*Sqm*
		4	*5.01*		*0.500*	*10.02*	*Sqm*
		4		*1.494*	*0.500*	*2.99*	*Sqm*
	Floor	*2*	*0.61*		*0.650*	*0.80*	*Sqm*
		2		*6.660*	*0.650*	*8.66*	*Sqm*
		2	*5.10*		*0.550*	*5.61*	*Sqm*
		2		*6.660*	*0.550*	*7.33*	*Sqm*
		2	*0.58*		*0.200*	*0.23*	*Sqm*
		2		*6.660*	*0.200*	*2.66*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*6.660*	*0.400*	*5.33*	*Sqm*
		2	*4.70*		*0.500*	*4.70*	*Sqm*
		2		*6.660*	*0.500*	*6.66*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*6.660*	*1.000*	*13.32*	*Sqm*
	Crest	*2*	*1.18*		*1.152*	*2.73*	*Sqm*
		2		*6.660*	*1.152*	*15.34*	*Sqm*
	Bridge Slab	*2*	*6.66*		*0.54*	*7.13*	*Sqm*
		2		*5.50*	*0.54*	*5.89*	*Sqm*
		1	*6.66*	*5.50*		*36.63*	*Sqm*
	Dirt Wall	*2*	*0.40*		*0.50*	*0.40*	*Sqm*
		2		5.50	0.50	*5.50*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.69*		*0.30*	*11.21*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*18.69*		*0.60*	*22.43*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.15*	*2.25*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall D/S Portion	*4*	*3.75*		*0.60*	*9.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**520.55**	**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*	*3.75*	*6.32*		*47.38*	*Sqm*
	TOTAL					**47.38**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.75*	*6.06*	*0.30*	**6.82**	**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	*3.75*	*6.06*	*0.15*	**6.82**	**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*	*16.29*	*0.450*		*7.33*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.29*	*0.450*		*7.33*	*Sqm*
	TOTAL					**14.66**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	3.00			**3.00**	**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						
	TOTAL					**101.89**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 11.760 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.						
		1		345.70		**345.70**	**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*	*0.542*	*6.00*	*0.15*	*0.49*	*Cum*
		1	*0.783*	*6.00*	*0.15*	*0.70*	*Cum*
		1	*7.599*	*6.00*	*0.15*	*6.84*	*Cum*
		1	*0.495*	*6.00*	*0.15*	*0.45*	*Cum*
		1	*2.263*	*6.00*	*0.15*	*2.04*	*Cum*
		1	*1.062*	*6.00*	*0.15*	*0.96*	*Cum*
		1	*0.542*	*6.00*	*0.15*	*0.49*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.59*	*2.29*	*0.15*	*1.09*	*Cum*
	Section 2-2	*2*	*4.50*	*1.71*	*0.15*	*2.31*	*Cum*
	Section 3-3	*2*	*3.70*	*1.59*	*0.15*	*1.76*	*Cum*
	Section 5-5	*2*	*7.89*	*2.44*	*0.15*	*5.77*	*Cum*
	Section 6-6	*2*	*4.11*	*1.59*	*0.15*	*1.96*	*Cum*
	Toe Wall D/S Portion	*1*	*17.40*	*0.75*	*0.30*	*3.92*	*Cum*
	Toe Wall D/S Portion	*1*	*17.10*	*0.45*	*0.60*	*4.62*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.60*	*0.15*	*0.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.30*	*0.60*	*1.44*	*Cum*
	TOTAL					**35.54**	**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*	*1.36*	*0.45*	*0.45*	*0.55*	*Cum*
		2	*1.36*	*1.22*	*2.56*	*8.53*	*Cum*
		2	*1.36*	*2.14*	*0.70*	*4.08*	*Cum*
	Section 2-2	*2*	*4.50*	*0.45*	*0.45*	*1.82*	*Cum*
		2	*4.50*	*0.93*	*1.60*	*13.39*	*Cum*
		2	*4.50*	*1.56*	*0.70*	*9.83*	*Cum*
	Section 3-3	*2*	*3.13*	*0.45*	*0.45*	*1.27*	*Cum*
		2	*3.13*	*0.87*	*1.40*	*7.62*	*Cum*
		2	*3.13*	*1.44*	*0.55*	*4.96*	*Cum*
	Section 5-5	*2*	*7.85*	*0.45*	*0.45*	*3.18*	*Cum*
		2	*7.85*	*1.22*	*2.56*	*49.04*	*Cum*
		2	*7.85*	*2.14*	*0.70*	*23.48*	*Cum*
	Section 6-6	*2*	*4.83*	*0.45*	*0.45*	*1.96*	*Cum*
		2	*4.83*	*0.87*	*1.40*	*11.77*	*Cum*
		2	*4.83*	*1.44*	*0.55*	*7.65*	*Cum*
	Floor	*1*	*0.63*	*6.00*	*0.70*	*2.63*	*Cum*
		1	*8.00*	*6.00*	*0.70*	*33.60*	*Cum*
		1	*6.20*	*6.00*	*0.20*	*7.44*	*Cum*
		1	*0.48*	*6.00*	*0.30*	*0.87*	*Cum*
		1	*0.20*	*6.00*	*0.45*	*0.54*	*Cum*
		1	*3.80*	*6.00*	*0.55*	*12.54*	*Cum*
		1	*0.69*	*6.00*	*0.95*	*3.92*	*Cum*
	Crest	*1*	*1.40*	*6.00*	*1.56*	*13.09*	*Cum*
	TOTAL					**223.75**	**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*	*1.15*	*6.00*	*0.15*	*1.04*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*23.36*	*0.45*	*0.05*	*0.53*	*Cum*
	On Abutment Top (Right Side)	*1*	*23.36*	*0.45*	*0.05*	*0.53*	*Cum*
	TOTAL					**2.09**	**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 @0.2% of M-20	**223.75**	**0.20%**	**0.45**	**7850**	**3512.83**	**Kg**
	Total Weight in Metric Tonne					**3.51**	**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*	*1.36*		*0.45*	*2.46*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.36*		*2.56*	*13.99*	*Sqm*
		4		*1.22*	*2.56*	*12.50*	*Sqm*
		4	*1.36*		*0.70*	*3.82*	*Sqm*
		4		*2.14*	*0.70*	*5.99*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.45*	*8.10*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.50*		*1.60*	*28.80*	*Sqm*
		4		*0.93*	*1.60*	*5.95*	*Sqm*
		4	*4.50*		*0.70*	*12.60*	*Sqm*
		4		*1.56*	*0.70*	*4.37*	*Sqm*
	Section 3-3	*4*	*3.13*		*0.45*	*5.63*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.13*		*1.40*	*17.53*	*Sqm*
		4		*0.87*	*1.40*	*4.87*	*Sqm*
		4	*3.13*		*0.55*	*6.89*	*Sqm*
		4		*1.44*	*0.55*	*3.17*	*Sqm*
	Section 5-5	*4*	*7.85*		*0.45*	*14.12*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*7.85*		*2.56*	*80.46*	*Sqm*
		4		*1.22*	*2.56*	*12.50*	*Sqm*
		4	*7.85*		*0.70*	*21.97*	*Sqm*
		4		*2.14*	*0.70*	*5.99*	*Sqm*
	Section 6-6	*4*	*4.83*		*0.45*	*8.69*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.83*		*1.40*	*27.05*	*Sqm*
		4		*0.87*	*1.40*	*4.87*	*Sqm*
		4	*4.83*		*0.55*	*10.63*	*Sqm*
		4		*1.44*	*0.55*	*3.17*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*6.00*	*0.70*	*8.40*	*Sqm*
		2	*8.00*		*0.70*	*11.20*	*Sqm*
		2		*6.00*	*0.70*	*8.40*	*Sqm*
		2	*6.20*		*0.20*	*2.48*	*Sqm*
		2		*6.00*	*0.20*	*2.40*	*Sqm*
		2	*0.48*		*0.30*	*0.29*	*Sqm*
		2		*6.00*	*0.30*	*3.60*	*Sqm*
		2	*0.20*		*0.45*	*0.18*	*Sqm*
		2		*6.00*	*0.45*	*5.40*	*Sqm*
		2	*3.80*		*0.55*	*4.18*	*Sqm*
		2		*6.00*	*0.55*	*6.60*	*Sqm*
		2	*0.69*		*0.95*	*1.31*	*Sqm*
		2		*6.00*	*0.95*	*11.40*	*Sqm*
	Crest	*2*	*1.401*		*1.557*	*4.36*	*Sqm*
		2		*6*	*1.557*	*18.68*	*Sqm*
	Toe Wall D/S Portion	*2*	*17.40*		*0.30*	*10.44*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*17.10*		*0.60*	*20.52*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.15*	*2.40*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.60*	*9.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**464.94**	**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*	*4.00*	*5.98*		*47.80*	*Sqm*
	TOTAL					**47.80**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.00*	*5.40*	*0.30*	**6.48**	**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	*4.00*	*5.40*	*0.15*	**6.48**	**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*	*23.36*	*0.45*		*10.51*	*Sqm*
	On Abutment Top (Right Side)	*1*	*23.36*	*0.45*		*10.51*	*Sqm*
	TOTAL					**21.02**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	3			**3.00**	**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						
		1		15.50		15.50	Cum
	TOTAL					**15.50**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL (1.830 M) FOR RUIR BRANCH CANAL AT RD 16.870 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*	*5.05*	*2.808*	*3.221*	*91.350*	*Cum*
	Section 2-2	*2*	*5.50*	*1.650*	*3.221*	*58.461*	*Cum*
	Section 3-3	*2*	*3.95*	*1.500*	*3.021*	*35.799*	*Cum*
	Section 5-5	*1*	*7.56*	*2.958*	*3.221*	*72.010*	*Cum*
	Section 6-6	*2*	*3.68*	*1.500*	*3.021*	*33.307*	*Cum*
	Floor	*1*	*0.74*	*5.460*	*1.300*	*5.235*	*Cum*
		1	*2.84*	*5.460*	*0.750*	*11.622*	*Cum*
		1	*0.68*	*5.460*	*0.350*	*1.290*	*Cum*
		1	*7.26*	*5.460*	*0.900*	*35.685*	*Cum*
		1	*0.35*	*5.460*	*0.632*	*1.208*	*Cum*
		1	*0.53*	*5.460*	*0.800*	*2.293*	*Cum*
		1	*4.00*	*5.460*	*0.800*	*17.472*	*Cum*
		1	*0.91*	*5.460*	*2.000*	*9.965*	*Cum*
	Toe Wall D/S Portion	*1*	*15.81*	*0.750*	*0.900*	*10.672*	*Cum*
	Boulder Pitching in U/S Portion	*1*	*8.00*	*5.800*	*0.450*	*20.880*	*Cum*
	Boulder Pitching in D/S Portion	*1*	*4.00*	*4.860*	*0.300*	*5.832*	*Cum*
						413.08	**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*	*5.460*	*0.150*	*0.44*	*Cum*
		1	*1.29*	*5.460*	*0.150*	*1.05*	*Cum*
		1	*1.66*	*5.460*	*0.150*	*1.36*	*Cum*
		1	*0.21*	*5.460*	*0.150*	*0.17*	*Cum*
		1	*7.69*	*5.460*	*0.150*	*6.30*	*Cum*
		1	*0.49*	*5.460*	*0.150*	*0.40*	*Cum*
		1	*2.06*	*5.460*	*0.150*	*1.69*	*Cum*
		1	*2.07*	*5.460*	*0.150*	*1.69*	*Cum*
		1	*0.54*	*5.460*	*0.150*	*0.44*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*5.05*	*2.808*	*0.150*	*4.25*	*Cum*
	Section 2-2	*2*	*5.50*	*1.650*	*0.150*	*2.72*	*Cum*
	Section 3-3	*2*	*3.95*	*1.500*	*0.150*	*1.78*	*Cum*
	Section 5-5	*1*	*7.56*	*2.958*	*0.150*	*3.35*	*Cum*
	Section 6-6	*2*	*3.68*	*1.500*	*0.150*	*1.65*	*Cum*
	Toe Wall D/S Portion	*1*	*15.81*	*0.750*	*0.300*	*3.56*	*Cum*
	Toe Wall D/S Portion	*1*	*15.51*	*0.450*	*0.600*	*4.19*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.600*	*0.150*	*0.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.300*	*0.600*	*1.44*	*Cum*
	TOTAL					**37.23**	**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*	*4.98*	*0.450*	*0.450*	*2.01*	*Cum*
		2	*4.98*	*1.479*	*3.430*	*50.48*	*Cum*
		2	*4.98*	*2.658*	*0.750*	*19.84*	*Cum*
	Section 2-2	*2*	*5.50*	*0.450*	*0.450*	*2.23*	*Cum*
		2	*5.50*	*0.900*	*1.500*	*14.85*	*Cum*
		2	*5.50*	*1.500*	*0.750*	*12.38*	*Cum*
	Section 3-3	*2*	*3.43*	*0.450*	*0.450*	*1.39*	*Cum*
		2	*3.43*	*0.825*	*1.250*	*7.06*	*Cum*
		2	*3.43*	*1.350*	*0.650*	*6.01*	*Cum*
	Section 5-5	*1*	*7.56*	*0.450*	*0.450*	*1.53*	*Cum*
		1	*7.56*	*1.479*	*3.430*	*38.34*	*Cum*
		1	*7.56*	*2.658*	*0.500*	*10.04*	*Cum*
	Section 6-6	*2*	*4.35*	*0.450*	*0.450*	*1.76*	*Cum*
		2	*4.35*	*0.825*	*1.250*	*8.97*	*Cum*
		2	*4.35*	*1.350*	*0.650*	*7.63*	*Cum*
	Floor	*1*	*0.74*	*5.460*	*1.150*	*4.63*	*Cum*
		1	*2.84*	*5.460*	*0.600*	*9.30*	*Cum*
		1	*0.68*	*5.460*	*0.200*	*0.74*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*7.26*	*5.460*	*0.750*	*29.74*	*Cum*
		1	*0.35*	*5.460*	*0.482*	*0.92*	*Cum*
		1	*0.53*	*5.460*	*0.650*	*1.86*	*Cum*
		1	*4.00*	*5.460*	*0.650*	*14.20*	*Cum*
		1	*0.91*	*5.460*	*1.850*	*9.22*	*Cum*
	Crest	*1*	*1.38*	*5.460*	*2.385*	*17.98*	*Cum*
	TOTAL					**273.11**	**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*	*5.460*	*0.150*	*0.82*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.45*	*0.450*	*0.050*	*0.35*	*Cum*
	On Abutment Top (Right Side)	*1*	*15.45*	*0.450*	*0.050*	*0.35*	*Cum*
	TOTAL					**1.51**	**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 @0.20% of M-20	**273.11**	**0.002**	**0.546**	**7850.0**	**4287.82**	**Kg**
	Total Weight in Metric Tonne					**4.29**	**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*	*4.98*		*0.450*	*8.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.98*		*3.430*	*68.26*	*Sqm*
		4		*1.479*	*3.430*	*20.29*	*Sqm*
		4	*4.98*		*0.750*	*14.93*	*Sqm*
		4		*2.658*	*0.750*	*7.97*	*Sqm*
	Section 2-2	*4*	*5.50*		*0.450*	*9.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.50*		*1.500*	*33.00*	*Sqm*
		4		*0.900*	*1.500*	*5.40*	*Sqm*
		4	*5.50*		*0.750*	*16.50*	*Sqm*
		4		*1.500*	*0.750*	*4.50*	*Sqm*
	Section 3-3	*4*	*3.43*		*0.450*	*6.17*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.43*		*1.250*	*17.13*	*Sqm*
		4		*0.825*	*1.250*	*4.13*	*Sqm*
		4	*3.43*		*0.650*	*8.91*	*Sqm*
		4		*1.350*	*0.650*	*3.51*	*Sqm*
	Section 5-5	*2*	*7.56*		*0.450*	*6.80*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
		2	*7.56*		*3.430*	*51.85*	*Sqm*
		2		*1.479*	*3.430*	*10.15*	*Sqm*
		2	*7.56*		*0.500*	*7.56*	*Sqm*
		2		*2.658*	*0.500*	*2.66*	*Sqm*
	Section 6-6	*4*	*4.35*		*0.450*	*7.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.35*		*1.250*	*21.75*	*Sqm*
		4		*0.825*	*1.250*	*4.13*	*Sqm*
		4	*4.35*		*0.650*	*11.31*	*Sqm*
		4		*1.350*	*0.650*	*3.51*	*Sqm*
	Floor	*2*	*0.74*		*1.150*	*1.70*	*Sqm*
		2		*5.460*	*1.150*	*12.56*	*Sqm*
		2	*2.84*		*0.600*	*3.41*	*Sqm*
		2		*5.460*	*0.600*	*6.55*	*Sqm*
		2	*0.68*		*0.200*	*0.27*	*Sqm*
		2		*5.460*	*0.200*	*2.18*	*Sqm*
		2	*7.26*		*0.750*	*10.89*	*Sqm*
		2		*5.460*	*0.750*	*8.19*	*Sqm*
		2	*0.350*		*0.482*	*0.34*	*Sqm*
		2		*5.460*	*0.482*	*5.26*	*Sqm*
		2	*0.53*		*0.650*	*0.68*	*Sqm*
		2		*5.460*	*0.650*	*7.10*	*Sqm*
		2	*4.00*		*0.650*	*5.20*	*Sqm*
		2		*5.460*	*0.650*	*7.10*	*Sqm*
		2	*0.91*		*1.850*	*3.38*	*Sqm*
		2		*5.460*	*1.850*	*20.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.38*		*2.385*	*6.59*	*Sqm*
		2		*5.460*	*2.385*	*26.04*	*Sqm*
	Toe Wall D/S Portion	*2*	*15.81*		*0.300*	*9.49*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*15.51*		*0.600*	*18.61*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.150*	*2.40*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.600*	*9.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**530.52**	**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*	*4.00*	*5.403*		*43.22*	*Sqm*
	TOTAL					**43.22**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Boulder Pitching in U/S Portion	*1*	*8.00*	*5.800*	*0.450*	**20.88**	**Cum**
	Boulder Pitching in D/S Portion	*1*	*4.00*	*4.860*	*0.300*	**5.83**	**Cum**
	TOTAL					**26.71**	**Sqm**
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	*4.00*	*4.860*	*0.150*	**5.83**	**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*	*15.45*	*0.450*		*6.95*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.45*	*0.450*		*6.95*	*Sqm*
	TOTAL					**13.91**	**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		38.271		38.27	**Cum**
	Abutment						
	Section 1-1	2	*5.05*	*2.177*		*21.988*	*Cum*
	Section 2-2	2	*5.50*	*1.770*		*19.470*	*Cum*
	Section 3-3	2	*3.95*	*1.414*		*11.171*	*Cum*
	Section 5-5	1	*7.56*	*1.755*		*13.264*	*Cum*
	Section 6-6	2	*3.68*	*1.414*		*10.393*	*Cum*
	D/S protection						
	Toe wall	2	*15.81*	*0.150*	*0.600*	*4.743*	*Cum*
		2	*4.00*	0.150	*0.600*	*0.720*	*Cum*
	TOTAL					**120.02**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 18.325 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.						
		1		127.58		**127.58**	**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*	*0.542*	*5.46*	*0.15*	*0.44*	*Cum*
		1	*0.783*	*5.46*	*0.15*	*0.64*	*Cum*
		1	*4.482*	*5.46*	*0.15*	*3.67*	*Cum*
		1	*0.283*	*5.46*	*0.15*	*0.23*	*Cum*
		1	*0.783*	*5.46*	*0.15*	*0.64*	*Cum*
		1	*0.783*	*5.46*	*0.15*	*0.64*	*Cum*
		1	*0.542*	*5.46*	*0.15*	*0.44*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.15*	*1.80*	*0.15*	*0.62*	*Cum*
	Section 2-2	*2*	*3.00*	*1.62*	*0.15*	*1.46*	*Cum*
	Section 3-3	*2*	*1.95*	*1.50*	*0.15*	*0.88*	*Cum*
	Section 5-5	*2*	*6.81*	*1.95*	*0.15*	*3.99*	*Cum*
	Section 6-6	*2*	*3.68*	*1.50*	*0.15*	*1.65*	*Cum*
	Toe Wall D/S Portion	*1*	*15.81*	*0.75*	*0.30*	*3.56*	*Cum*
	Toe Wall D/S Portion	*1*	*15.51*	*0.45*	*0.60*	*4.19*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.60*	*0.15*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.30*	*0.60*	*1.17*	*Cum*
	TOTAL					**24.81**	**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*	*1.03*	*0.45*	*0.45*	*0.42*	*Cum*
		2	*1.03*	*0.98*	*1.76*	*3.54*	*Cum*
		2	*1.03*	*1.65*	*0.50*	*1.71*	*Cum*
	Section 2-2	*2*	*3.00*	*0.45*	*0.45*	*1.22*	*Cum*
		2	*3.00*	*0.89*	*1.45*	*7.70*	*Cum*
		2	*3.00*	*1.47*	*0.50*	*4.41*	*Cum*
	Section 3-3	*2*	*1.42*	*0.45*	*0.45*	*0.58*	*Cum*
		2	*1.42*	*0.83*	*1.25*	*2.93*	*Cum*
		2	*1.42*	*1.35*	*0.50*	*1.92*	*Cum*
	Section 5-5	*2*	*6.76*	*0.45*	*0.45*	*2.74*	*Cum*
		2	*6.76*	*0.98*	*1.76*	*23.18*	*Cum*
		2	*6.76*	*1.65*	*0.50*	*11.18*	*Cum*
	Section 6-6	*2*	*4.35*	*0.45*	*0.45*	*1.76*	*Cum*
		2	*4.35*	*0.83*	*1.25*	*8.97*	*Cum*
		2	*4.35*	*1.35*	*0.50*	*5.87*	*Cum*
	Floor	*1*	*0.63*	*5.46*	*0.70*	*2.39*	*Cum*
		1	*5.01*	*5.46*	*0.50*	*13.66*	*Cum*
		1	*0.41*	*5.46*	*0.20*	*0.44*	*Cum*
		1	*0.20*	*5.46*	*0.40*	*0.44*	*Cum*
		1	*2.45*	*5.46*	*0.50*	*6.69*	*Cum*
		1	*0.63*	*5.46*	*0.70*	*2.39*	*Cum*
	Crest	*1*	*0.99*	*5.46*	*0.85*	*4.55*	*Cum*
	TOTAL					**108.69**	**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*	*5.46*	*0.15*	*0.70*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*17.86*	*0.45*	*0.05*	*0.40*	*Sqm*
	On Abutment Top (Right Side)	*1*	*17.86*	*0.45*	*0.05*	*0.40*	*Sqm*
	TOTAL					**1.50**	**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 @0.2% of M-20	**108.69**	**0.20%**	**0.22**	**7850**	**1706.36**	**Kg**
	Total Weight in Metric Tonne					**1.71**	**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*	*1.03*		*0.45*	*1.86*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.03*		*1.76*	*7.26*	*Sqm*
		4		*0.98*	*1.76*	*6.86*	*Sqm*
		4	*1.03*		*0.50*	*2.07*	*Sqm*
		4		*1.65*	*0.50*	*3.31*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.45*	*5.40*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.00*		*1.45*	*17.40*	*Sqm*
		4		*0.89*	*1.45*	*5.13*	*Sqm*
		4	*3.00*		*0.50*	*6.00*	*Sqm*
		4		*1.47*	*0.50*	*2.94*	*Sqm*
	Section 3-3	*4*	*1.42*		*0.45*	*2.56*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.42*		*1.25*	*7.10*	*Sqm*
		4		*0.83*	*1.25*	*4.13*	*Sqm*
		4	*1.42*		*0.50*	*2.84*	*Sqm*
		4		*1.35*	*0.50*	*2.70*	*Sqm*
	Section 5-5	*4*	*6.76*		*0.45*	*12.18*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*6.76*		*1.76*	*47.48*	*Sqm*
		4		*0.98*	*1.76*	*6.86*	*Sqm*
		4	*6.76*		*0.50*	*13.53*	*Sqm*
		4		*1.65*	*0.50*	*3.31*	*Sqm*
	Section 6-6	*4*	*4.35*		*0.45*	*7.83*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.35*		*1.25*	*21.75*	*Sqm*
		4		*0.83*	*1.25*	*4.13*	*Sqm*
		4	*4.35*		*0.50*	*8.70*	*Sqm*
		4		*1.35*	*0.50*	*2.70*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*5.46*	*0.70*	*7.64*	*Sqm*
		2	*5.01*		*0.50*	*5.01*	*Sqm*
		2		*5.46*	*0.50*	*5.46*	*Sqm*
		2	*0.41*		*0.20*	*0.16*	*Sqm*
		2		*5.46*	*0.20*	*2.18*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*5.46*	*0.40*	*4.37*	*Sqm*
		2	*2.45*		*0.50*	*2.45*	*Sqm*
		2		*5.46*	*0.50*	*5.46*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*5.46*	*0.70*	*7.64*	*Sqm*
	Crest	*2*	*0.985*		*0.846*	*1.67*	*Sqm*
		2		*5.46*	*0.846*	*9.24*	*Sqm*
	Toe Wall D/S Portion	*2*	*15.81*		*0.30*	*9.49*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*15.51*		*0.60*	*18.61*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.15*	*1.95*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.60*	*7.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**303.15**	**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*	*5.40*		*35.13*	*Sqm*
	TOTAL					**35.13**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*4.86*	*0.30*	**4.74**	**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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.25*	*4.86*	*0.15*	**4.74**	**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*	*17.86*	*0.45*		*8.04*	*Sqm*
	On Abutment Top (Right Side)	*1*	*17.86*	*0.45*		*8.04*	*Sqm*
	TOTAL					**16.07**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	3			**3.00**	**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						
		1		13.82		13.82	Cum
	TOTAL					**13.82**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.676 METER AT CH. 27.340 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.						
		1		312.24		**312.24**	**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*	*0.543*	*2.20*	*0.15*	*0.18*	*Cum*
		1	*0.671*	*2.20*	*0.15*	*0.22*	*Cum*
		1	*0.965*	*2.20*	*0.15*	*0.32*	*Cum*
		1	*0.353*	*2.20*	*0.15*	*0.12*	*Cum*
		1	*5.574*	*2.20*	*0.15*	*1.84*	*Cum*
		1	*0.566*	*2.20*	*0.15*	*0.19*	*Cum*
		1	*3.851*	*2.20*	*0.15*	*1.27*	*Cum*
		1	*1.286*	*2.20*	*0.15*	*0.42*	*Cum*
		1	*0.543*	*2.20*	*0.15*	*0.18*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.68*	*2.23*	*0.15*	*1.13*	*Cum*
	Section 2-2	*2*	*4.65*	*1.84*	*0.15*	*2.57*	*Cum*
	Section 3-3	*2*	*4.55*	*2.16*	*0.15*	*2.95*	*Cum*
	Section 5-5	*2*	*4.24*	*2.38*	*0.15*	*3.03*	*Cum*
	Section 6-6	*2*	*1.86*	*1.20*	*0.15*	*0.67*	*Cum*
	Toe Wall D/S Portion	*1*	*9.05*	*0.75*	*0.30*	*2.04*	*Cum*
	Toe Wall D/S Portion	*1*	*8.75*	*0.45*	*0.60*	*2.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**20.57**	**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*	*1.57*	*0.45*	*0.45*	*0.63*	*Cum*
		2	*1.57*	*1.19*	*2.47*	*9.23*	*Cum*
		2	*1.57*	*2.08*	*0.85*	*5.54*	*Cum*
	Section 2-2	*2*	*4.65*	*0.82*	*0.50*	*3.81*	*Cum*
		2	*4.65*	*1.11*	*0.95*	*9.76*	*Cum*
		2	*4.65*	*1.54*	*1.60*	*22.92*	*Cum*
	Section 3-3	*2*	*4.18*	*0.82*	*0.50*	*3.42*	*Cum*
		2	*4.18*	*1.11*	*0.75*	*6.92*	*Cum*
		2	*4.18*	*1.54*	*1.80*	*23.15*	*Cum*
	Section 5-5	*2*	*4.20*	*0.45*	*0.45*	*1.70*	*Cum*
		2	*4.20*	*1.19*	*2.47*	*24.77*	*Cum*
		2	*4.20*	*2.08*	*0.85*	*14.88*	*Cum*
	Section 6-6	*2*	*2.57*	*0.45*	*0.50*	*1.15*	*Cum*
		2	*2.57*	*1.35*	*0.75*	*5.19*	*Cum*
		2	*2.57*	*1.05*	*0.65*	*3.50*	*Cum*
	deduction for M25 Grade concrete	*2*	*0.82*	*6.50*	*0.30*	*-3.20*	*Cum*
	Floor	*1*	*0.60*	*2.20*	*0.60*	*0.79*	*Cum*
		1	*7.50*	*2.20*	*0.60*	*9.90*	*Cum*
		1	*5.51*	*2.20*	*0.25*	*3.03*	*Cum*
		1	*0.58*	*2.20*	*0.40*	*0.51*	*Cum*
		1	*0.20*	*2.20*	*0.55*	*0.24*	*Cum*
		1	*5.30*	*2.20*	*0.70*	*8.16*	*Cum*
		1	*0.75*	*2.20*	*1.15*	*1.90*	*Cum*
	Crest	*1*	*1.45*	*2.20*	*1.78*	*5.64*	*Cum*
	TOTAL					**163.57**	**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*	*1.15*	*2.20*	*0.15*	*0.38*	*Cum*
	Coping over Abutment Top	*2*	*6.69*	*0.45*	*0.05*	*0.30*	*Cum*
	Slab Bridge						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Slab	*1*	*3.00*	*6.5*	*0.34*	*6.53*	*Cum*
	Wearing coat	*1*	*3.00*	*5.50*	*0.07*	*1.16*	*Cum*
	Dirt wall	*2*	*0.40*	*6.5*	*0.30*	*1.56*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	TOTAL					**13.13**	*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*	*36*	*3.46*		*1.578*	*196.6*	*Kg*
a2	*10*	*15*	*6.90*		*0.616*	*63.8*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*23*	*3.38*		*0.616*	*47.9*	*Kg*
a5	*10*	*10*	*6.80*		*0.616*	*41.9*	*Kg*
x1	*12*	*48*	*2.50*		*0.888*	*106.6*	*Kg*
x2	*16*	*48*	*1.91*		*1.578*	*144.7*	*Kg*
x3	*12*	*20*	*2.90*		*0.888*	*51.5*	*Kg*
	Total Reinforcement Steel (in kg)					*660.8*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**163.57**	**0.30%**	**0.49**	**7850**	**3852.01**	**Kg**
	TOTAL REINFORCEMENT STEEL (in MT)					**4.5**	**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*	*1.57*		*0.45*	*2.82*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.57*		*2.47*	*15.49*	*Sqm*
		4		*1.19*	*2.47*	*11.80*	*Sqm*
		4	*1.57*		*0.85*	*5.32*	*Sqm*
		4		*2.08*	*0.85*	*7.09*	*Sqm*
	Section 2-2	*4*	*4.65*		*0.50*	*9.30*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*4.65*		*0.95*	*17.67*	*Sqm*
		4		*1.11*	*0.95*	*4.20*	*Sqm*
		4	*4.65*		*1.60*	*29.76*	*Sqm*
		4		*1.54*	*1.60*	*9.86*	*Sqm*
	Section 3-3	*4*	*4.18*		*0.50*	*8.35*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*4.18*		*0.75*	*12.53*	*Sqm*
		4		*1.11*	*0.75*	*3.32*	*Sqm*
		4	*4.18*		*1.80*	*30.06*	*Sqm*
		4		*1.54*	*1.80*	*11.09*	*Sqm*
	Section 5-5	*4*	*4.20*		*0.45*	*7.56*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.20*		*2.47*	*41.56*	*Sqm*
		4		*1.19*	*2.47*	*11.80*	*Sqm*
		4	*4.20*		*0.85*	*14.28*	*Sqm*
		4		*2.08*	*0.85*	*7.09*	*Sqm*
	Section 6-6	*4*	*2.57*		*0.50*	*5.13*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*2.57*		*0.75*	*7.70*	*Sqm*
		4		*1.35*	*0.75*	*4.05*	*Sqm*
		4	*2.57*		*0.65*	*6.67*	*Sqm*
		4		*1.05*	*0.65*	*2.73*	*Sqm*
	Floor	*2*	*0.60*		*0.60*	*0.72*	*Sqm*
		2		*2.20*	*0.60*	*2.64*	*Sqm*
		2	*7.50*		*0.60*	*9.00*	*Sqm*
		2		*2.20*	*0.60*	*2.64*	*Sqm*
		2	*5.51*		*0.25*	*2.75*	*Sqm*
		2		*2.20*	*0.25*	*1.10*	*Sqm*
		2	*0.58*		*0.40*	*0.46*	*Sqm*
		2		*2.20*	*0.40*	*1.76*	*Sqm*
		2	*0.20*		*0.55*	*0.22*	*Sqm*
		2		*2.20*	*0.55*	*2.42*	*Sqm*
		2	*5.30*		*0.70*	*7.42*	*Sqm*
		2		*2.20*	*0.70*	*3.08*	*Sqm*
		2	*0.75*		*1.15*	*1.73*	*Sqm*
		2		*2.20*	*1.15*	*5.06*	*Sqm*
	Crest	*2*	*1.445*		*1.775*	*5.13*	*Sqm*
		2		*2.2*	*1.775*	*7.81*	*Sqm*
	Slab	*2*	*3*		*0.335*	*2.01*	*Sqm*
		2		*6.5*	*0.335*	*4.36*	*Sqm*
		1	*3*	*6.5*		*19.50*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Dirt wall	*2*	*0.4*		*0.3*	*0.24*	*Sqm*
		2		*6.5*	*0.3*	*3.90*	*Sqm*
	Toe Wall D/S Portion	*2*	*9.05*		*0.30*	*5.43*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.75*		*0.60*	*10.50*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**400.93**	**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*	*3.50*		*14.01*	*Sqm*
	TOTAL					**14.01**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.60*	*0.30*	**0.96**	**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*	*1.60*	*0.15*	**0.96**	**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*	*6.69*	*0.45*		*3.01*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.69*	*0.45*		*3.01*	*Sqm*
	TOTAL					**6.02**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		17.22		17.22	Cum
	TOTAL					**17.22**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 28.170 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.						
		1		199.65		**199.65**	**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*	*0.543*	*1.60*	*0.15*	*0.13*	*Cum*
		1	*0.559*	*1.60*	*0.15*	*0.13*	*Cum*
		1	*5.827*	*1.60*	*0.15*	*1.40*	*Cum*
		1	*0.495*	*1.60*	*0.15*	*0.12*	*Cum*
		1	*4.113*	*1.60*	*0.15*	*0.99*	*Cum*
		1	*0.839*	*1.60*	*0.15*	*0.20*	*Cum*
		1	*0.543*	*1.60*	*0.15*	*0.13*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.73*	*1.99*	*0.15*	*1.04*	*Cum*
	Section 2-2	*2*	*4.65*	*1.78*	*0.15*	*2.48*	*Cum*
	Section 3-3	*2*	*3.93*	*1.66*	*0.15*	*1.96*	*Cum*
	Section 5-5	*2*	*3.80*	*2.14*	*0.15*	*2.44*	*Cum*
	Section 6-6	*2*	*1.57*	*1.14*	*0.15*	*0.54*	*Cum*
	Toe Wall D/S Portion	*1*	*7.75*	*0.75*	*0.30*	*1.74*	*Cum*
	Toe Wall D/S Portion	*1*	*7.45*	*0.45*	*0.60*	*2.01*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**16.12**	**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*	*1.61*	*0.45*	*0.45*	*0.65*	*Cum*
		2	*1.61*	*1.07*	*2.07*	*7.16*	*Cum*
		2	*1.61*	*1.84*	*0.70*	*4.16*	*Cum*
	Section 2-2	*2*	*4.65*	*0.82*	*0.50*	*3.81*	*Cum*
		2	*4.65*	*1.08*	*0.85*	*8.50*	*Cum*
		2	*4.65*	*1.48*	*1.10*	*15.14*	*Cum*
	Section 3-3	*2*	*3.59*	*0.82*	*0.50*	*2.94*	*Cum*
		2	*3.59*	*1.02*	*0.65*	*4.73*	*Cum*
		2	*3.59*	*1.36*	*1.30*	*12.69*	*Cum*
	Section 5-5	*2*	*3.76*	*0.45*	*0.45*	*1.52*	*Cum*
		2	*3.76*	*1.07*	*2.07*	*16.65*	*Cum*
		2	*3.76*	*1.84*	*0.70*	*9.68*	*Cum*
	Section 6-6	*2*	*2.32*	*0.45*	*0.50*	*1.04*	*Cum*
		2	*2.32*	*1.35*	*0.65*	*4.07*	*Cum*
		2	*2.32*	*1.05*	*0.65*	*3.17*	*Cum*
	deduction for M25 Grade concrete	*2*	*0.82*	*6.50*	*0.30*	*-3.20*	*Cum*
	Floor	*1*	*0.58*	*1.60*	*0.50*	*0.46*	*Cum*
		1	*6.50*	*1.60*	*0.70*	*7.28*	*Cum*
		1	*0.49*	*1.60*	*0.35*	*0.27*	*Cum*
		1	*0.20*	*1.60*	*0.45*	*0.14*	*Cum*
		1	*5.30*	*1.60*	*0.70*	*5.94*	*Cum*
		1	*0.64*	*1.60*	*0.75*	*0.77*	*Cum*
	Crest	*1*	*1.39*	*1.60*	*1.47*	*3.26*	*Cum*
	TOTAL					**110.84**	**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*	*1.15*	*1.60*	*0.15*	*0.28*	*Cum*
	Coping over Abutment Top	*2*	*6.07*	*0.45*	*0.05*	*0.27*	*Cum*
	Slab Bridge						
	Slab	*1*	*2.40*	*6.5*	*0.34*	*5.23*	*Cum*
	Wearing coat	*1*	*2.40*	*5.50*	*0.07*	*0.92*	*Cum*
	Dirt wall	*2*	*0.40*	*6.5*	*0.30*	*1.56*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	TOTAL					**11.46**	*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.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*36*	*2.86*		*1.578*	*162.5*	*Kg*
a2	*10*	*12*	*6.90*		*0.616*	*51.0*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*23*	*2.78*		*0.616*	*39.4*	*Kg*
a5	*10*	*9*	*6.80*		*0.616*	*37.7*	*Kg*
x1	*12*	*38*	*2.50*		*0.888*	*84.4*	*Kg*
x2	*16*	*38*	*1.91*		*1.578*	*114.5*	*Kg*
x3	*12*	*20*	*2.30*		*0.888*	*40.8*	*Kg*
	Total Reinforcement Steel (in kg)					*538.3*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**110.84**	**0.30%**	**0.33**	**7850**	**2610.40**	**Kg**
	TOTAL REINFORCEMENT STEEL (in MT)					**3.1**	**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*	*1.61*		*0.45*	*2.91*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.61*		*2.07*	*13.37*	*Sqm*
		4		*1.07*	*2.07*	*8.87*	*Sqm*
		4	*1.61*		*0.70*	*4.52*	*Sqm*
		4		*1.84*	*0.70*	*5.16*	*Sqm*
	Section 2-2	*4*	*4.65*		*0.50*	*9.30*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*4.65*		*0.85*	*15.81*	*Sqm*
		4		*1.08*	*0.85*	*3.66*	*Sqm*
		4	*4.65*		*1.10*	*20.46*	*Sqm*
		4		*1.48*	*1.10*	*6.51*	*Sqm*
	Section 3-3	*4*	*3.59*		*0.50*	*7.18*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*3.59*		*0.65*	*9.33*	*Sqm*
		4		*1.02*	*0.65*	*2.64*	*Sqm*
		4	*3.59*		*1.30*	*18.66*	*Sqm*
		4		*1.36*	*1.30*	*7.07*	*Sqm*
	Section 5-5	*4*	*3.76*		*0.45*	*6.76*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.76*		*2.07*	*31.10*	*Sqm*
		4		*1.07*	*2.07*	*8.87*	*Sqm*
		4	*3.76*		*0.70*	*10.52*	*Sqm*
		4		*1.84*	*0.70*	*5.16*	*Sqm*
	Section 6-6	*4*	*2.32*		*0.50*	*4.64*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*2.32*		*0.65*	*6.03*	*Sqm*
		4		*1.35*	*0.65*	*3.51*	*Sqm*
		4	*2.32*		*0.65*	*6.03*	*Sqm*
		4		*1.05*	*0.65*	*2.73*	*Sqm*
	Floor	*2*	*0.58*		*0.50*	*0.58*	*Sqm*
		2		*1.60*	*0.50*	*1.60*	*Sqm*
		2	*6.50*		*0.70*	*9.10*	*Sqm*
		2		*1.60*	*0.70*	*2.24*	*Sqm*
		2	*0.49*		*0.35*	*0.34*	*Sqm*
		2		*1.60*	*0.35*	*1.12*	*Sqm*
		2	*0.20*		*0.45*	*0.18*	*Sqm*
		2		*1.60*	*0.45*	*1.44*	*Sqm*
		2	*5.30*		*0.70*	*7.42*	*Sqm*
		2		*1.60*	*0.70*	*2.24*	*Sqm*
		2	*0.64*		*0.75*	*0.96*	*Sqm*
		2		*1.60*	*0.75*	*2.40*	*Sqm*
	Crest	*2*	*1.3865*		*1.468*	*4.07*	*Sqm*
		2		*1.6*	*1.468*	*4.70*	*Sqm*
	Slab	*2*	*2.4*		*0.335*	*1.61*	*Sqm*
		2		*6.5*	*0.335*	*4.36*	*Sqm*
		1	*2.4*	*6.5*		*15.60*	*Sqm*
	Dirt wall	*2*	*0.4*		*0.3*	*0.24*	*Sqm*
		2		*6.5*	*0.3*	*3.90*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.75*		*0.30*	*4.65*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.45*		*0.60*	*8.94*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**310.81**	**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*	*3.12*		*9.37*	*Sqm*
	TOTAL					**9.37**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*1.00*	*0.30*	**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	*1.50*	*1.00*	*0.15*	**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*	*6.07*	*0.45*		*2.73*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.07*	*0.45*		*2.73*	*Sqm*
	TOTAL					**5.47**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	*2*			**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						
		1		8.09		8.09	Cum
	TOTAL					**8.09**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR PANTI MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.890 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.						
		1		228.91		**228.91**	**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*	*0.542*	*2.50*	*0.15*	*0.20*	*Cum*
		1	*0.727*	*2.50*	*0.15*	*0.27*	*Cum*
		1	*7.547*	*2.50*	*0.15*	*2.83*	*Cum*
		1	*0.565*	*2.50*	*0.15*	*0.21*	*Cum*
		1	*0.843*	*2.50*	*0.15*	*0.32*	*Cum*
		1	*1.789*	*2.50*	*0.15*	*0.67*	*Cum*
		1	*0.542*	*2.50*	*0.15*	*0.20*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.12*	*2.20*	*0.15*	*0.74*	*Cum*
	Section 2-2	*2*	*5.10*	*1.29*	*0.15*	*1.97*	*Cum*
	Section 3-3	*2*	*2.70*	*1.17*	*0.15*	*0.95*	*Cum*
	Section 5-5	*2*	*2.73*	*2.35*	*0.15*	*1.93*	*Cum*
	Section 6-6	*2*	*1.18*	*1.17*	*0.15*	*0.41*	*Cum*
	Toe Wall D/S Portion	*1*	*7.20*	*0.75*	*0.30*	*1.62*	*Cum*
	Toe Wall D/S Portion	*1*	*6.90*	*0.45*	*0.60*	*1.86*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
	TOTAL					**15.55**	**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*	*0.45*	*0.45*	*0.41*	*Cum*
		2	*1.00*	*1.18*	*2.42*	*5.71*	*Cum*
		2	*1.00*	*2.05*	*0.85*	*3.50*	*Cum*
	Section 2-2	*2*	*5.10*	*0.45*	*0.45*	*2.07*	*Cum*
		2	*5.10*	*0.72*	*0.90*	*6.61*	*Cum*
		2	*5.10*	*1.14*	*0.85*	*9.89*	*Cum*
	Section 3-3	*2*	*2.34*	*0.45*	*0.45*	*0.95*	*Cum*
		2	*2.34*	*0.66*	*0.70*	*2.16*	*Cum*
		2	*2.34*	*1.02*	*0.65*	*3.10*	*Cum*
	Section 5-5	*2*	*2.69*	*0.45*	*0.45*	*1.09*	*Cum*
		2	*2.69*	*1.18*	*2.42*	*15.32*	*Cum*
		2	*2.69*	*2.05*	*0.85*	*9.38*	*Cum*
	Section 6-6	*2*	*1.69*	*0.45*	*0.45*	*0.68*	*Cum*
		2	*1.69*	*0.66*	*0.70*	*1.56*	*Cum*
		2	*1.69*	*1.02*	*0.65*	*2.24*	*Cum*
	Floor	*1*	*0.61*	*2.50*	*0.65*	*1.00*	*Cum*
		1	*8.00*	*2.50*	*0.85*	*17.00*	*Cum*
		1	*0.55*	*2.50*	*0.40*	*0.55*	*Cum*
		1	*0.20*	*2.50*	*0.55*	*0.28*	*Cum*
		1	*2.80*	*2.50*	*0.50*	*3.50*	*Cum*
		1	*0.85*	*2.50*	*1.65*	*3.51*	*Cum*
	Crest	*1*	*1.04*	*2.50*	*1.92*	*4.97*	*Cum*
	TOTAL					**95.46**	**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*	*1.15*	*2.50*	*0.15*	*0.43*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.95*	*0.45*	*0.05*	*0.31*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.95*	*0.45*	*0.05*	*0.31*	*Cum*
	TOTAL					**1.06**	**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	**95.46**	**0.30%**	**0.29**	**7850**	**2248.01**	**Kg**
	Total Weight in Metric Tonne					**2.25**	**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*		*0.45*	*1.80*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.00*		*2.42*	*9.71*	*Sqm*
		4		*1.18*	*2.42*	*11.41*	*Sqm*
		4	*1.00*		*0.85*	*3.40*	*Sqm*
		4		*2.05*	*0.85*	*6.98*	*Sqm*
	Section 2-2	*4*	*5.10*		*0.45*	*9.18*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*5.10*		*0.90*	*18.36*	*Sqm*
		4		*0.72*	*0.90*	*2.59*	*Sqm*
		4	*5.10*		*0.85*	*17.34*	*Sqm*
		4		*1.14*	*0.85*	*3.88*	*Sqm*
	Section 3-3	*4*	*2.34*		*0.45*	*4.21*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.34*		*0.70*	*6.55*	*Sqm*
		4		*0.66*	*0.70*	*1.85*	*Sqm*
		4	*2.34*		*0.65*	*6.08*	*Sqm*
		4		*1.02*	*0.65*	*2.65*	*Sqm*
	Section 5-5	*4*	*2.69*		*0.45*	*4.83*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.69*		*2.42*	*26.04*	*Sqm*
		4		*1.18*	*2.42*	*11.41*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*2.69*		*0.85*	*9.13*	*Sqm*
		4		*2.05*	*0.85*	*6.98*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.45*	*3.04*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.69*		*0.70*	*4.73*	*Sqm*
		4		*0.66*	*0.70*	*1.85*	*Sqm*
		4	*1.69*		*0.65*	*4.39*	*Sqm*
		4		*1.02*	*0.65*	*2.65*	*Sqm*
	Floor	*2*	*0.61*		*0.65*	*0.80*	*Sqm*
		2		*2.50*	*0.65*	*3.25*	*Sqm*
		2	*8.00*		*0.85*	*13.60*	*Sqm*
		2		*2.50*	*0.85*	*4.25*	*Sqm*
		2	*0.55*		*0.40*	*0.44*	*Sqm*
		2		*2.50*	*0.40*	*2.00*	*Sqm*
		2	*0.20*		*0.55*	*0.22*	*Sqm*
		2		*2.50*	*0.55*	*2.75*	*Sqm*
		2	*2.80*		*0.50*	*2.80*	*Sqm*
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*0.85*		*1.65*	*2.81*	*Sqm*
		2		*2.50*	*1.65*	*8.25*	*Sqm*
	Crest	*2*	*1.036*		*1.917*	*3.97*	*Sqm*
		2		*2.5*	*1.917*	*9.59*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.20*		*0.30*	*4.32*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.90*		*0.60*	*8.28*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**264.52**	**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*	*2.41*		*12.07*	*Sqm*
	TOTAL					**12.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.90*	*0.30*	**1.43**	**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*	*1.90*	*0.15*	**1.43**	**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*	*13.95*	*0.45*		*6.28*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.95*	*0.45*		*6.28*	*Cum*
	TOTAL					**12.55**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		17.67		17.67	Cum
	TOTAL					**17.67**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.800 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.						
		1		75.32		**75.32**	**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*	*0.542*	*2.50*	*0.15*	*0.20*	*Cum*
		1	*0.783*	*2.50*	*0.15*	*0.29*	*Cum*
		1	*4.568*	*2.50*	*0.15*	*1.71*	*Cum*
		1	*0.282*	*2.50*	*0.15*	*0.11*	*Cum*
		1	*0.447*	*2.50*	*0.15*	*0.17*	*Cum*
		1	*0.782*	*2.50*	*0.15*	*0.29*	*Cum*
		1	*0.542*	*2.50*	*0.15*	*0.20*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.25*	*1.56*	*0.15*	*0.59*	*Cum*
	Section 2-2	*2*	*3.00*	*1.29*	*0.15*	*1.16*	*Cum*
	Section 3-3	*2*	*1.70*	*1.17*	*0.15*	*0.60*	*Cum*
	Section 5-5	*2*	*2.86*	*1.71*	*0.15*	*1.47*	*Cum*
	Section 6-6	*2*	*1.18*	*1.17*	*0.15*	*0.41*	*Cum*
	Toe Wall D/S Portion	*1*	*7.20*	*0.75*	*0.30*	*1.62*	*Cum*
	Toe Wall D/S Portion	*1*	*6.90*	*0.45*	*0.60*	*1.86*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
	TOTAL					**12.04**	**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*	*1.03*	*0.45*	*0.45*	*0.42*	*Cum*
		2	*1.03*	*0.86*	*1.36*	*2.39*	*Cum*
		2	*1.03*	*1.41*	*0.50*	*1.45*	*Cum*
	Section 2-2	*2*	*3.00*	*0.45*	*0.45*	*1.22*	*Cum*
		2	*3.00*	*0.72*	*0.90*	*3.89*	*Cum*
		2	*3.00*	*1.14*	*0.50*	*3.42*	*Cum*
	Section 3-3	*2*	*1.34*	*0.45*	*0.45*	*0.54*	*Cum*
		2	*1.34*	*0.66*	*0.70*	*1.24*	*Cum*
		2	*1.34*	*1.02*	*0.50*	*1.37*	*Cum*
	Section 5-5	*2*	*2.82*	*0.45*	*0.45*	*1.14*	*Cum*
		2	*2.82*	*0.86*	*1.36*	*6.56*	*Cum*
		2	*2.82*	*1.41*	*0.50*	*3.99*	*Cum*
	Section 6-6	*2*	*1.69*	*0.45*	*0.45*	*0.68*	*Cum*
		2	*1.69*	*0.66*	*0.70*	*1.56*	*Cum*
		2	*1.69*	*1.02*	*0.50*	*1.72*	*Cum*
	Floor	*1*	*0.63*	*2.50*	*0.70*	*1.09*	*Cum*
		1	*5.00*	*2.50*	*0.50*	*6.25*	*Cum*
		1	*0.50*	*2.50*	*0.20*	*0.25*	*Cum*
		1	*0.20*	*2.50*	*0.40*	*0.20*	*Cum*
		1	*1.80*	*2.50*	*0.50*	*2.25*	*Cum*
		1	*0.63*	*2.50*	*0.70*	*1.09*	*Cum*
	Crest	*1*	*1.04*	*2.50*	*0.86*	*2.24*	*Cum*
	TOTAL					**44.96**	**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*	*2.50*	*0.15*	*0.34*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.84*	*0.45*	*0.05*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.84*	*0.45*	*0.05*	*0.24*	*Cum*
	TOTAL					**0.83**	**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	**44.96**	**0.30%**	**0.13**	**7850**	**1058.74**	**Kg**
	Total Weight in Metric Tonne					**1.06**	**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*	*1.03*		*0.45*	*1.85*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.03*		*1.36*	*5.58*	*Sqm*
		4		*0.86*	*1.36*	*4.65*	*Sqm*
		4	*1.03*		*0.50*	*2.06*	*Sqm*
		4		*1.41*	*0.50*	*2.83*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.45*	*5.40*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.00*		*0.90*	*10.80*	*Sqm*
		4		*0.72*	*0.90*	*2.59*	*Sqm*
		4	*3.00*		*0.50*	*6.00*	*Sqm*
		4		*1.14*	*0.50*	*2.28*	*Sqm*
	Section 3-3	*4*	*1.34*		*0.45*	*2.41*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.34*		*0.70*	*3.75*	*Sqm*
		4		*0.66*	*0.70*	*1.85*	*Sqm*
		4	*1.34*		*0.50*	*2.68*	*Sqm*
		4		*1.02*	*0.50*	*2.04*	*Sqm*
	Section 5-5	*4*	*2.82*		*0.45*	*5.07*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.82*		*1.36*	*15.30*	*Sqm*
		4		*0.86*	*1.36*	*4.65*	*Sqm*
		4	*2.82*		*0.50*	*5.64*	*Sqm*
		4		*1.41*	*0.50*	*2.83*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.45*	*3.04*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.69*		*0.70*	*4.73*	*Sqm*
		4		*0.66*	*0.70*	*1.85*	*Sqm*
		4	*1.69*		*0.50*	*3.38*	*Sqm*
		4		*1.02*	*0.50*	*2.04*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*2.50*	*0.70*	*3.50*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*2.50*	*0.20*	*1.00*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*2.50*	*0.40*	*2.00*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*2.50*	*0.50*	*2.50*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*2.50*	*0.70*	*3.50*	*Sqm*
	Crest	*2*	*1.0355*		*0.864*	*1.79*	*Sqm*
		2		*2.5*	*0.864*	*4.32*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.20*		*0.30*	*4.32*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.90*		*0.60*	*8.28*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**161.54**	**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*	*2.50*	*2.41*		*12.07*	*Sqm*
	TOTAL					**12.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.90*	*0.30*	**1.43**	**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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.50*	*1.90*	*0.15*	**1.43**	**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*	*10.84*	*0.45*		*4.88*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.84*	*0.45*		*4.88*	*Sqm*
	TOTAL					**9.76**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.89		1.89	Cum
	TOTAL					**1.89**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.550 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.						
		1		113.10		**113.10**	**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*	*0.542*	*2.00*	*0.15*	*0.16*	*Cum*
		1	*0.670*	*2.00*	*0.15*	*0.20*	*Cum*
		1	*5.539*	*2.00*	*0.15*	*1.66*	*Cum*
		1	*0.424*	*2.00*	*0.15*	*0.13*	*Cum*
		1	*0.826*	*2.00*	*0.15*	*0.25*	*Cum*
		1	*1.006*	*2.00*	*0.15*	*0.30*	*Cum*
		1	*0.542*	*2.00*	*0.15*	*0.16*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.35*	*1.81*	*0.15*	*0.73*	*Cum*
	Section 2-2	*2*	*3.50*	*1.27*	*0.15*	*1.33*	*Cum*
	Section 3-3	*2*	*2.20*	*1.15*	*0.15*	*0.76*	*Cum*
	Section 5-5	*2*	*2.73*	*1.96*	*0.15*	*1.61*	*Cum*
	Section 6-6	*2*	*1.14*	*1.15*	*0.15*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*6.58*	*0.75*	*0.30*	*1.48*	*Cum*
	Toe Wall D/S Portion	*1*	*6.28*	*0.45*	*0.60*	*1.70*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*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*	*1.12*	*0.45*	*0.45*	*0.46*	*Cum*
		2	*1.12*	*0.98*	*1.77*	*3.92*	*Cum*
		2	*1.12*	*1.66*	*0.60*	*2.24*	*Cum*
	Section 2-2	*2*	*3.50*	*0.45*	*0.45*	*1.42*	*Cum*
		2	*3.50*	*0.71*	*0.66*	*3.27*	*Cum*
		2	*3.50*	*1.12*	*0.60*	*4.69*	*Cum*
	Section 3-3	*2*	*1.85*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.85*	*0.65*	*0.66*	*1.58*	*Cum*
		2	*1.85*	*1.00*	*0.50*	*1.84*	*Cum*
	Section 5-5	*2*	*2.68*	*0.45*	*0.45*	*1.09*	*Cum*
		2	*2.68*	*0.98*	*1.77*	*9.34*	*Cum*
		2	*2.68*	*1.66*	*0.60*	*5.35*	*Cum*
	Section 6-6	*2*	*1.64*	*0.45*	*0.45*	*0.67*	*Cum*
		2	*1.64*	*0.65*	*0.66*	*1.40*	*Cum*
		2	*1.64*	*1.00*	*0.50*	*1.64*	*Cum*
	Floor	*1*	*0.60*	*2.00*	*0.70*	*0.84*	*Cum*
		1	*6.00*	*2.00*	*0.50*	*6.00*	*Cum*
		1	*0.47*	*2.00*	*0.30*	*0.28*	*Cum*
		1	*0.20*	*2.00*	*0.40*	*0.16*	*Cum*
		1	*2.30*	*2.00*	*0.50*	*2.30*	*Cum*
		1	*0.68*	*2.00*	*0.90*	*1.22*	*Cum*
	Crest	*1*	*1.11*	*2.00*	*1.26*	*2.79*	*Cum*
	TOTAL					**53.24**	**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*	*2.00*	*0.20*	*0.36*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.85*	*0.45*	*0.05*	*0.27*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.85*	*0.45*	*0.05*	*0.27*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**0.89**	**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	**53.24**	**0.30%**	**0.16**	**7850**	**1253.90**	**Kg**
	Total Weight in Metric Tonne					**1.25**	**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*		*0.45*	*2.02*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.12*		*1.77*	*7.98*	*Sqm*
		4		*0.98*	*1.77*	*6.97*	*Sqm*
		4	*1.12*		*0.60*	*2.70*	*Sqm*
		4		*1.66*	*0.60*	*3.99*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.45*	*6.30*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.50*		*0.66*	*9.24*	*Sqm*
		4		*0.71*	*0.66*	*1.87*	*Sqm*
		4	*3.50*		*0.60*	*8.40*	*Sqm*
		4		*1.12*	*0.60*	*2.68*	*Sqm*
	Section 3-3	*4*	*1.85*		*0.45*	*3.33*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.85*		*0.66*	*4.89*	*Sqm*
		4		*0.65*	*0.66*	*1.71*	*Sqm*
		4	*1.85*		*0.50*	*3.70*	*Sqm*
		4		*1.00*	*0.50*	*1.99*	*Sqm*
	Section 5-5	*4*	*2.68*		*0.45*	*4.83*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.68*		*1.77*	*19.03*	*Sqm*
		4		*0.98*	*1.77*	*6.97*	*Sqm*
		4	*2.68*		*0.60*	*6.44*	*Sqm*
		4		*1.66*	*0.60*	*3.99*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.45*	*2.96*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.64*		*0.66*	*4.33*	*Sqm*
		4		*0.65*	*0.66*	*1.71*	*Sqm*
		4	*1.64*		*0.50*	*3.28*	*Sqm*
		4		*1.00*	*0.50*	*1.99*	*Sqm*
	Floor	*2*	*0.60*		*0.70*	*0.84*	*Sqm*
		2		*2.00*	*0.70*	*2.80*	*Sqm*
		2	*6.00*		*0.50*	*6.00*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
		2	*0.47*		*0.30*	*0.28*	*Sqm*
		2		*2.00*	*0.30*	*1.20*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*2.00*	*0.40*	*1.60*	*Sqm*
		2	*2.30*		*0.50*	*2.30*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
		2	*0.68*		*0.90*	*1.22*	*Sqm*
		2		*2.00*	*0.90*	*3.60*	*Sqm*
	Crest	*2*	*1.1095*		*1.257*	*2.79*	*Sqm*
		2		*2*	*1.257*	*5.03*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.58*		*0.30*	*3.95*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.28*		*0.60*	*7.54*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**180.22**	**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*	*2.34*		*11.70*	*Sqm*
	TOTAL					**11.70**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.40*	*0.30*	**1.05**	**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	*2.50*	*1.40*	*0.15*	**1.05**	**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*	*11.85*	*0.45*		*5.33*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.85*	*0.45*		*5.33*	*Sqm*
	TOTAL					**10.66**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		5.29		5.29	Cum
	TOTAL					**5.29**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 3.000 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.						
		1		133.29		**133.29**	**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*	*0.542*	*2.00*	*0.15*	*0.16*	*Cum*
		1	*0.614*	*2.00*	*0.15*	*0.18*	*Cum*
		1	*6.064*	*2.00*	*0.15*	*1.82*	*Cum*
		1	*0.495*	*2.00*	*0.15*	*0.15*	*Cum*
		1	*1.226*	*2.00*	*0.15*	*0.37*	*Cum*
		1	*1.118*	*2.00*	*0.15*	*0.34*	*Cum*
		1	*0.542*	*2.00*	*0.15*	*0.16*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.47*	*1.91*	*0.15*	*0.84*	*Cum*
	Section 2-2	*2*	*4.00*	*1.27*	*0.15*	*1.52*	*Cum*
	Section 3-3	*2*	*2.70*	*1.15*	*0.15*	*0.93*	*Cum*
	Section 5-5	*2*	*2.71*	*2.06*	*0.15*	*1.67*	*Cum*
	Section 6-6	*2*	*1.14*	*1.15*	*0.15*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*6.58*	*0.75*	*0.30*	*1.48*	*Cum*
	Toe Wall D/S Portion	*1*	*6.28*	*0.45*	*0.60*	*1.70*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
	TOTAL					**13.06**	**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*	*1.25*	*0.45*	*0.45*	*0.50*	*Cum*
		2	*1.25*	*1.03*	*1.93*	*4.94*	*Cum*
		2	*1.25*	*1.76*	*0.60*	*2.63*	*Cum*
	Section 2-2	*2*	*4.00*	*0.45*	*0.45*	*1.62*	*Cum*
		2	*4.00*	*0.71*	*0.66*	*3.74*	*Cum*
		2	*4.00*	*1.12*	*0.60*	*5.36*	*Cum*
	Section 3-3	*2*	*2.35*	*0.45*	*0.45*	*0.95*	*Cum*
		2	*2.35*	*0.65*	*0.66*	*2.01*	*Cum*
		2	*2.35*	*1.00*	*0.50*	*2.34*	*Cum*
	Section 5-5	*2*	*2.66*	*0.45*	*0.45*	*1.08*	*Cum*
		2	*2.66*	*1.03*	*1.93*	*10.55*	*Cum*
		2	*2.66*	*1.76*	*0.60*	*5.61*	*Cum*
	Section 6-6	*2*	*1.64*	*0.45*	*0.45*	*0.67*	*Cum*
		2	*1.64*	*0.65*	*0.66*	*1.40*	*Cum*
		2	*1.64*	*1.00*	*0.55*	*1.80*	*Cum*
	Floor	*1*	*0.59*	*2.00*	*0.55*	*0.65*	*Cum*
		1	*6.50*	*2.00*	*0.65*	*8.45*	*Cum*
		1	*0.49*	*2.00*	*0.35*	*0.35*	*Cum*
		1	*0.20*	*2.00*	*0.40*	*0.16*	*Cum*
		1	*2.80*	*2.00*	*0.50*	*2.80*	*Cum*
		1	*0.70*	*2.00*	*1.00*	*1.40*	*Cum*
	Crest	*1*	*1.23*	*2.00*	*1.39*	*3.42*	*Cum*
	TOTAL					**62.42**	**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*	*2.00*	*0.20*	*0.40*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.99*	*0.45*	*0.05*	*0.29*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.99*	*0.45*	*0.05*	*0.29*	*Sqm*
	TOTAL					**0.98**	**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	**62.42**	**0.30%**	**0.19**	**7850**	**1470.01**	**Kg**
	Total Weight in Metric Tonne					**1.47**	**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*	*1.25*		*0.45*	*2.24*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.25*		*1.93*	*9.60*	*Sqm*
		4		*1.03*	*1.93*	*7.92*	*Sqm*
		4	*1.25*		*0.60*	*2.99*	*Sqm*
		4		*1.76*	*0.60*	*4.21*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.45*	*7.20*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.00*		*0.66*	*10.56*	*Sqm*
		4		*0.71*	*0.66*	*1.87*	*Sqm*
		4	*4.00*		*0.60*	*9.60*	*Sqm*
		4		*1.12*	*0.60*	*2.68*	*Sqm*
	Section 3-3	*4*	*2.35*		*0.45*	*4.23*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.35*		*0.66*	*6.21*	*Sqm*
		4		*0.65*	*0.66*	*1.71*	*Sqm*
		4	*2.35*		*0.50*	*4.70*	*Sqm*
		4		*1.00*	*0.50*	*1.99*	*Sqm*
	Section 5-5	*4*	*2.66*		*0.45*	*4.79*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.66*		*1.93*	*20.52*	*Sqm*
		4		*1.03*	*1.93*	*7.92*	*Sqm*
		4	*2.66*		*0.60*	*6.39*	*Sqm*
		4		*1.76*	*0.60*	*4.21*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.45*	*2.96*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.64*		*0.66*	*4.33*	*Sqm*
		4		*0.65*	*0.66*	*1.71*	*Sqm*
		4	*1.64*		*0.55*	*3.61*	*Sqm*
		4		*1.00*	*0.55*	*2.19*	*Sqm*
	Floor	*2*	*0.59*		*0.55*	*0.65*	*Sqm*
		2		*2.00*	*0.55*	*2.20*	*Sqm*
		2	*6.50*		*0.65*	*8.45*	*Sqm*
		2		*2.00*	*0.65*	*2.60*	*Sqm*
		2	*0.49*		*0.35*	*0.35*	*Sqm*
		2		*2.00*	*0.35*	*1.40*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*2.00*	*0.40*	*1.60*	*Sqm*
		2	*2.80*		*0.50*	*2.80*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
		2	*0.70*		*1.00*	*1.40*	*Sqm*
		2		*2.00*	*1.00*	*4.00*	*Sqm*
	Crest	*2*	*1.23*		*1.392*	*3.42*	*Sqm*
		2		*2*	*1.392*	*5.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.58*		*0.30*	*3.95*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.28*		*0.60*	*7.54*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**198.08**	**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*	*2.34*		*11.70*	*Sqm*
	TOTAL					**11.70**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.40*	*0.30*	**1.05**	**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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.50*	*1.40*	*0.15*	**1.05**	**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*	*12.99*	*0.45*		*5.85*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.99*	*0.45*		*5.85*	*Sqm*
	TOTAL					**11.69**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		5.19		5.19	**Cum**
	TOTAL					**5.19**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR CHAPRI MINOR						
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.000 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.						
		1		43.65		**43.65**	**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*	*0.542*	*1.00*	*0.15*	*0.08*	*Cum*
		1	*0.783*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*3.618*	*1.00*	*0.15*	*0.54*	*Cum*
		1	*0.282*	*1.00*	*0.15*	*0.04*	*Cum*
		1	*0.896*	*1.00*	*0.15*	*0.13*	*Cum*
		1	*0.782*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*0.542*	*1.00*	*0.15*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.19*	*1.41*	*0.15*	*0.50*	*Cum*
	Section 2-2	*2*	*2.26*	*1.14*	*0.15*	*0.77*	*Cum*
	Section 3-3	*2*	*2.65*	*1.02*	*0.15*	*0.81*	*Cum*
	Section 5-5	*2*	*2.36*	*1.56*	*0.15*	*1.11*	*Cum*
	Section 6-6	*2*	*0.96*	*1.02*	*0.15*	*0.29*	*Cum*
	Toe Wall D/S Portion	*1*	*4.95*	*0.75*	*0.30*	*1.11*	*Cum*
	Toe Wall D/S Portion	*1*	*4.65*	*0.45*	*0.60*	*1.26*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**7.78**	**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*	*0.96*	*0.45*	*0.45*	*0.39*	*Cum*
		2	*0.96*	*0.78*	*1.11*	*1.67*	*Cum*
		2	*0.96*	*1.26*	*0.50*	*1.22*	*Cum*
	Section 2-2	*2*	*2.26*	*0.45*	*0.45*	*0.91*	*Cum*
		2	*2.26*	*0.65*	*0.65*	*1.89*	*Cum*
		2	*2.26*	*0.99*	*0.50*	*2.23*	*Cum*
	Section 3-3	*2*	*2.37*	*0.45*	*0.45*	*0.96*	*Cum*
		2	*2.37*	*0.59*	*0.45*	*1.25*	*Cum*
		2	*2.37*	*0.87*	*0.50*	*2.06*	*Cum*
	Section 5-5	*2*	*2.32*	*0.45*	*0.45*	*0.94*	*Cum*
		2	*2.32*	*0.78*	*1.11*	*4.01*	*Cum*
		2	*2.32*	*1.26*	*0.50*	*2.93*	*Cum*
	Section 6-6	*2*	*1.39*	*0.45*	*0.45*	*0.56*	*Cum*
		2	*1.39*	*0.59*	*0.45*	*0.73*	*Cum*
		2	*1.39*	*0.87*	*0.50*	*1.21*	*Cum*
	Floor	*1*	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
		1	*4.00*	*1.00*	*0.50*	*2.00*	*Cum*
		1	*0.55*	*1.00*	*0.20*	*0.11*	*Cum*
		1	*0.20*	*1.00*	*0.40*	*0.08*	*Cum*
		1	*2.30*	*1.00*	*0.50*	*1.15*	*Cum*
		1	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
	Crest	*1*	*0.72*	*1.00*	*0.75*	*0.53*	*Cum*
	TOTAL					**27.72**	**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*	*1.00*	*0.15*	*0.09*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.05*	*0.45*	*0.05*	*0.23*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.05*	*0.45*	*0.05*	*0.23*	*Sqm*
	TOTAL					**0.54**	**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	**27.72**	**0.30%**	**0.08**	**7850**	**652.70**	**Kg**
	Total Weight in Metric Tonne					**0.65**	**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*	*0.96*		*0.45*	*1.74*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.96*		*1.11*	*4.27*	*Sqm*
		4		*0.78*	*1.11*	*3.46*	*Sqm*
		4	*0.96*		*0.50*	*1.93*	*Sqm*
		4		*1.26*	*0.50*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.26*		*0.45*	*4.06*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.26*		*0.65*	*5.87*	*Sqm*
		4		*0.65*	*0.65*	*1.68*	*Sqm*
		4	*2.26*		*0.50*	*4.51*	*Sqm*
		4		*0.99*	*0.50*	*1.98*	*Sqm*
	Section 3-3	*4*	*2.37*		*0.45*	*4.26*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.37*		*0.45*	*4.26*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*2.37*		*0.50*	*4.73*	*Sqm*
		4		*0.87*	*0.50*	*1.74*	*Sqm*
	Section 5-5	*4*	*2.32*		*0.45*	*4.17*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.32*		*1.11*	*10.27*	*Sqm*
		4		*0.78*	*1.11*	*3.46*	*Sqm*
		4	*2.32*		*0.50*	*4.64*	*Sqm*
		4		*1.26*	*0.50*	*2.53*	*Sqm*
	Section 6-6	*4*	*1.39*		*0.45*	*2.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.39*		*0.45*	*2.50*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*1.39*		*0.50*	*2.78*	*Sqm*
		4		*0.87*	*0.50*	*1.74*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
		2	*4.00*		*0.50*	*4.00*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.55*		*0.20*	*0.22*	*Sqm*
		2		*1.00*	*0.20*	*0.40*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.00*	*0.40*	*0.80*	*Sqm*
		2	*2.30*		*0.50*	*2.30*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
	Crest	*2*	*0.716*		*0.746*	*1.07*	*Sqm*
		2		*1*	*0.746*	*1.49*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.95*		*0.30*	*2.97*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.65*		*0.60*	*5.58*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**119.86**	**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*	*1.50*	*1.96*		*5.88*	*Sqm*
	TOTAL					**5.88**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.40*	*0.30*	**0.18**	**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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.50*	*0.40*	*0.15*	**0.18**	**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*	*10.05*	*0.45*		*4.52*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.05*	*0.45*		*4.52*	*Sqm*
	TOTAL					**9.05**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		0.78		0.78	Cum
	TOTAL					**0.78**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 1.850 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.						
		1		68.16		**68.16**	**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*	*0.543*	*0.70*	*0.15*	*0.06*	*Cum*
		1	*0.559*	*0.70*	*0.15*	*0.06*	*Cum*
		1	*5.518*	*0.70*	*0.15*	*0.58*	*Cum*
		1	*0.495*	*0.70*	*0.15*	*0.05*	*Cum*
		1	*1.816*	*0.70*	*0.15*	*0.19*	*Cum*
		1	*1.118*	*0.70*	*0.15*	*0.12*	*Cum*
		1	*0.543*	*0.70*	*0.15*	*0.06*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.80*	*1.78*	*0.15*	*0.43*	*Cum*
	Section 2-2	*2*	*2.50*	*1.05*	*0.15*	*0.79*	*Cum*
	Section 3-3	*2*	*4.75*	*0.93*	*0.15*	*1.32*	*Cum*
	Section 5-5	*2*	*0.55*	*1.93*	*0.15*	*0.32*	*Cum*
	Section 6-6	*2*	*0.15*	*0.93*	*0.15*	*0.04*	*Cum*
	Toe Wall D/S Portion	*1*	*2.20*	*0.75*	*0.30*	*0.50*	*Cum*
	Toe Wall D/S Portion	*1*	*1.90*	*0.45*	*0.60*	*0.51*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*1.40*	*0.15*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**5.88**	**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.						
	Abutment						
	Section 1-1	*2*	*0.58*	*0.45*	*0.45*	*0.23*	*Cum*
		2	*0.58*	*0.97*	*1.72*	*1.92*	*Cum*
		2	*0.58*	*1.63*	*0.70*	*1.32*	*Cum*
	Section 2-2	*2*	*2.50*	*0.45*	*0.45*	*1.01*	*Cum*
		2	*2.50*	*0.60*	*0.50*	*1.50*	*Cum*
		2	*2.50*	*0.90*	*0.70*	*3.15*	*Cum*
	Section 3-3	*2*	*4.43*	*0.45*	*0.45*	*1.80*	*Cum*
		2	*4.43*	*0.54*	*0.30*	*1.44*	*Cum*
		2	*4.43*	*0.78*	*0.55*	*3.80*	*Cum*
	Section 5-5	*2*	*0.51*	*0.45*	*0.45*	*0.21*	*Cum*
		2	*0.51*	*0.97*	*1.72*	*1.70*	*Cum*
		2	*0.51*	*1.63*	*0.70*	*1.17*	*Cum*
	Section 6-6	*2*	*0.54*	*0.45*	*0.45*	*0.22*	*Cum*
		2	*0.54*	*0.54*	*0.30*	*0.17*	*Cum*
		2	*0.54*	*0.78*	*0.50*	*0.42*	*Cum*
	Floor	*1*	*0.58*	*0.70*	*0.50*	*0.20*	*Cum*
		1	*6.00*	*0.70*	*0.70*	*2.94*	*Cum*
		1	*0.42*	*0.70*	*0.35*	*0.10*	*Cum*
		1	*0.20*	*0.70*	*0.45*	*0.06*	*Cum*
		1	*1.30*	*0.70*	*0.55*	*0.50*	*Cum*
		1	*0.05*	*0.70*	*0.53*	*0.02*	*Cum*
		1	*1.95*	*0.70*	*0.50*	*0.68*	*Cum*
		1	*0.70*	*0.70*	*1.00*	*0.49*	*Cum*
	Crest	*1*	*1.08*	*0.70*	*1.45*	*1.10*	*Cum*
	TOTAL					**26.17**	**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*	*0.70*	*0.15*	*0.08*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.13*	*0.45*	*0.05*	*0.21*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.13*	*0.45*	*0.05*	*0.21*	*Cum*
	TOTAL					**0.49**	**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	**26.17**	**0.30%**	**0.08**	**7850**	**616.24**	**Kg**
	Total Weight in Metric Tonne					**0.62**	**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*	*0.58*		*0.45*	*1.04*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.58*		*1.72*	*3.98*	*Sqm*
		4		*0.97*	*1.72*	*6.65*	*Sqm*
		4	*0.58*		*0.70*	*1.62*	*Sqm*
		4		*1.63*	*0.70*	*4.57*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.45*	*4.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.50*		*0.50*	*5.00*	*Sqm*
		4		*0.60*	*0.50*	*1.20*	*Sqm*
		4	*2.50*		*0.70*	*7.00*	*Sqm*
		4		*0.90*	*0.70*	*2.52*	*Sqm*
	Section 3-3	*4*	*4.43*		*0.45*	*7.98*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.43*		*0.30*	*5.32*	*Sqm*
		4		*0.54*	*0.30*	*0.65*	*Sqm*
		4	*4.43*		*0.55*	*9.75*	*Sqm*
		4		*0.78*	*0.55*	*1.72*	*Sqm*
	Section 5-5	*4*	*0.51*		*0.45*	*0.92*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.51*		*1.72*	*3.51*	*Sqm*
		4		*0.97*	*1.72*	*6.65*	*Sqm*
		4	*0.51*		*0.70*	*1.43*	*Sqm*
		4		*1.63*	*0.70*	*4.57*	*Sqm*
	Section 6-6	*4*	*0.54*		*0.45*	*0.97*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.54*		*0.30*	*0.65*	*Sqm*
		4		*0.54*	*0.30*	*0.65*	*Sqm*
		4	*0.54*		*0.50*	*1.08*	*Sqm*
		4		*0.78*	*0.50*	*1.56*	*Sqm*
	Floor	*2*	*0.58*		*0.50*	*0.58*	*Sqm*
		2		*0.70*	*0.50*	*0.70*	*Sqm*
		2	*6.00*		*0.70*	*8.40*	*Sqm*
		2		*0.70*	*0.70*	*0.98*	*Sqm*
		2	*0.42*		*0.35*	*0.30*	*Sqm*
		2		*0.70*	*0.35*	*0.49*	*Sqm*
		2	*0.20*		*0.45*	*0.18*	*Sqm*
		2		*0.70*	*0.45*	*0.63*	*Sqm*
		2	*1.30*		*0.55*	*1.43*	*Sqm*
		2		*0.70*	*0.55*	*0.77*	*Sqm*
		2	*0.05*		*0.53*	*0.05*	*Sqm*
		2		*0.70*	*0.53*	*0.74*	*Sqm*
		2	*1.95*		*0.50*	*1.95*	*Sqm*
		2		*0.70*	*0.50*	*0.70*	*Sqm*
		2	*0.70*		*1.00*	*1.40*	*Sqm*
		2		*0.70*	*1.00*	*1.40*	*Sqm*
	Crest	*2*	*1.0835*		*1.454*	*3.15*	*Sqm*
		2		*0.7*	*1.454*	*2.04*	*Sqm*
	Toe Wall D/S Portion	*2*	*2.20*		*0.30*	*1.32*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*1.90*		*0.60*	*2.28*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*2*	*1.50*		*0.15*	*0.45*	*Sqm*
		2		*1.40*	*0.15*	*0.42*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**125.19**	**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*	*2.70*		*8.10*	*Sqm*
	TOTAL					**8.10**	**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*	*1.50*	*0.50*	*0.30*	**0.23**	**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*	*0.50*	*0.15*	**0.23**	**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*	*0.45*		*4.11*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.13*	*0.45*		*4.11*	*Sqm*
	TOTAL					**8.22**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		2.01		2.01	Cum
	TOTAL					**2.01**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BISHUNPUR SUB-DY.						
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 0.000 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.						
		1		180.24		**180.24**	**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*	*0.543*	*3.60*	*0.15*	*0.29*	*Cum*
		1	*0.783*	*3.60*	*0.15*	*0.42*	*Cum*
		1	*4.227*	*3.60*	*0.15*	*2.28*	*Cum*
		1	*0.283*	*3.60*	*0.15*	*0.15*	*Cum*
		1	*3.788*	*3.60*	*0.15*	*2.05*	*Cum*
		1	*0.783*	*3.60*	*0.15*	*0.42*	*Cum*
		1	*0.543*	*3.60*	*0.15*	*0.29*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.52*	*1.77*	*0.15*	*0.81*	*Cum*
	Section 2-2	*2*	*2.80*	*2.11*	*0.15*	*1.77*	*Cum*
	Section 3-3	*2*	*4.95*	*1.99*	*0.15*	*2.96*	*Cum*
	Section 5-5	*2*	*7.14*	*1.92*	*0.15*	*4.12*	*Cum*
	Section 6-6	*2*	*3.66*	*1.14*	*0.15*	*1.25*	*Cum*
	Toe Wall D/S Portion	*1*	*14.60*	*0.75*	*0.30*	*3.29*	*Cum*
	Toe Wall D/S Portion	*1*	*14.30*	*0.45*	*0.60*	*3.86*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.60*	*0.15*	*0.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.30*	*0.60*	*1.35*	*Cum*
	TOTAL					**25.99**	**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*	*1.44*	*0.45*	*0.45*	*0.58*	*Cum*
		2	*1.44*	*0.96*	*1.71*	*4.71*	*Cum*
		2	*1.44*	*1.62*	*0.50*	*2.33*	*Cum*
	Section 2-2	*2*	*2.66*	*0.82*	*0.50*	*2.18*	*Cum*
		2	*2.66*	*1.24*	*1.40*	*9.23*	*Cum*
		2	*2.66*	*1.81*	*1.00*	*9.62*	*Cum*
	Section 3-3	*2*	*4.43*	*0.82*	*0.50*	*3.63*	*Cum*
		2	*4.43*	*1.18*	*1.20*	*12.53*	*Cum*
		2	*4.43*	*1.69*	*1.20*	*17.95*	*Cum*
	Section 5-5	*2*	*7.10*	*0.45*	*0.45*	*2.87*	*Cum*
		2	*7.10*	*0.96*	*1.71*	*23.27*	*Cum*
		2	*7.10*	*1.62*	*0.50*	*11.52*	*Cum*
	Section 6-6	*2*	*4.58*	*0.45*	*0.50*	*2.06*	*Cum*
		2	*4.58*	*1.62*	*1.20*	*17.81*	*Cum*
		2	*4.58*	*1.32*	*0.50*	*6.05*	*Cum*
	deduction for M25 Grade concrete	*2*	*0.82*	*6.50*	*0.30*	*-3.20*	*Cum*
	Floor	*1*	*0.63*	*3.60*	*0.70*	*1.58*	*Cum*
		1	*4.75*	*3.60*	*0.50*	*8.55*	*Cum*
		1	*0.44*	*3.60*	*0.20*	*0.32*	*Cum*
		1	*0.20*	*3.60*	*0.40*	*0.29*	*Cum*
		1	*5.05*	*3.60*	*0.50*	*9.09*	*Cum*
		1	*0.63*	*3.60*	*0.70*	*1.58*	*Cum*
	Crest	*1*	*1.04*	*3.60*	*0.90*	*3.39*	*Cum*
	TOTAL					**147.94**	**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 Crest	*1*	*0.90*	*3.60*	*0.15*	*0.49*	*Cum*
	Coping over Abutment Top	*2*	*9.06*	*0.45*	*0.05*	*0.41*	*Cum*
	Slab Bridge						
	Slab	*1*	*4.40*	*6.5*	*0.39*	*11.01*	*Cum*
	Wearing coat	*1*	*4.40*	*5.50*	*0.07*	*1.69*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Dirt wall	*2*	*0.40*	*6.5*	*0.35*	*1.82*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	TOTAL					**18.62**	*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.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*45*	*4.96*		*1.578*	*352.2*	*Kg*
a2	*10*	*22*	*6.90*		*0.616*	*93.6*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*2.88*		*0.616*	*46.2*	*Kg*
a5	*10*	*18*	*6.85*		*0.616*	*76.0*	*Kg*
x1	*12*	*72*	*2.55*		*0.888*	*163.0*	*Kg*
x2	*16*	*72*	*1.91*		*1.578*	*217.0*	*Kg*
x3	*12*	*20*	*4.30*		*0.888*	*76.3*	*Kg*
	Total Reinforcement Steel (in kg)					*1032.3*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**147.94**	**0.30%**	**0.44**	**7850**	**3483.88**	**Kg**
	TOTAL REINFORCEMENT STEEL (in MT)					**4.5**	**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*		*0.45*	*2.59*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.44*		*1.71*	*9.81*	*Sqm*
		4		*0.96*	*1.71*	*6.56*	*Sqm*
		4	*1.44*		*0.50*	*2.88*	*Sqm*
		4		*1.62*	*0.50*	*3.25*	*Sqm*
	Section 2-2	*4*	*2.66*		*0.50*	*5.32*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*2.66*		*1.40*	*14.88*	*Sqm*
		4		*1.24*	*1.40*	*6.94*	*Sqm*
		4	*2.66*		*1.00*	*10.63*	*Sqm*
		4		*1.81*	*1.00*	*7.24*	*Sqm*
	Section 3-3	*4*	*4.43*		*0.50*	*8.85*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*4.43*		*1.20*	*21.24*	*Sqm*
		4		*1.18*	*1.20*	*5.66*	*Sqm*
		4	*4.43*		*1.20*	*21.24*	*Sqm*
		4		*1.69*	*1.20*	*8.11*	*Sqm*
	Section 5-5	*4*	*7.10*		*0.45*	*12.78*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*7.10*		*1.71*	*48.40*	*Sqm*
		4		*0.96*	*1.71*	*6.56*	*Sqm*
		4	*7.10*		*0.50*	*14.20*	*Sqm*
		4		*1.62*	*0.50*	*3.25*	*Sqm*
	Section 6-6	*4*	*4.58*		*0.50*	*9.16*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*4.58*		*1.20*	*21.98*	*Sqm*
		4		*1.62*	*1.20*	*7.78*	*Sqm*
		4	*4.58*		*0.50*	*9.16*	*Sqm*
		4		*1.32*	*0.50*	*2.64*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.60*	*0.70*	*5.04*	*Sqm*
		2	*4.75*		*0.50*	*4.75*	*Sqm*
		2		*3.60*	*0.50*	*3.60*	*Sqm*
		2	*0.44*		*0.20*	*0.18*	*Sqm*
		2		*3.60*	*0.20*	*1.44*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*3.60*	*0.40*	*2.88*	*Sqm*
		2	*5.05*		*0.50*	*5.05*	*Sqm*
		2		*3.60*	*0.50*	*3.60*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.60*	*0.70*	*5.04*	*Sqm*
	Crest	*2*	*1.0425*		*0.904*	*1.88*	*Sqm*
		2		*3.6*	*0.904*	*6.51*	*Sqm*
	Slab	*2*	*4.4*		*0.385*	*3.39*	*Sqm*
		2		*6.5*	*0.385*	*5.01*	*Sqm*
		1	*4.4*	*6.5*		*28.60*	*Sqm*
	Dirt wall	*2*	*0.4*		*0.35*	*0.28*	*Sqm*
		2		*6.5*	*0.35*	*4.55*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.60*		*0.30*	*8.76*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.30*		*0.60*	*17.16*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.15*	*2.25*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.60*	*9.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**399.84**	**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*	*3.75*	*5.71*		*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*	*3.75*	*3.00*	*0.30*	**3.38**	**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	*3.75*	*3.00*	*0.15*	**3.38**	**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*	*9.06*	*0.45*		*4.08*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*9.06*	*0.45*		*4.08*	*Sqm*
	TOTAL					**8.16**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.19		1.19	Cum
	TOTAL					**1.19**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 4.550 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.						
		1		530.39		**530.39**	**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*	*0.543*	*3.45*	*0.15*	*0.28*	*Cum*
		1	*0.559*	*3.45*	*0.15*	*0.29*	*Cum*
		1	*8.280*	*3.45*	*0.15*	*4.28*	*Cum*
		1	*0.707*	*3.45*	*0.15*	*0.37*	*Cum*
		1	*2.009*	*3.45*	*0.15*	*1.04*	*Cum*
		1	*1.956*	*3.45*	*0.15*	*1.01*	*Cum*
		1	*0.543*	*3.45*	*0.15*	*0.28*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.85*	*2.47*	*0.15*	*1.37*	*Cum*
	Section 2-2	*2*	*5.50*	*2.08*	*0.15*	*3.43*	*Cum*
	Section 3-3	*2*	*3.70*	*1.96*	*0.15*	*2.18*	*Cum*
	Section 5-5	*2*	*6.95*	*2.62*	*0.15*	*5.47*	*Cum*
	Section 6-6	*2*	*3.52*	*1.44*	*0.15*	*1.52*	*Cum*
	Toe Wall D/S Portion	*1*	*14.10*	*0.75*	*0.30*	*3.17*	*Cum*
	Toe Wall D/S Portion	*1*	*13.80*	*0.45*	*0.60*	*3.73*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.60*	*0.15*	*0.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.30*	*0.60*	*1.35*	*Cum*
	TOTAL					**30.45**	**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*	*0.45*	*0.45*	*0.66*	*Cum*
		2	*1.62*	*1.31*	*2.87*	*12.24*	*Cum*
		2	*1.62*	*2.32*	*1.05*	*7.92*	*Cum*
	Section 2-2	*2*	*5.50*	*0.82*	*0.50*	*4.51*	*Cum*
		2	*5.50*	*1.23*	*1.35*	*18.19*	*Cum*
		2	*5.50*	*1.78*	*2.30*	*45.03*	*Cum*
	Section 3-3	*2*	*3.21*	*0.82*	*0.50*	*2.63*	*Cum*
		2	*3.21*	*1.17*	*1.15*	*8.59*	*Cum*
		2	*3.21*	*1.66*	*2.50*	*26.60*	*Cum*
	Section 5-5	*2*	*6.91*	*0.45*	*0.45*	*2.80*	*Cum*
		2	*6.91*	*1.31*	*2.87*	*52.09*	*Cum*
		2	*6.91*	*2.32*	*1.05*	*33.71*	*Cum*
	Section 6-6	*2*	*4.35*	*0.45*	*0.50*	*1.96*	*Cum*
		2	*4.35*	*0.80*	*1.15*	*7.94*	*Cum*
		2	*4.35*	*1.29*	*0.50*	*5.61*	*Cum*
	deduction for M25 Grade concrete	*2*	*0.82*	*6.50*	*0.30*	*-3.20*	*Cum*
	Floor	*1*	*0.58*	*3.45*	*0.50*	*0.99*	*Cum*
		1	*9.00*	*3.45*	*1.05*	*32.60*	*Cum*
		1	*0.26*	*3.45*	*0.50*	*0.45*	*Cum*
		1	*0.20*	*3.45*	*0.65*	*0.45*	*Cum*
		1	*3.80*	*3.45*	*0.75*	*9.83*	*Cum*
		1	*0.89*	*3.45*	*1.75*	*5.36*	*Cum*
	Crest	*1*	*1.60*	*3.45*	*2.16*	*11.95*	*Cum*
	TOTAL					**288.90**	**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*	*1.25*	*3.45*	*0.15*	*0.65*	*Cum*
	Coping over Abutment Top	*2*	*9.73*	*0.45*	*0.05*	*0.44*	*Cum*
	Slab Bridge						
	Slab	*1*	*4.25*	*6.5*	*0.39*	*10.64*	*Cum*
	Wearing coat	*1*	*4.25*	*5.50*	*0.07*	*1.64*	*Cum*
	Dirt wall	*2*	*0.40*	*6.5*	*0.35*	*1.82*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	TOTAL					**18.37**	*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*	*45*	*4.81*		*1.578*	*341.6*	*Kg*
a2	*10*	*21*	*7.00*		*0.616*	*90.6*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.73*		*0.616*	*75.8*	*Kg*
a5	*10*	*17*	*6.85*		*0.616*	*71.8*	*Kg*
x1	*12*	*70*	*2.55*		*0.888*	*158.5*	*Kg*
x2	*16*	*70*	*1.91*		*1.578*	*211.0*	*Kg*
x3	*12*	*20*	*4.30*		*0.888*	*76.3*	*Kg*
	Total Reinforcement Steel (in kg)					*1033.6*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**288.90**	**0.30%**	**0.87**	**7850**	**6803.68**	**Kg**
	TOTAL REINFORCEMENT STEEL (in MT)					**7.8**	**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*		*0.45*	*2.92*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.62*		*2.87*	*18.65*	*Sqm*
		4		*1.31*	*2.87*	*15.08*	*Sqm*
		4	*1.62*		*1.05*	*6.81*	*Sqm*
		4		*2.32*	*1.05*	*9.76*	*Sqm*
	Section 2-2	*4*	*5.50*		*0.50*	*11.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.50*		*1.35*	*29.70*	*Sqm*
		4		*1.23*	*1.35*	*6.62*	*Sqm*
		4	*5.50*		*2.30*	*50.60*	*Sqm*
		4		*1.78*	*2.30*	*16.38*	*Sqm*
	Section 3-3	*4*	*3.21*		*0.50*	*6.41*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*3.21*		*1.15*	*14.74*	*Sqm*
		4		*1.17*	*1.15*	*5.36*	*Sqm*
		4	*3.21*		*2.50*	*32.05*	*Sqm*
		4		*1.66*	*2.50*	*16.60*	*Sqm*
	Section 5-5	*4*	*6.91*		*0.45*	*12.43*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*6.91*		*2.87*	*79.41*	*Sqm*
		4		*1.31*	*2.87*	*15.08*	*Sqm*
		4	*6.91*		*1.05*	*29.01*	*Sqm*
		4		*2.32*	*1.05*	*9.76*	*Sqm*
	Section 6-6	*4*	*4.35*		*0.50*	*8.69*	*Sqm*
		4		*0.45*	*0.50*	*0.90*	*Sqm*
		4	*4.35*		*1.15*	*19.99*	*Sqm*
		4		*0.80*	*1.15*	*3.66*	*Sqm*
		4	*4.35*		*0.50*	*8.69*	*Sqm*
		4		*1.29*	*0.50*	*2.58*	*Sqm*
	Floor	*2*	*0.58*		*0.50*	*0.58*	*Sqm*
		2		*3.45*	*0.50*	*3.45*	*Sqm*
		2	*9.00*		*1.05*	*18.90*	*Sqm*
		2		*3.45*	*1.05*	*7.25*	*Sqm*
		2	*0.26*		*0.50*	*0.26*	*Sqm*
		2		*3.45*	*0.50*	*3.45*	*Sqm*
		2	*0.20*		*0.65*	*0.26*	*Sqm*
		2		*3.45*	*0.65*	*4.49*	*Sqm*
		2	*3.80*		*0.75*	*5.70*	*Sqm*
		2		*3.45*	*0.75*	*5.18*	*Sqm*
		2	*0.89*		*1.75*	*3.11*	*Sqm*
		2		*3.45*	*1.75*	*12.08*	*Sqm*
	Crest	*2*	*1.602*		*2.162*	*6.93*	*Sqm*
		2		*3.45*	*2.162*	*14.92*	*Sqm*
	Slab	*2*	*4.25*		*0.385*	*3.27*	*Sqm*
		2		*6.5*	*0.385*	*5.01*	*Sqm*
		1	*4.25*	*6.5*		*27.63*	*Sqm*
	Dirt wall	*2*	*0.4*		*0.35*	*0.28*	*Sqm*
		2		*6.5*	*0.35*	*4.55*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.10*		*0.30*	*8.46*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.80*		*0.60*	*16.56*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.15*	*2.25*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.60*	*9.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**603.38**	**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*	*3.75*	*5.52*		*41.43*	*Sqm*
	TOTAL					**41.43**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.75*	*2.85*	*0.30*	**3.21**	**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	*3.75*	*2.85*	*0.15*	**3.21**	**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*	*9.73*	*0.45*		*4.38*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.73*	*0.45*		*4.38*	*Sqm*
	TOTAL					**8.76**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		17.81		17.81	Cum
	TOTAL					**17.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH. 5.880 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.						
		1		612.72		**612.72**	**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*	*0.543*	*3.45*	*0.15*	*0.28*	*Cum*
		1	*0.559*	*3.45*	*0.15*	*0.29*	*Cum*
		1	*8.280*	*3.45*	*0.15*	*4.28*	*Cum*
		1	*0.707*	*3.45*	*0.15*	*0.37*	*Cum*
		1	*2.009*	*3.45*	*0.15*	*1.04*	*Cum*
		1	*1.956*	*3.45*	*0.15*	*1.01*	*Cum*
		1	*0.543*	*3.45*	*0.15*	*0.28*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.85*	*2.59*	*0.15*	*1.43*	*Cum*
	Section 2-2	*2*	*5.50*	*2.01*	*0.15*	*3.31*	*Cum*
	Section 3-3	*2*	*3.70*	*1.89*	*0.15*	*2.10*	*Cum*
	Section 5-5	*2*	*6.95*	*2.74*	*0.15*	*5.71*	*Cum*
	Section 6-6	*2*	*3.52*	*1.37*	*0.15*	*1.44*	*Cum*
	Toe Wall D/S Portion	*1*	*12.81*	*0.75*	*0.30*	*2.88*	*Cum*
	Toe Wall D/S Portion	*1*	*12.51*	*0.45*	*0.60*	*3.38*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.50*	*0.60*	*0.15*	*0.63*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.50*	*0.30*	*0.60*	*1.26*	*Cum*
	TOTAL					**29.70**	**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*	*1.62*	*0.45*	*0.45*	*0.66*	*Cum*
		2	*1.62*	*1.37*	*3.06*	*13.58*	*Cum*
		2	*1.62*	*2.44*	*1.15*	*9.09*	*Cum*
	Section 2-2	*2*	*5.50*	*0.82*	*0.20*	*1.80*	*Cum*
		2	*5.50*	*1.19*	*1.73*	*22.63*	*Cum*
		2	*5.50*	*1.71*	*2.30*	*43.21*	*Cum*
	Section 3-3	*2*	*3.21*	*0.82*	*0.20*	*1.05*	*Cum*
		2	*3.21*	*1.13*	*1.53*	*11.07*	*Cum*
		2	*3.21*	*1.59*	*2.50*	*25.45*	*Cum*
	Section 5-5	*2*	*6.91*	*0.45*	*0.45*	*2.80*	*Cum*
		2	*6.91*	*1.37*	*3.06*	*57.83*	*Cum*
		2	*6.91*	*2.44*	*1.15*	*38.70*	*Cum*
	Section 6-6	*2*	*4.35*	*0.45*	*0.20*	*0.78*	*Cum*
		2	*4.35*	*0.76*	*1.53*	*10.09*	*Cum*
		2	*4.35*	*1.37*	*0.50*	*5.94*	*Cum*
	deduction for M25 Grade concrete	*2*	*0.82*	*6.50*	*0.30*	*-3.20*	*Cum*
	Floor	*1*	*0.58*	*3.45*	*0.50*	*0.99*	*Cum*
		1	*11.31*	*3.45*	*1.15*	*44.87*	*Cum*
		1	*0.71*	*3.45*	*1.00*	*2.44*	*Cum*
		1	*1.21*	*3.45*	*0.85*	*3.56*	*Cum*
		1	*1.28*	*3.45*	*0.85*	*3.74*	*Cum*
		1	*0.86*	*3.45*	*1.65*	*4.91*	*Cum*
	Crest	*1*	*1.89*	*3.45*	*2.34*	*15.24*	*Cum*
	TOTAL					**317.25**	**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*	*1.50*	*3.45*	*0.15*	*0.78*	*Cum*
	Coping over Abutment Top	*2*	*9.32*	*0.45*	*0.05*	*0.42*	*Cum*
	Slab Bridge						
	Slab	*1*	*3.80*	*6.5*	*0.39*	*9.51*	*Cum*
	Wearing coat	*1*	*3.80*	*5.50*	*0.07*	*1.46*	*Cum*
	Dirt wall	*2*	*0.40*	*6.5*	*0.35*	*1.82*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	TOTAL					**17.19**	*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*	*45*	*4.46*		*1.578*	*316.7*	*Kg*
a2	*10*	*19*	*7.00*		*0.616*	*82.0*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.38*		*0.616*	*70.2*	*Kg*
a5	*10*	*15*	*6.85*		*0.616*	*63.3*	*Kg*
x1	*12*	*64*	*2.55*		*0.888*	*144.9*	*Kg*
x2	*16*	*64*	*1.99*		*1.578*	*201.0*	*Kg*
x3	*12*	*20*	*3.80*		*0.888*	*67.5*	*Kg*
	Total Reinforcement Steel (in kg)					*953.5*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**317.25**	**0.30%**	**0.95**	**7850**	**7471.19**	**Kg**
	TOTAL REINFORCEMENT STEEL (in MT)					**8.4**	**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*		*0.45*	*2.92*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.62*		*3.06*	*19.86*	*Sqm*
		4		*1.37*	*3.06*	*16.74*	*Sqm*
		4	*1.62*		*1.15*	*7.46*	*Sqm*
		4		*2.44*	*1.15*	*11.21*	*Sqm*
	Section 2-2	*4*	*5.50*		*0.20*	*4.40*	*Sqm*
		4		*0.82*	*0.20*	*0.66*	*Sqm*
		4	*5.50*		*1.73*	*38.06*	*Sqm*
		4		*1.19*	*1.73*	*8.23*	*Sqm*
		4	*5.50*		*2.30*	*50.60*	*Sqm*
		4		*1.71*	*2.30*	*15.71*	*Sqm*
	Section 3-3	*4*	*3.21*		*0.20*	*2.56*	*Sqm*
		4		*0.82*	*0.20*	*0.66*	*Sqm*
		4	*3.21*		*1.53*	*19.61*	*Sqm*
		4		*1.13*	*1.53*	*6.91*	*Sqm*
		4	*3.21*		*2.50*	*32.05*	*Sqm*
		4		*1.59*	*2.50*	*15.88*	*Sqm*
	Section 5-5	*4*	*6.91*		*0.45*	*12.43*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*6.91*		*3.06*	*84.55*	*Sqm*
		4		*1.37*	*3.06*	*16.74*	*Sqm*
		4	*6.91*		*1.15*	*31.77*	*Sqm*
		4		*2.44*	*1.15*	*11.21*	*Sqm*
	Section 6-6	*4*	*4.35*		*0.20*	*3.48*	*Sqm*
		4		*0.45*	*0.20*	*0.36*	*Sqm*
		4	*4.35*		*1.53*	*26.59*	*Sqm*
		4		*0.76*	*1.53*	*4.65*	*Sqm*
		4	*4.35*		*0.50*	*8.69*	*Sqm*
		4		*1.37*	*0.50*	*2.74*	*Sqm*
	Floor	*2*	*0.58*		*0.50*	*0.58*	*Sqm*
		2		*3.45*	*0.50*	*3.45*	*Sqm*
		2	*11.31*		*1.15*	*26.01*	*Sqm*
		2		*3.45*	*1.15*	*7.94*	*Sqm*
		2	*0.71*		*1.00*	*1.41*	*Sqm*
		2		*3.45*	*1.00*	*6.90*	*Sqm*
		2	*1.21*		*0.85*	*2.06*	*Sqm*
		2		*3.45*	*0.85*	*5.87*	*Sqm*
		2	*1.28*		*0.85*	*2.17*	*Sqm*
		2		*3.45*	*0.85*	*5.87*	*Sqm*
		2	*0.86*		*1.65*	*2.85*	*Sqm*
		2		*3.45*	*1.65*	*11.39*	*Sqm*
	Crest	*2*	*1.8895*		*2.338*	*8.84*	*Sqm*
		2		*3.45*	*2.338*	*16.13*	*Sqm*
	Slab	*2*	*3.8*		*0.385*	*2.93*	*Sqm*
		2		*6.5*	*0.385*	*5.01*	*Sqm*
		1	*3.8*	*6.5*		*24.70*	*Sqm*
	Dirt wall	*2*	*0.4*		*0.35*	*0.28*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*6.5*	*0.35*	*4.55*	*Sqm*
	Toe Wall D/S Portion	*2*	*12.81*		*0.30*	*7.69*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*12.51*		*0.60*	*15.01*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.50*		*0.15*	*2.10*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.50*		*0.60*	*8.40*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**632.53**	**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*	*3.50*	*5.07*		*35.46*	*Sqm*
	TOTAL					**35.46**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.50*	*2.85*	*0.30*	**2.99**	**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	*3.50*	*2.85*	*0.15*	**2.99**	**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*	*9.32*	*0.45*		*4.19*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.32*	*0.45*		*4.19*	*Sqm*
	TOTAL					**8.39**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		33.99		33.99	Cum
	TOTAL					**33.99**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR TETRIA MR						
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 1.220 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.						
		1		117.18		**117.18**	**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*	*0.543*	*1.20*	*0.15*	*0.10*	*Cum*
		1	*0.727*	*1.20*	*0.15*	*0.13*	*Cum*
		1	*4.592*	*1.20*	*0.15*	*0.83*	*Cum*
		1	*0.353*	*1.20*	*0.15*	*0.06*	*Cum*
		1	*2.796*	*1.20*	*0.15*	*0.50*	*Cum*
		1	*1.006*	*1.20*	*0.15*	*0.18*	*Cum*
		1	*0.543*	*1.20*	*0.15*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.53*	*0.15*	*0.45*	*Cum*
	Section 2-2	*2*	*3.21*	*1.71*	*0.15*	*1.65*	*Cum*
	Section 3-3	*2*	*2.93*	*1.59*	*0.15*	*1.40*	*Cum*
	Section 5-5	*2*	*2.23*	*1.68*	*0.15*	*1.12*	*Cum*
	Section 6-6	*2*	*1.07*	*1.22*	*0.15*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*5.42*	*0.75*	*0.30*	*1.22*	*Cum*
	Toe Wall D/S Portion	*1*	*5.12*	*0.45*	*0.60*	*1.38*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**10.60**	**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.						
	Abutment						
	Section 1-1	*2*	*1.12*	*0.45*	*0.45*	*0.45*	*Cum*
		2	*1.12*	*1.31*	*2.87*	*8.46*	*Cum*
		2	*1.12*	*2.32*	*1.05*	*5.48*	*Cum*
	Section 2-2	*2*	*3.21*	*0.82*	*0.20*	*1.05*	*Cum*
		2	*3.21*	*1.23*	*1.35*	*10.63*	*Cum*
		2	*3.21*	*1.78*	*2.30*	*26.32*	*Cum*
	Section 3-3	*2*	*3.21*	*0.82*	*0.20*	*1.05*	*Cum*
		2	*3.21*	*1.17*	*1.15*	*8.59*	*Cum*
		2	*3.21*	*1.66*	*2.50*	*26.60*	*Cum*
	Section 5-5	*2*	*6.91*	*0.45*	*0.45*	*2.80*	*Cum*
		2	*6.91*	*1.31*	*2.87*	*52.09*	*Cum*
		2	*6.91*	*2.32*	*1.05*	*33.71*	*Cum*
	Section 6-6	*2*	*4.35*	*0.45*	*0.20*	*0.78*	*Cum*
		2	*4.35*	*0.80*	*1.15*	*7.94*	*Cum*
		2	*4.35*	*1.29*	*0.50*	*5.61*	*Cum*
	deduction for M25 Grade concrete	*2*	*0.82*	*6.50*	*0.30*	*-3.20*	*Cum*
	Floor	*1*	*0.58*	*1.20*	*0.50*	*0.35*	*Cum*
		1	*9.00*	*1.20*	*1.05*	*11.34*	*Cum*
		1	*0.26*	*1.20*	*0.50*	*0.16*	*Cum*
		1	*0.20*	*1.20*	*0.65*	*0.16*	*Cum*
		1	*3.80*	*1.20*	*0.75*	*3.42*	*Cum*
		1	*0.89*	*1.20*	*1.75*	*1.86*	*Cum*
	Crest	*1*	*1.60*	*1.20*	*2.16*	*4.16*	*Cum*
	TOTAL					**209.80**	**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*	*1.25*	*1.20*	*0.15*	*0.23*	*Cum*
	Coping over Abutment Top	*2*	*9.32*	*0.45*	*0.05*	*0.42*	*Cum*
	Slab Bridge						
	Slab	*1*	*4.25*	*6.5*	*0.39*	*10.64*	*Cum*
	Wearing coat	*1*	*4.25*	*5.50*	*0.07*	*1.64*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Dirt wall	*2*	*0.40*	*6.5*	*0.35*	*1.82*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	TOTAL					**17.93**	*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*	*45*	*4.81*		*1.578*	*341.6*	*Kg*
a2	*10*	*21*	*7.00*		*0.616*	*90.6*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.73*		*0.616*	*75.8*	*Kg*
a5	*10*	*17*	*6.85*		*0.616*	*71.8*	*Kg*
x1	*12*	*70*	*2.55*		*0.888*	*158.5*	*Kg*
x2	*16*	*70*	*1.91*		*1.578*	*211.0*	*Kg*
x3	*12*	*20*	*4.30*		*0.888*	*76.3*	*Kg*
	Total Reinforcement Steel (in kg)					*1033.6*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**209.80**	**0.30%**	**0.63**	**7850**	**4940.90**	**Kg**
	TOTAL REINFORCEMENT STEEL (in MT)					**6.0**	**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*		*0.45*	*2.02*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.12*		*2.87*	*12.90*	*Sqm*
		4		*1.31*	*2.87*	*15.08*	*Sqm*
		4	*1.12*		*1.05*	*4.71*	*Sqm*
		4		*2.32*	*1.05*	*9.76*	*Sqm*
	Section 2-2	*4*	*3.21*		*0.20*	*2.57*	*Sqm*
		4		*0.82*	*0.20*	*0.66*	*Sqm*
		4	*3.21*		*1.35*	*17.36*	*Sqm*
		4		*1.23*	*1.35*	*6.62*	*Sqm*
		4	*3.21*		*2.30*	*29.57*	*Sqm*
		4		*1.78*	*2.30*	*16.38*	*Sqm*
	Section 3-3	*4*	*3.21*		*0.20*	*2.56*	*Sqm*
		4		*0.82*	*0.20*	*0.66*	*Sqm*
		4	*3.21*		*1.15*	*14.74*	*Sqm*
		4		*1.17*	*1.15*	*5.36*	*Sqm*
		4	*3.21*		*2.50*	*32.05*	*Sqm*
		4		*1.66*	*2.50*	*16.60*	*Sqm*
	Section 5-5	*4*	*6.91*		*0.45*	*12.43*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*6.91*		*2.87*	*79.41*	*Sqm*
		4		*1.31*	*2.87*	*15.08*	*Sqm*
		4	*6.91*		*1.05*	*29.01*	*Sqm*
		4		*2.32*	*1.05*	*9.76*	*Sqm*
		4	*4.35*		*0.50*	*8.69*	*Sqm*
		4		*1.29*	*0.50*	*2.58*	*Sqm*
	Floor	*2*	*0.58*		*0.50*	*0.58*	*Sqm*
		2		*1.20*	*0.50*	*1.20*	*Sqm*
		2	*9.00*		*1.05*	*18.90*	*Sqm*
		2		*1.20*	*1.05*	*2.52*	*Sqm*
		2	*0.26*		*0.50*	*0.26*	*Sqm*
		2		*1.20*	*0.50*	*1.20*	*Sqm*
		2	*0.20*		*0.65*	*0.26*	*Sqm*
		2		*1.20*	*0.65*	*1.56*	*Sqm*
		2	*3.80*		*0.75*	*5.70*	*Sqm*
		2		*1.20*	*0.75*	*1.80*	*Sqm*
		2	*0.89*		*1.75*	*3.11*	*Sqm*
		2		*1.20*	*1.75*	*4.20*	*Sqm*
	Crest	*2*	*1.602*		*2.162*	*6.93*	*Sqm*
		2		*1.2*	*2.162*	*5.19*	*Sqm*
	Slab	*2*	*4.25*		*0.385*	*3.27*	*Sqm*
		2		*6.5*	*0.385*	*5.01*	*Sqm*
		1	*4.25*	*6.5*		*27.63*	*Sqm*
	Dirt wall	*2*	*0.4*		*0.35*	*0.28*	*Sqm*
		2		*6.5*	*0.35*	*4.55*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.42*		*0.30*	*3.25*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.12*		*0.60*	*6.14*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**487.25**	**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*	*5.52*		*22.10*	*Sqm*
	TOTAL					**22.10**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.60*	*0.30*	**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*	*0.60*	*0.15*	**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*	*9.32*	*0.45*		*4.19*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.32*	*0.45*		*4.19*	*Sqm*
	TOTAL					**8.39**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		33.99		33.99	Cum
	TOTAL					**33.99**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KARMARI MR						
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 1.050 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.						
		1		61.08		**61.08**	**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*	*0.543*	*0.88*	*0.15*	*0.07*	*Cum*
		1	*0.782*	*0.88*	*0.15*	*0.10*	*Cum*
		1	*4.568*	*0.88*	*0.15*	*0.60*	*Cum*
		1	*0.283*	*0.88*	*0.15*	*0.04*	*Cum*
		1	*0.397*	*0.88*	*0.15*	*0.05*	*Cum*
		1	*0.895*	*0.88*	*0.15*	*0.12*	*Cum*
		1	*0.543*	*0.88*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.24*	*1.64*	*0.15*	*0.61*	*Cum*
	Section 2-2	*2*	*3.00*	*1.06*	*0.15*	*0.96*	*Cum*
	Section 3-3	*2*	*1.70*	*0.94*	*0.15*	*0.48*	*Cum*
	Section 5-5	*2*	*2.23*	*1.79*	*0.15*	*1.20*	*Cum*
	Section 6-6	*2*	*0.81*	*0.94*	*0.15*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*3.56*	*0.75*	*0.30*	*0.80*	*Cum*
	Toe Wall D/S Portion	*1*	*3.26*	*0.45*	*0.60*	*0.88*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*1.40*	*0.15*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**7.07**	**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*	*0.45*	*0.45*	*0.41*	*Cum*
		2	*1.01*	*0.90*	*1.48*	*2.68*	*Cum*
		2	*1.01*	*1.49*	*0.50*	*1.51*	*Cum*
	Section 2-2	*2*	*3.00*	*0.45*	*0.45*	*1.22*	*Cum*
		2	*3.00*	*0.61*	*0.52*	*1.89*	*Cum*
		2	*3.00*	*0.91*	*0.50*	*2.74*	*Cum*
	Section 3-3	*2*	*1.44*	*0.45*	*0.45*	*0.58*	*Cum*
		2	*1.44*	*0.55*	*0.32*	*0.50*	*Cum*
		2	*1.44*	*0.79*	*0.50*	*1.14*	*Cum*
	Section 5-5	*2*	*2.19*	*0.45*	*0.45*	*0.89*	*Cum*
		2	*2.19*	*0.90*	*1.48*	*5.81*	*Cum*
		2	*2.19*	*1.49*	*0.50*	*3.26*	*Cum*
	Section 6-6	*2*	*1.22*	*0.45*	*0.45*	*0.49*	*Cum*
		2	*1.22*	*0.55*	*0.32*	*0.43*	*Cum*
		2	*1.22*	*0.79*	*0.50*	*0.97*	*Cum*
	Floor	*1*	*0.58*	*0.88*	*0.50*	*0.25*	*Cum*
		1	*6.00*	*0.88*	*0.70*	*3.70*	*Cum*
		1	*0.42*	*0.88*	*0.35*	*0.13*	*Cum*
		1	*0.20*	*0.88*	*0.45*	*0.08*	*Cum*
		1	*1.30*	*0.88*	*0.55*	*0.63*	*Cum*
		1	*0.05*	*0.88*	*0.53*	*0.02*	*Cum*
		1	*1.95*	*0.88*	*0.50*	*0.86*	*Cum*
		1	*0.70*	*0.88*	*1.00*	*0.62*	*Cum*
	Crest	*1*	*1.08*	*0.88*	*1.45*	*1.39*	*Cum*
	TOTAL					**32.19**	**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*	*0.88*	*0.15*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.66*	*0.45*	*0.05*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.66*	*0.45*	*0.05*	*0.22*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**0.54**	**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	32.19	0.30%	0.10	7850	758.02	Kg
	Total Weight in Metric Tonne					**0.76**	**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*		*0.45*	*1.82*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.01*		*1.48*	*6.00*	*Sqm*
		4		*0.90*	*1.48*	*5.31*	*Sqm*
		4	*1.01*		*0.50*	*2.02*	*Sqm*
		4		*1.49*	*0.50*	*2.98*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.45*	*5.40*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.00*		*0.52*	*6.24*	*Sqm*
		4		*0.61*	*0.52*	*1.26*	*Sqm*
		4	*3.00*		*0.50*	*6.00*	*Sqm*
		4		*0.91*	*0.50*	*1.82*	*Sqm*
	Section 3-3	*4*	*1.44*		*0.45*	*2.60*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.44*		*0.32*	*1.85*	*Sqm*
		4		*0.55*	*0.32*	*0.70*	*Sqm*
		4	*1.44*		*0.50*	*2.88*	*Sqm*
		4		*0.79*	*0.50*	*1.58*	*Sqm*
	Section 5-5	*4*	*2.19*		*0.45*	*3.94*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.19*		*1.48*	*12.99*	*Sqm*
		4		*0.90*	*1.48*	*5.31*	*Sqm*
		4	*2.19*		*0.50*	*4.38*	*Sqm*
		4		*1.49*	*0.50*	*2.98*	*Sqm*
	Section 6-6	*4*	*1.22*		*0.45*	*2.20*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.22*		*0.32*	*1.56*	*Sqm*
		4		*0.55*	*0.32*	*0.70*	*Sqm*
		4	*1.22*		*0.50*	*2.44*	*Sqm*
		4		*0.79*	*0.50*	*1.58*	*Sqm*
	Floor	*2*	*0.58*		*0.50*	*0.58*	*Sqm*
		2		*0.88*	*0.50*	*0.88*	*Sqm*
		2	*6.00*		*0.70*	*8.40*	*Sqm*
		2		*0.88*	*0.70*	*1.23*	*Sqm*
		2	*0.42*		*0.35*	*0.30*	*Sqm*
		2		*0.88*	*0.35*	*0.62*	*Sqm*
		2	*0.20*		*0.45*	*0.18*	*Sqm*
		2		*0.88*	*0.45*	*0.79*	*Sqm*
		2	*1.30*		*0.55*	*1.43*	*Sqm*
		2		*0.88*	*0.55*	*0.97*	*Sqm*
		2	*0.05*		*0.53*	*0.05*	*Sqm*
		2		*0.88*	*0.53*	*0.92*	*Sqm*
		2	*1.95*		*0.50*	*1.95*	*Sqm*
		2		*0.88*	*0.50*	*0.88*	*Sqm*
		2	*0.70*		*1.00*	*1.40*	*Sqm*
		2		*0.88*	*1.00*	*1.76*	*Sqm*
	Crest	*2*	*1.0835*		*1.454*	*3.15*	*Sqm*
		2		*0.88*	*1.454*	*2.56*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.56*		*0.30*	*2.14*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.26*		*0.60*	*3.91*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*2*	*1.50*		*0.15*	*0.45*	*Sqm*
		2		*1.40*	*0.15*	*0.42*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**130.87**	**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*	*1.50*	*2.70*		*8.10*	*Sqm*
	TOTAL					**8.10**	**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*	*1.50*	*0.68*	*0.30*	**0.31**	**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*	*0.68*	*0.15*	**0.31**	**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*	*9.66*	*0.45*		*4.35*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.66*	*0.45*		*4.35*	*Sqm*
	TOTAL					**8.69**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		2.01		2.01	Cum
	TOTAL					**2.01**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR MIRZAPUR MR						
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.000 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.						
		1		61.17		**61.17**	**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*	*0.542*	*1.72*	*0.15*	*0.14*	*Cum*
		1	*0.783*	*1.72*	*0.15*	*0.20*	*Cum*
		1	*4.067*	*1.72*	*0.15*	*1.05*	*Cum*
		1	*0.282*	*1.72*	*0.15*	*0.07*	*Cum*
		1	*0.946*	*1.72*	*0.15*	*0.24*	*Cum*
		1	*0.782*	*1.72*	*0.15*	*0.20*	*Cum*
		1	*0.542*	*1.72*	*0.15*	*0.14*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.20*	*1.47*	*0.15*	*0.97*	*Cum*
	Section 2-2	*2*	*1.50*	*1.20*	*0.15*	*0.54*	*Cum*
	Section 3-3	*2*	*2.00*	*1.08*	*0.15*	*0.65*	*Cum*
	Section 5-5	*2*	*2.56*	*1.62*	*0.15*	*1.25*	*Cum*
	Section 6-6	*2*	*1.05*	*1.08*	*0.15*	*0.34*	*Cum*
	Toe Wall D/S Portion	*1*	*5.97*	*0.75*	*0.30*	*1.34*	*Cum*
	Toe Wall D/S Portion	*1*	*5.67*	*0.45*	*0.60*	*1.53*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**9.75**	**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*	*2.05*	*0.45*	*0.45*	*0.83*	*Cum*
		2	*2.05*	*0.81*	*1.21*	*4.01*	*Cum*
		2	*2.05*	*1.32*	*0.50*	*2.71*	*Cum*
	Section 2-2	*2*	*1.50*	*0.45*	*0.45*	*0.61*	*Cum*
		2	*1.50*	*0.68*	*0.75*	*1.52*	*Cum*
		2	*1.50*	*1.05*	*0.50*	*1.58*	*Cum*
	Section 3-3	*2*	*1.69*	*0.45*	*0.45*	*0.68*	*Cum*
		2	*1.69*	*0.62*	*0.55*	*1.14*	*Cum*
		2	*1.69*	*0.93*	*0.50*	*1.57*	*Cum*
	Section 5-5	*2*	*2.52*	*0.45*	*0.45*	*1.02*	*Cum*
		2	*2.52*	*0.81*	*1.21*	*4.93*	*Cum*
		2	*2.52*	*1.32*	*0.50*	*3.33*	*Cum*
	Section 6-6	*2*	*1.51*	*0.45*	*0.45*	*0.61*	*Cum*
		2	*1.51*	*0.62*	*0.55*	*1.02*	*Cum*
		2	*1.51*	*0.93*	*0.50*	*1.40*	*Cum*
	Floor	*1*	*0.63*	*1.72*	*0.70*	*0.75*	*Cum*
		1	*4.68*	*1.72*	*0.50*	*4.02*	*Cum*
		1	*0.28*	*1.72*	*0.50*	*0.24*	*Cum*
		1	*1.70*	*1.72*	*0.50*	*1.46*	*Cum*
		1	*0.63*	*1.72*	*0.70*	*0.75*	*Cum*
	Crest	*1*	*0.77*	*1.72*	*0.79*	*1.05*	*Cum*
	TOTAL					**35.25**	**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*	*0.65*	*1.72*	*0.15*	*0.17*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.39*	*0.45*	*0.05*	*0.21*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.39*	*0.45*	*0.05*	*0.21*	*Cum*
	TOTAL					**0.59**	**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	35.25	0.30%	0.11	7850	830.07	Kg
	Total Weight in Metric Tonne					**0.83**	**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*	*2.05*		*0.45*	*3.69*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.05*		*1.21*	*9.89*	*Sqm*
		4		*0.81*	*1.21*	*3.92*	*Sqm*
		4	*2.05*		*0.50*	*4.10*	*Sqm*
		4		*1.32*	*0.50*	*2.65*	*Sqm*
	Section 2-2	*4*	*1.50*		*0.45*	*2.70*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.50*		*0.75*	*4.50*	*Sqm*
		4		*0.68*	*0.75*	*2.03*	*Sqm*
		4	*1.50*		*0.50*	*3.00*	*Sqm*
		4		*1.05*	*0.50*	*2.10*	*Sqm*
	Section 3-3	*4*	*1.69*		*0.45*	*3.03*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.69*		*0.55*	*3.71*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.69*		*0.50*	*3.37*	*Sqm*
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Section 5-5	*4*	*2.52*		*0.45*	*4.53*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.52*		*1.21*	*12.15*	*Sqm*
		4		*0.81*	*1.21*	*3.92*	*Sqm*
		4	*2.52*		*0.50*	*5.03*	*Sqm*
		4		*1.32*	*0.50*	*2.65*	*Sqm*
	Section 6-6	*4*	*1.51*		*0.45*	*2.72*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.51*		*0.55*	*3.32*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.51*		*0.50*	*3.02*	*Sqm*
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.72*	*0.70*	*2.41*	*Sqm*
		2	*4.68*		*0.50*	*4.68*	*Sqm*
		2		*1.72*	*0.50*	*1.72*	*Sqm*
		2	*0.28*		*0.50*	*0.28*	*Sqm*
		2		*1.72*	*0.50*	*1.72*	*Sqm*
		2	*1.70*		*0.50*	*1.70*	*Sqm*
		2		*1.72*	*0.50*	*1.72*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.72*	*0.70*	*2.41*	*Sqm*
	Crest	*2*	*0.7735*		*0.792*	*1.23*	*Sqm*
		2		*1.72*	*0.792*	*2.72*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.97*		*0.30*	*3.58*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.67*		*0.60*	*6.80*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**137.27**	**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*	*2.14*	*2.00*		*8.57*	*Sqm*
	TOTAL					**8.57**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.12*	*0.30*	**0.67**	**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*	*1.12*	*0.15*	**0.67**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*9.39*	*0.45*		*4.23*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.39*	*0.45*		*4.23*	*Sqm*
	TOTAL					**8.45**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		2.24		2.24	Cum
	TOTAL					**2.24**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 0.990 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.						
		1		89.07		**89.07**	**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.						
	PCC Below Floor	*1*	*0.542*	*1.72*	*0.15*	*0.14*	*Cum*
		1	*0.726*	*1.72*	*0.15*	*0.19*	*Cum*
		1	*5.042*	*1.72*	*0.15*	*1.30*	*Cum*
		1	*0.353*	*1.72*	*0.15*	*0.09*	*Cum*
		1	*0.346*	*1.72*	*0.15*	*0.09*	*Cum*
		1	*1.006*	*1.72*	*0.15*	*0.26*	*Cum*
		1	*0.542*	*1.72*	*0.15*	*0.14*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.53*	*0.15*	*0.45*	*Cum*
	Section 2-2	*2*	*2.50*	*1.20*	*0.15*	*0.90*	*Cum*
	Section 3-3	*2*	*1.66*	*1.08*	*0.15*	*0.54*	*Cum*
	Section 5-5	*2*	*2.55*	*1.68*	*0.15*	*1.28*	*Cum*
	Section 6-6	*2*	*1.59*	*1.08*	*0.15*	*0.51*	*Cum*
	Toe Wall D/S Portion	*1*	*5.97*	*0.75*	*0.30*	*1.34*	*Cum*
	Toe Wall D/S Portion	*1*	*5.67*	*0.45*	*0.60*	*1.53*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**9.85**	**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*	*0.45*	*0.45*	*0.35*	*Cum*
		2	*0.86*	*0.84*	*1.66*	*2.40*	*Cum*
		2	*0.86*	*1.38*	*0.55*	*1.30*	*Cum*
	Section 2-2	*2*	*2.50*	*0.45*	*0.45*	*1.01*	*Cum*
		2	*2.50*	*0.68*	*0.75*	*2.53*	*Cum*
		2	*2.50*	*1.05*	*0.55*	*2.89*	*Cum*
	Section 3-3	*2*	*1.81*	*0.45*	*0.45*	*0.73*	*Cum*
		2	*1.81*	*0.62*	*0.55*	*1.22*	*Cum*
		2	*1.81*	*0.93*	*0.55*	*1.85*	*Cum*
	Section 5-5	*2*	*2.51*	*0.45*	*0.45*	*1.01*	*Cum*
		2	*2.51*	*0.84*	*1.66*	*7.00*	*Cum*
		2	*2.51*	*1.38*	*0.55*	*3.80*	*Cum*
	Section 6-6	*2*	*1.51*	*0.45*	*0.45*	*0.61*	*Cum*
		2	*1.51*	*0.62*	*0.55*	*1.02*	*Cum*
		2	*1.51*	*0.93*	*0.55*	*1.54*	*Cum*
	Floor	*1*	*0.61*	*1.72*	*0.65*	*0.68*	*Cum*
		1	*5.67*	*1.72*	*0.55*	*5.37*	*Cum*
		1	*0.28*	*1.72*	*0.55*	*0.27*	*Cum*
		1	*1.60*	*1.72*	*0.50*	*1.38*	*Cum*
		1	*0.68*	*1.72*	*0.90*	*1.04*	*Cum*
	Crest	*1*	*1.05*	*1.72*	*1.24*	*2.23*	*Cum*
	TOTAL					**40.26**	**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*	*1.72*	*0.15*	*0.22*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.39*	*0.45*	*0.05*	*0.21*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.39*	*0.45*	*0.05*	*0.21*	*Cum*
	TOTAL					**0.64**	**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	40.26	0.30%	0.12	7850	948.06	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*	*0.86*		*0.45*	*1.55*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.86*		*1.66*	*5.71*	*Sqm*
		4		*0.84*	*1.66*	*5.59*	*Sqm*
		4	*0.86*		*0.55*	*1.89*	*Sqm*
		4		*1.38*	*0.55*	*3.04*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.45*	*4.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.50*		*0.75*	*7.50*	*Sqm*
		4		*0.68*	*0.75*	*2.03*	*Sqm*
		4	*2.50*		*0.55*	*5.50*	*Sqm*
		4		*1.05*	*0.55*	*2.31*	*Sqm*
	Section 3-3	*4*	*1.81*		*0.45*	*3.26*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.81*		*0.55*	*3.98*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.81*		*0.55*	*3.98*	*Sqm*
		4		*0.93*	*0.55*	*2.05*	*Sqm*
	Section 5-5	*4*	*2.51*		*0.45*	*4.51*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.51*		*1.66*	*16.68*	*Sqm*
		4		*0.84*	*1.66*	*5.59*	*Sqm*
		4	*2.51*		*0.55*	*5.51*	*Sqm*
		4		*1.38*	*0.55*	*3.04*	*Sqm*
	Section 6-6	*4*	*1.51*		*0.45*	*2.72*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.51*		*0.55*	*3.32*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.51*		*0.55*	*3.32*	*Sqm*
		4		*0.93*	*0.55*	*2.05*	*Sqm*
	Floor	*2*	*0.61*		*0.65*	*0.80*	*Sqm*
		2		*1.72*	*0.65*	*2.24*	*Sqm*
		2	*5.67*		*0.55*	*6.24*	*Sqm*
		2		*1.72*	*0.55*	*1.89*	*Sqm*
		2	*0.28*		*0.55*	*0.31*	*Sqm*
		2		*1.72*	*0.55*	*1.89*	*Sqm*
		2	*1.60*		*0.50*	*1.60*	*Sqm*
		2		*1.72*	*0.50*	*1.72*	*Sqm*
		2	*0.68*		*0.90*	*1.22*	*Sqm*
		2		*1.72*	*0.90*	*3.10*	*Sqm*
	Crest	*2*	*1.0475*		*1.235*	*2.59*	*Sqm*
		2		*1.72*	*1.235*	*4.25*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.97*		*0.30*	*3.58*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.67*		*0.60*	*6.80*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**152.66**	**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*	*2.14*	*2.00*		*8.57*	*Sqm*
	TOTAL					**8.57**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.12*	*0.30*	**0.67**	**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*	*1.12*	*0.15*	**0.67**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*9.39*	*0.45*		*4.23*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.39*	*0.45*		*4.23*	*Sqm*
	TOTAL					**8.45**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		4.94		4.94	Cum
	TOTAL					**4.94**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR JASOEA MINOR						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.150 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.						
		1		66.09		**66.09**	**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*	*0.542*	*1.46*	*0.15*	*0.12*	*Cum*
		1	*0.782*	*1.46*	*0.15*	*0.17*	*Cum*
		1	*4.568*	*1.46*	*0.15*	*1.00*	*Cum*
		1	*0.283*	*1.46*	*0.15*	*0.06*	*Cum*
		1	*0.447*	*1.46*	*0.15*	*0.10*	*Cum*
		1	*0.783*	*1.46*	*0.15*	*0.17*	*Cum*
		1	*0.542*	*1.46*	*0.15*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.28*	*1.57*	*0.15*	*1.07*	*Cum*
	Section 2-2	*2*	*2.00*	*1.20*	*0.15*	*0.72*	*Cum*
	Section 3-3	*2*	*1.50*	*1.08*	*0.15*	*0.49*	*Cum*
	Section 5-5	*2*	*2.54*	*1.72*	*0.15*	*1.31*	*Cum*
	Section 6-6	*2*	*1.05*	*1.08*	*0.15*	*0.34*	*Cum*
	Toe Wall D/S Portion	*1*	*5.71*	*0.75*	*0.30*	*1.28*	*Cum*
	Toe Wall D/S Portion	*1*	*5.41*	*0.45*	*0.60*	*1.46*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**9.49**	**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*	*2.16*	*0.45*	*0.45*	*0.88*	*Cum*
		2	*2.16*	*0.83*	*1.36*	*4.87*	*Cum*
		2	*2.16*	*1.42*	*0.50*	*3.06*	*Cum*
	Section 2-2	*2*	*2.00*	*0.45*	*0.45*	*0.81*	*Cum*
		2	*2.00*	*0.68*	*0.75*	*2.03*	*Cum*
		2	*2.00*	*1.05*	*0.50*	*2.10*	*Cum*
	Section 3-3	*2*	*1.19*	*0.45*	*0.45*	*0.48*	*Cum*
		2	*1.19*	*0.62*	*0.55*	*0.80*	*Cum*
		2	*1.19*	*0.93*	*0.50*	*1.10*	*Cum*
	Section 5-5	*2*	*2.50*	*0.45*	*0.45*	*1.01*	*Cum*
		2	*2.50*	*0.83*	*1.36*	*5.63*	*Cum*
		2	*2.50*	*1.42*	*0.50*	*3.54*	*Cum*
	Section 6-6	*2*	*1.51*	*0.45*	*0.45*	*0.61*	*Cum*
		2	*1.51*	*0.62*	*0.55*	*1.02*	*Cum*
		2	*1.51*	*0.93*	*0.50*	*1.40*	*Cum*
	Floor	*1*	*0.63*	*1.46*	*0.70*	*0.64*	*Cum*
		1	*5.00*	*1.46*	*0.50*	*3.65*	*Cum*
		1	*0.50*	*1.46*	*0.20*	*0.15*	*Cum*
		1	*0.20*	*1.46*	*0.40*	*0.12*	*Cum*
		1	*1.80*	*1.46*	*0.50*	*1.31*	*Cum*
		1	*0.63*	*1.46*	*0.70*	*0.64*	*Cum*
	Crest	*1*	*0.85*	*1.46*	*0.95*	*1.18*	*Cum*
	TOTAL					**37.04**	**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*	*0.70*	*1.46*	*0.15*	*0.15*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.13*	*0.45*	*0.05*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.13*	*0.45*	*0.05*	*0.23*	*Cum*
	TOTAL					**0.61**	**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	37.04	0.30%	0.11	7850	872.22	Kg
	Total Weight in Metric Tonne					**0.87**	**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*	*2.16*		*0.45*	*3.90*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.16*		*1.36*	*11.77*	*Sqm*
		4		*0.83*	*1.36*	*4.50*	*Sqm*
		4	*2.16*		*0.50*	*4.33*	*Sqm*
		4		*1.42*	*0.50*	*2.83*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.45*	*3.60*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.00*		*0.75*	*6.00*	*Sqm*
		4		*0.68*	*0.75*	*2.03*	*Sqm*
		4	*2.00*		*0.50*	*4.00*	*Sqm*
		4		*1.05*	*0.50*	*2.10*	*Sqm*
	Section 3-3	*4*	*1.19*		*0.45*	*2.13*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.19*		*0.55*	*2.61*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.19*		*0.50*	*2.37*	*Sqm*
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Section 5-5	*4*	*2.50*		*0.45*	*4.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.50*		*1.36*	*13.59*	*Sqm*
		4		*0.83*	*1.36*	*4.50*	*Sqm*
		4	*2.50*		*0.50*	*5.00*	*Sqm*
		4		*1.42*	*0.50*	*2.83*	*Sqm*
	Section 6-6	*4*	*1.51*		*0.45*	*2.72*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.51*		*0.55*	*3.32*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.51*		*0.50*	*3.02*	*Sqm*
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.46*	*0.70*	*2.04*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*1.46*	*0.50*	*1.46*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*1.46*	*0.20*	*0.58*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.46*	*0.40*	*1.17*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*1.46*	*0.50*	*1.46*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.46*	*0.70*	*2.04*	*Sqm*
	Crest	*2*	*0.8505*		*0.952*	*1.62*	*Sqm*
		2		*1.46*	*0.952*	*2.78*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.71*		*0.30*	*3.43*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.41*		*0.60*	*6.49*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**142.19**	**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*	*2.14*		*8.57*	*Sqm*
	TOTAL					**8.57**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.86*	*0.30*	**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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.00*	*0.86*	*0.15*	**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*	*10.13*	*0.45*		*4.56*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.13*	*0.45*		*4.56*	*Sqm*
	TOTAL					**9.12**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		2.32		2.32	**Cum**
	TOTAL					**2.32**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.050 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.						
		1		58.36		**58.36**	**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*	*0.542*	*1.46*	*0.15*	*0.12*	*Cum*
		1	*0.782*	*1.46*	*0.15*	*0.17*	*Cum*
		1	*4.568*	*1.46*	*0.15*	*1.00*	*Cum*
		1	*0.283*	*1.46*	*0.15*	*0.06*	*Cum*
		1	*0.447*	*1.46*	*0.15*	*0.10*	*Cum*
		1	*0.783*	*1.46*	*0.15*	*0.17*	*Cum*
		1	*0.542*	*1.46*	*0.15*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.15*	*1.47*	*0.15*	*0.95*	*Cum*
	Section 2-2	*2*	*2.00*	*1.20*	*0.15*	*0.72*	*Cum*
	Section 3-3	*2*	*1.50*	*1.08*	*0.15*	*0.49*	*Cum*
	Section 5-5	*2*	*2.56*	*1.62*	*0.15*	*1.25*	*Cum*
	Section 6-6	*2*	*1.05*	*1.08*	*0.15*	*0.34*	*Cum*
	Toe Wall D/S Portion	*1*	*5.71*	*0.75*	*0.30*	*1.28*	*Cum*
	Toe Wall D/S Portion	*1*	*5.41*	*0.45*	*0.60*	*1.46*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**9.31**	**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*	*1.93*	*0.45*	*0.45*	*0.78*	*Cum*
		2	*1.93*	*0.83*	*1.36*	*4.34*	*Cum*
		2	*1.93*	*1.42*	*0.50*	*2.73*	*Cum*
	Section 2-2	*2*	*2.00*	*0.45*	*0.45*	*0.81*	*Cum*
		2	*2.00*	*0.68*	*0.75*	*2.03*	*Cum*
		2	*2.00*	*1.05*	*0.50*	*2.10*	*Cum*
	Section 3-3	*2*	*0.96*	*0.45*	*0.45*	*0.39*	*Cum*
		2	*0.96*	*0.62*	*0.55*	*0.65*	*Cum*
		2	*0.96*	*0.93*	*0.50*	*0.89*	*Cum*
	Section 5-5	*2*	*2.52*	*0.45*	*0.45*	*1.02*	*Cum*
		2	*2.52*	*0.83*	*1.36*	*5.67*	*Cum*
		2	*2.52*	*1.42*	*0.50*	*3.57*	*Cum*
	Section 6-6	*2*	*1.51*	*0.45*	*0.45*	*0.61*	*Cum*
		2	*1.51*	*0.62*	*0.55*	*1.02*	*Cum*
		2	*1.51*	*0.93*	*0.50*	*1.40*	*Cum*
	Floor	*1*	*0.63*	*1.46*	*0.70*	*0.64*	*Cum*
		1	*5.00*	*1.46*	*0.50*	*3.65*	*Cum*
		1	*0.50*	*1.46*	*0.20*	*0.15*	*Cum*
		1	*0.20*	*1.46*	*0.40*	*0.12*	*Cum*
		1	*1.80*	*1.46*	*0.50*	*1.31*	*Cum*
		1	*0.63*	*1.46*	*0.70*	*0.64*	*Cum*
	Crest	*1*	*0.72*	*1.46*	*0.80*	*0.84*	*Cum*
	TOTAL					**35.35**	**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*	*0.60*	*1.46*	*0.15*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.98*	*0.45*	*0.05*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.98*	*0.45*	*0.05*	*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	35.35	0.30%	0.11	7850	832.40	Kg
	Total Weight in Metric Tonne					**0.83**	**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*	*1.93*		*0.45*	*3.47*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.93*		*1.36*	*10.47*	*Sqm*
		4		*0.83*	*1.36*	*4.50*	*Sqm*
		4	*1.93*		*0.50*	*3.85*	*Sqm*
		4		*1.42*	*0.50*	*2.83*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.45*	*3.60*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.00*		*0.75*	*6.00*	*Sqm*
		4		*0.68*	*0.75*	*2.03*	*Sqm*
		4	*2.00*		*0.50*	*4.00*	*Sqm*
		4		*1.05*	*0.50*	*2.10*	*Sqm*
	Section 3-3	*4*	*0.96*		*0.45*	*1.73*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.96*		*0.55*	*2.11*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*0.96*		*0.50*	*1.92*	*Sqm*
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Section 5-5	*4*	*2.52*		*0.45*	*4.53*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.52*		*1.36*	*13.70*	*Sqm*
		4		*0.83*	*1.36*	*4.50*	*Sqm*
		4	*2.52*		*0.50*	*5.04*	*Sqm*
		4		*1.42*	*0.50*	*2.83*	*Sqm*
	Section 6-6	*4*	*1.51*		*0.45*	*2.72*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.51*		*0.55*	*3.32*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.51*		*0.50*	*3.02*	*Sqm*
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.46*	*0.70*	*2.04*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*1.46*	*0.50*	*1.46*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*1.46*	*0.20*	*0.58*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.46*	*0.40*	*1.17*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*1.46*	*0.50*	*1.46*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.46*	*0.70*	*2.04*	*Sqm*
	Crest	*2*	*0.7245*		*0.796*	*1.15*	*Sqm*
		2		*1.46*	*0.796*	*2.32*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.71*		*0.30*	*3.43*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.41*		*0.60*	*6.49*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**137.88**	**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*	*2.00*	*2.14*		*8.57*	*Sqm*
	TOTAL					**8.57**	**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*	*2.00*	*0.86*	*0.30*	**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*	*0.86*	*0.15*	**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*	*9.98*	*0.45*		*4.49*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.98*	*0.45*		*4.49*	*Sqm*
	TOTAL					**8.98**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	3			**3.00**	**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						
		1		2.20		2.20	Cum
	TOTAL					**2.20**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 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.						
		1		135.60		**135.60**	**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*	*0.542*	*1.22*	*0.15*	*0.10*	*Cum*
		1	*0.559*	*1.22*	*0.15*	*0.10*	*Cum*
		1	*5.867*	*1.22*	*0.15*	*1.07*	*Cum*
		1	*0.494*	*1.22*	*0.15*	*0.09*	*Cum*
		1	*1.246*	*1.22*	*0.15*	*0.23*	*Cum*
		1	*1.565*	*1.22*	*0.15*	*0.29*	*Cum*
		1	*0.542*	*1.22*	*0.15*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.66*	*2.06*	*0.15*	*1.03*	*Cum*
	Section 2-2	*2*	*3.50*	*1.15*	*0.15*	*1.20*	*Cum*
	Section 3-3	*2*	*2.19*	*1.03*	*0.15*	*0.67*	*Cum*
	Section 5-5	*2*	*2.25*	*2.21*	*0.15*	*1.49*	*Cum*
	Section 6-6	*2*	*1.48*	*1.03*	*0.15*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.75*	*0.30*	*1.17*	*Cum*
	Toe Wall D/S Portion	*1*	*4.90*	*0.45*	*0.60*	*1.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.60*	*0.15*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.30*	*0.60*	*0.63*	*Cum*
	TOTAL					**10.27**	**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*	*1.51*	*0.45*	*0.45*	*0.61*	*Cum*
		2	*1.51*	*1.11*	*2.18*	*7.30*	*Cum*
		2	*1.51*	*1.91*	*0.75*	*4.33*	*Cum*
	Section 2-2	*2*	*3.50*	*0.45*	*0.45*	*1.42*	*Cum*
		2	*3.50*	*0.65*	*0.46*	*2.09*	*Cum*
		2	*3.50*	*0.85*	*0.75*	*4.44*	*Cum*
	Section 3-3	*2*	*2.34*	*0.45*	*0.45*	*0.95*	*Cum*
		2	*2.34*	*0.59*	*0.46*	*1.26*	*Cum*
		2	*2.34*	*0.88*	*0.60*	*2.46*	*Cum*
	Section 5-5	*2*	*2.21*	*0.45*	*0.45*	*0.89*	*Cum*
		2	*2.21*	*1.11*	*2.18*	*10.65*	*Cum*
		2	*2.21*	*1.91*	*0.75*	*6.32*	*Cum*
	Section 6-6	*2*	*1.40*	*0.45*	*0.45*	*0.57*	*Cum*
		2	*1.40*	*0.59*	*0.46*	*0.76*	*Cum*
		2	*1.40*	*0.88*	*0.60*	*1.47*	*Cum*
	Floor	*1*	*0.58*	*1.22*	*0.50*	*0.35*	*Cum*
		1	*6.55*	*1.22*	*0.75*	*5.99*	*Cum*
		1	*0.49*	*1.22*	*0.75*	*0.45*	*Cum*
		1	*2.68*	*1.22*	*0.60*	*1.96*	*Cum*
		1	*0.80*	*1.22*	*1.40*	*1.37*	*Cum*
	Crest	*1*	*1.39*	*1.22*	*1.75*	*2.98*	*Cum*
	TOTAL					**58.62**	**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*	*1.10*	*1.22*	*0.20*	*0.27*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.35*	*0.45*	*0.05*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.35*	*0.45*	*0.05*	*0.26*	*Cum*
	TOTAL					**0.78**	**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	58.62	0.30%	0.18	7850	1380.59	Kg
	Total Weight in Metric Tonne					**1.38**	**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*	*1.51*		*0.45*	*2.72*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.51*		*2.18*	*13.22*	*Sqm*
		4		*1.11*	*2.18*	*9.65*	*Sqm*
		4	*1.51*		*0.75*	*4.54*	*Sqm*
		4		*1.91*	*0.75*	*5.73*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.45*	*6.30*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.50*		*0.46*	*6.44*	*Sqm*
		4		*0.65*	*0.46*	*1.19*	*Sqm*
		4	*3.50*		*0.75*	*10.50*	*Sqm*
		4		*0.85*	*0.75*	*2.54*	*Sqm*
	Section 3-3	*4*	*2.34*		*0.45*	*4.21*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.34*		*0.46*	*4.30*	*Sqm*
		4		*0.59*	*0.46*	*1.08*	*Sqm*
		4	*2.34*		*0.60*	*5.61*	*Sqm*
		4		*0.88*	*0.60*	*2.10*	*Sqm*
	Section 5-5	*4*	*2.21*		*0.45*	*3.97*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.21*		*2.18*	*19.28*	*Sqm*
		4		*1.11*	*2.18*	*9.65*	*Sqm*
		4	*2.21*		*0.75*	*6.62*	*Sqm*
		4		*1.91*	*0.75*	*5.73*	*Sqm*
	Section 6-6	*4*	*1.40*		*0.45*	*2.52*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.40*		*0.46*	*2.58*	*Sqm*
		4		*0.59*	*0.46*	*1.08*	*Sqm*
		4	*1.40*		*0.60*	*3.36*	*Sqm*
		4		*0.88*	*0.60*	*2.10*	*Sqm*
	Floor	*2*	*0.58*		*0.50*	*0.58*	*Sqm*
		2		*1.22*	*0.50*	*1.22*	*Sqm*
		2	*6.55*		*0.75*	*9.82*	*Sqm*
		2		*1.22*	*0.75*	*1.83*	*Sqm*
		2	*0.49*		*0.75*	*0.74*	*Sqm*
		2		*1.22*	*0.75*	*1.83*	*Sqm*
		2	*2.68*		*0.60*	*3.21*	*Sqm*
		2		*1.22*	*0.60*	*1.46*	*Sqm*
		2	*0.80*		*1.40*	*2.24*	*Sqm*
		2		*1.22*	*1.40*	*3.42*	*Sqm*
	Crest	*2*	*1.392*		*1.752*	*4.88*	*Sqm*
		2		*1.22*	*1.752*	*4.27*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.30*	*3.12*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.90*		*0.60*	*5.88*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.15*	*1.05*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.60*	*4.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**192.91**	**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*	*1.98*	*1.75*		*6.93*	*Sqm*
	TOTAL					**6.93**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.62*	*0.30*	**0.33**	**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*	*0.62*	*0.15*	**0.33**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*11.35*	*0.45*		*5.11*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.35*	*0.45*		*5.11*	*Sqm*
	TOTAL					**10.22**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		8.68		8.68	Cum
	TOTAL					**8.68**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.150 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.						
		1		49.46		**49.46**	**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*	*0.542*	*0.90*	*0.15*	*0.07*	*Cum*
		1	*0.782*	*0.90*	*0.15*	*0.11*	*Cum*
		1	*4.567*	*0.90*	*0.15*	*0.62*	*Cum*
		1	*0.282*	*0.90*	*0.15*	*0.04*	*Cum*
		1	*0.446*	*0.90*	*0.15*	*0.06*	*Cum*
		1	*0.782*	*0.90*	*0.15*	*0.11*	*Cum*
		1	*0.542*	*0.90*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.13*	*1.43*	*0.15*	*0.49*	*Cum*
	Section 2-2	*2*	*3.20*	*1.07*	*0.15*	*1.02*	*Cum*
	Section 3-3	*2*	*1.03*	*0.95*	*0.15*	*0.29*	*Cum*
	Section 5-5	*2*	*2.24*	*1.58*	*0.15*	*1.06*	*Cum*
	Section 6-6	*2*	*1.31*	*0.95*	*0.15*	*0.37*	*Cum*
	Toe Wall D/S Portion	*1*	*4.47*	*0.75*	*0.30*	*1.01*	*Cum*
	Toe Wall D/S Portion	*1*	*4.17*	*0.45*	*0.60*	*1.13*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**7.25**	**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*	*0.98*	*0.45*	*0.45*	*0.40*	*Cum*
		2	*0.98*	*0.79*	*1.14*	*1.76*	*Cum*
		2	*0.98*	*1.28*	*0.50*	*1.26*	*Cum*
	Section 2-2	*2*	*3.20*	*0.45*	*0.45*	*1.30*	*Cum*
		2	*3.20*	*0.61*	*0.53*	*2.04*	*Cum*
		2	*3.20*	*0.92*	*0.50*	*2.93*	*Cum*
	Section 3-3	*2*	*1.18*	*0.45*	*0.45*	*0.48*	*Cum*
		2	*1.18*	*0.55*	*0.33*	*0.42*	*Cum*
		2	*1.18*	*0.80*	*0.50*	*0.94*	*Cum*
	Section 5-5	*2*	*2.20*	*0.45*	*0.45*	*0.89*	*Cum*
		2	*2.20*	*0.79*	*1.14*	*3.95*	*Cum*
		2	*2.20*	*1.28*	*0.50*	*2.82*	*Cum*
	Section 6-6	*2*	*1.24*	*0.45*	*0.45*	*0.50*	*Cum*
		2	*1.24*	*0.55*	*0.33*	*0.44*	*Cum*
		2	*1.24*	*0.80*	*0.50*	*0.99*	*Cum*
	Floor	*1*	*0.63*	*0.90*	*0.70*	*0.39*	*Cum*
		1	*4.80*	*0.90*	*0.50*	*2.16*	*Cum*
		1	*0.28*	*0.90*	*0.50*	*0.13*	*Cum*
		1	*1.60*	*0.90*	*0.50*	*0.72*	*Cum*
		1	*0.63*	*0.90*	*0.70*	*0.39*	*Cum*
	Crest	*1*	*0.89*	*0.90*	*0.87*	*0.70*	*Cum*
	TOTAL					**25.59**	**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*	*0.90*	*0.15*	*0.10*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.85*	*0.45*	*0.05*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.85*	*0.45*	*0.05*	*0.20*	*Cum*
	TOTAL					**0.50**	**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	25.59	0.30%	0.08	7850	602.69	Kg
	Total Weight in Metric Tonne					**0.60**	**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*	*0.98*		*0.45*	*1.77*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.98*		*1.14*	*4.47*	*Sqm*
		4		*0.79*	*1.14*	*3.59*	*Sqm*
		4	*0.98*		*0.50*	*1.97*	*Sqm*
		4		*1.28*	*0.50*	*2.56*	*Sqm*
	Section 2-2	*4*	*3.20*		*0.45*	*5.76*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.20*		*0.53*	*6.72*	*Sqm*
		4		*0.61*	*0.53*	*1.28*	*Sqm*
		4	*3.20*		*0.50*	*6.40*	*Sqm*
		4		*0.92*	*0.50*	*1.83*	*Sqm*
	Section 3-3	*4*	*1.18*		*0.45*	*2.12*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.18*		*0.33*	*1.53*	*Sqm*
		4		*0.55*	*0.33*	*0.71*	*Sqm*
		4	*1.18*		*0.50*	*2.36*	*Sqm*
		4		*0.80*	*0.50*	*1.59*	*Sqm*
	Section 5-5	*4*	*2.20*		*0.45*	*3.96*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.20*		*1.14*	*9.98*	*Sqm*
		4		*0.79*	*1.14*	*3.59*	*Sqm*
		4	*2.20*		*0.50*	*4.40*	*Sqm*
		4		*1.28*	*0.50*	*2.56*	*Sqm*
	Section 6-6	*4*	*1.24*		*0.45*	*2.23*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.24*		*0.33*	*1.61*	*Sqm*
		4		*0.55*	*0.33*	*0.71*	*Sqm*
		4	*1.24*		*0.50*	*2.48*	*Sqm*
		4		*0.80*	*0.50*	*1.59*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.90*	*0.70*	*1.26*	*Sqm*
		2	*4.80*		*0.50*	*4.80*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*0.28*		*0.50*	*0.28*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*1.60*		*0.50*	*1.60*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.90*	*0.70*	*1.26*	*Sqm*
	Crest	*2*	*0.887*		*0.871*	*1.55*	*Sqm*
		2		*0.9*	*0.871*	*1.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.47*		*0.30*	*2.68*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.17*		*0.60*	*5.01*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**112.84**	**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*	*1.74*	*1.50*		*5.21*	*Sqm*
	TOTAL					**5.21**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.30*	*0.30*	**0.14**	**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*	*0.30*	*0.15*	**0.14**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*8.85*	*0.45*		*3.98*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.85*	*0.45*		*3.98*	*Sqm*
	TOTAL					**7.97**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.79		1.79	Cum
	TOTAL					**1.79**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.350 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.						
		1		63.98		**63.98**	**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*	*0.542*	*0.90*	*0.15*	*0.07*	*Cum*
		1	*0.782*	*0.90*	*0.15*	*0.11*	*Cum*
		1	*5.067*	*0.90*	*0.15*	*0.68*	*Cum*
		1	*0.282*	*0.90*	*0.15*	*0.04*	*Cum*
		1	*0.396*	*0.90*	*0.15*	*0.05*	*Cum*
		1	*0.894*	*0.90*	*0.15*	*0.12*	*Cum*
		1	*0.542*	*0.90*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.38*	*1.61*	*0.15*	*0.67*	*Cum*
	Section 2-2	*2*	*3.20*	*1.07*	*0.15*	*1.02*	*Cum*
	Section 3-3	*2*	*1.03*	*0.95*	*0.15*	*0.29*	*Cum*
	Section 5-5	*2*	*2.21*	*1.76*	*0.15*	*1.17*	*Cum*
	Section 6-6	*2*	*1.31*	*0.95*	*0.15*	*0.37*	*Cum*
	Toe Wall D/S Portion	*1*	*4.47*	*0.75*	*0.30*	*1.01*	*Cum*
	Toe Wall D/S Portion	*1*	*4.17*	*0.45*	*0.60*	*1.13*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**7.61**	**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*	*1.23*	*0.45*	*0.45*	*0.50*	*Cum*
		2	*1.23*	*0.88*	*1.44*	*3.13*	*Cum*
		2	*1.23*	*1.46*	*0.50*	*1.80*	*Cum*
	Section 2-2	*2*	*3.20*	*0.45*	*0.45*	*1.30*	*Cum*
		2	*3.20*	*0.61*	*0.53*	*2.04*	*Cum*
		2	*3.20*	*0.92*	*0.50*	*2.93*	*Cum*
	Section 3-3	*2*	*1.18*	*0.45*	*0.45*	*0.48*	*Cum*
		2	*1.18*	*0.55*	*0.33*	*0.42*	*Cum*
		2	*1.18*	*0.80*	*0.50*	*0.94*	*Cum*
	Section 5-5	*2*	*2.16*	*0.45*	*0.45*	*0.88*	*Cum*
		2	*2.16*	*0.88*	*1.44*	*5.48*	*Cum*
		2	*2.16*	*1.46*	*0.50*	*3.16*	*Cum*
	Section 6-6	*2*	*1.24*	*0.45*	*0.45*	*0.50*	*Cum*
		2	*1.24*	*0.55*	*0.33*	*0.44*	*Cum*
		2	*1.24*	*0.80*	*0.50*	*0.99*	*Cum*
	Floor	*1*	*0.63*	*0.90*	*0.70*	*0.39*	*Cum*
		1	*5.70*	*0.90*	*0.50*	*2.56*	*Cum*
		1	*0.28*	*0.90*	*0.50*	*0.13*	*Cum*
		1	*1.60*	*0.90*	*0.50*	*0.72*	*Cum*
		1	*0.65*	*0.90*	*0.80*	*0.47*	*Cum*
	Crest	*1*	*1.13*	*0.90*	*0.87*	*0.89*	*Cum*
	TOTAL					**30.13**	**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*	*0.90*	*0.15*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.14*	*0.45*	*0.05*	*0.21*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.14*	*0.45*	*0.05*	*0.21*	*Cum*
	TOTAL					**0.54**	**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	30.13	0.30%	0.09	7850	709.65	Kg
	Total Weight in Metric Tonne					**0.71**	**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*		*0.45*	*2.22*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.23*		*1.44*	*7.09*	*Sqm*
		4		*0.88*	*1.44*	*5.07*	*Sqm*
		4	*1.23*		*0.50*	*2.47*	*Sqm*
		4		*1.46*	*0.50*	*2.93*	*Sqm*
	Section 2-2	*4*	*3.20*		*0.45*	*5.76*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.20*		*0.53*	*6.72*	*Sqm*
		4		*0.61*	*0.53*	*1.28*	*Sqm*
		4	*3.20*		*0.50*	*6.40*	*Sqm*
		4		*0.92*	*0.50*	*1.83*	*Sqm*
	Section 3-3	*4*	*1.18*		*0.45*	*2.12*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.18*		*0.33*	*1.53*	*Sqm*
		4		*0.55*	*0.33*	*0.71*	*Sqm*
		4	*1.18*		*0.50*	*2.36*	*Sqm*
		4		*0.80*	*0.50*	*1.59*	*Sqm*
	Section 5-5	*4*	*2.16*		*0.45*	*3.89*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.16*		*1.44*	*12.44*	*Sqm*
		4		*0.88*	*1.44*	*5.07*	*Sqm*
		4	*2.16*		*0.50*	*4.32*	*Sqm*
		4		*1.46*	*0.50*	*2.93*	*Sqm*
	Section 6-6	*4*	*1.24*		*0.45*	*2.23*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.24*		*0.33*	*1.61*	*Sqm*
		4		*0.55*	*0.33*	*0.71*	*Sqm*
		4	*1.24*		*0.50*	*2.48*	*Sqm*
		4		*0.80*	*0.50*	*1.59*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.90*	*0.70*	*1.26*	*Sqm*
		2	*5.70*		*0.50*	*5.70*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*0.28*		*0.50*	*0.28*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*1.60*		*0.50*	*1.60*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*0.65*		*0.80*	*1.04*	*Sqm*
		2		*0.90*	*0.80*	*1.44*	*Sqm*
	Crest	*2*	*1.1305*		*0.871*	*1.97*	*Sqm*
		2		*0.9*	*0.871*	*1.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.47*		*0.30*	*2.68*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.17*		*0.60*	*5.01*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**124.09**	**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*	*1.74*	*1.50*		*5.21*	*Sqm*
	TOTAL					**5.21**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.30*	*0.30*	**0.14**	**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*	*0.30*	*0.15*	**0.14**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*9.14*	*0.45*		*4.11*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.14*	*0.45*		*4.11*	*Sqm*
	TOTAL					**8.23**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		3.79		3.79	Cum
	TOTAL					**3.79**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SENDHOKHAP MR						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 1.600 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.						
		1		48.23		**48.23**	**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*	*0.542*	*1.00*	*0.15*	*0.08*	*Cum*
		1	*0.782*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*3.817*	*1.00*	*0.15*	*0.57*	*Cum*
		1	*0.282*	*1.00*	*0.15*	*0.04*	*Cum*
		1	*0.696*	*1.00*	*0.15*	*0.10*	*Cum*
		1	*0.782*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*0.542*	*1.00*	*0.15*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.45*	*0.15*	*0.43*	*Cum*
	Section 2-2	*2*	*2.50*	*1.09*	*0.15*	*0.81*	*Cum*
	Section 3-3	*2*	*1.47*	*0.96*	*0.15*	*0.42*	*Cum*
	Section 5-5	*2*	*2.16*	*1.60*	*0.15*	*1.04*	*Cum*
	Section 6-6	*2*	*1.36*	*0.96*	*0.15*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*3.68*	*0.75*	*0.30*	*0.83*	*Cum*
	Toe Wall D/S Portion	*1*	*3.38*	*0.45*	*0.60*	*0.91*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**6.77**	**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*	*0.76*	*0.45*	*0.45*	*0.31*	*Cum*
		2	*0.76*	*0.80*	*1.17*	*1.43*	*Cum*
		2	*0.76*	*1.30*	*0.50*	*0.99*	*Cum*
	Section 2-2	*2*	*2.50*	*0.45*	*0.45*	*1.01*	*Cum*
		2	*2.50*	*0.62*	*0.56*	*1.73*	*Cum*
		2	*2.50*	*0.94*	*0.50*	*2.34*	*Cum*
	Section 3-3	*2*	*1.90*	*0.45*	*0.45*	*0.77*	*Cum*
		2	*1.90*	*0.56*	*0.36*	*0.76*	*Cum*
		2	*1.90*	*0.81*	*0.50*	*1.53*	*Cum*
	Section 5-5	*2*	*2.12*	*0.45*	*0.45*	*0.86*	*Cum*
		2	*2.12*	*0.80*	*1.17*	*3.97*	*Cum*
		2	*2.12*	*1.30*	*0.50*	*2.76*	*Cum*
	Section 6-6	*2*	*1.28*	*0.45*	*0.45*	*0.52*	*Cum*
		2	*1.28*	*0.56*	*0.36*	*0.51*	*Cum*
		2	*1.28*	*0.81*	*0.50*	*1.04*	*Cum*
	Floor	*1*	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
		1	*4.45*	*1.00*	*0.50*	*2.23*	*Cum*
		1	*0.28*	*1.00*	*0.50*	*0.14*	*Cum*
		1	*1.85*	*1.00*	*0.50*	*0.93*	*Cum*
		1	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
	Crest	*1*	*0.74*	*1.00*	*0.85*	*0.63*	*Cum*
	TOTAL					**25.34**	**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*	*0.60*	*1.00*	*0.15*	*0.09*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.44*	*0.45*	*0.05*	*0.19*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.44*	*0.45*	*0.05*	*0.19*	*Cum*
	TOTAL					**0.47**	**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	25.34	0.30%	0.08	7850	596.66	Kg
	Total Weight in Metric Tonne					**0.60**	**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*	*0.76*		*0.45*	*1.38*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.76*		*1.17*	*3.58*	*Sqm*
		4		*0.80*	*1.17*	*3.75*	*Sqm*
		4	*0.76*		*0.50*	*1.53*	*Sqm*
		4		*1.30*	*0.50*	*2.60*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.45*	*4.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.50*		*0.56*	*5.60*	*Sqm*
		4		*0.62*	*0.56*	*1.38*	*Sqm*
		4	*2.50*		*0.50*	*5.00*	*Sqm*
		4		*0.94*	*0.50*	*1.87*	*Sqm*
	Section 3-3	*4*	*1.90*		*0.45*	*3.41*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.90*		*0.36*	*2.73*	*Sqm*
		4		*0.56*	*0.36*	*0.80*	*Sqm*
		4	*1.90*		*0.50*	*3.79*	*Sqm*
		4		*0.81*	*0.50*	*1.62*	*Sqm*
	Section 5-5	*4*	*2.12*		*0.45*	*3.82*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.12*		*1.17*	*9.92*	*Sqm*
		4		*0.80*	*1.17*	*3.75*	*Sqm*
		4	*2.12*		*0.50*	*4.24*	*Sqm*
		4		*1.30*	*0.50*	*2.60*	*Sqm*
	Section 6-6	*4*	*1.28*		*0.45*	*2.31*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.28*		*0.36*	*1.85*	*Sqm*
		4		*0.56*	*0.36*	*0.80*	*Sqm*
		4	*1.28*		*0.50*	*2.56*	*Sqm*
		4		*0.81*	*0.50*	*1.62*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
		2	*4.45*		*0.50*	*4.45*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.28*		*0.50*	*0.28*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*1.85*		*0.50*	*1.85*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
	Crest	*2*	*0.742*		*0.847*	*1.26*	*Sqm*
		2		*1*	*0.847*	*1.69*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.68*		*0.30*	*2.21*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.38*		*0.60*	*4.06*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**110.97**	**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*	*1.80*	*1.50*		*5.40*	*Sqm*
	TOTAL					**5.40**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.40*	*0.30*	**0.18**	**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*	*0.40*	*0.15*	**0.18**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*8.44*	*0.45*		*3.80*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.44*	*0.45*		*3.80*	*Sqm*
	TOTAL					**7.60**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.48		1.48	Cum
	TOTAL					**1.48**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 2.060 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.						
		1		136.78		**136.78**	**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*	*0.542*	*0.90*	*0.15*	*0.07*	*Cum*
		1	*0.614*	*0.90*	*0.15*	*0.08*	*Cum*
		1	*5.492*	*0.90*	*0.15*	*0.74*	*Cum*
		1	*0.494*	*0.90*	*0.15*	*0.07*	*Cum*
		1	*3.296*	*0.90*	*0.15*	*0.44*	*Cum*
		1	*1.118*	*0.90*	*0.15*	*0.15*	*Cum*
		1	*0.542*	*0.90*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.39*	*1.78*	*0.15*	*0.74*	*Cum*
	Section 2-2	*2*	*3.00*	*1.42*	*0.30*	*2.56*	*Cum*
	Section 3-3	*2*	*4.24*	*1.30*	*0.30*	*3.30*	*Cum*
	Section 5-5	*2*	*1.97*	*1.93*	*0.15*	*1.14*	*Cum*
	Section 6-6	*2*	*1.10*	*1.30*	*0.15*	*0.43*	*Cum*
	Toe Wall D/S Portion	*1*	*3.50*	*0.75*	*0.30*	*0.79*	*Cum*
	Toe Wall D/S Portion	*1*	*3.20*	*0.45*	*0.60*	*0.86*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.65*	*0.15*	*0.29*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**12.29**	**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*	*0.45*	*0.45*	*0.47*	*Cum*
		2	*1.17*	*0.97*	*1.72*	*3.88*	*Cum*
		2	*1.17*	*1.63*	*0.65*	*2.48*	*Cum*
	Section 2-2	*2*	*3.00*	*0.40*	*0.45*	*1.07*	*Cum*
		2	*3.00*	*0.82*	*0.50*	*2.46*	*Cum*
		2	*3.00*	*0.97*	*0.50*	*2.91*	*Cum*
		2	*3.00*	*1.27*	*1.30*	*9.91*	*Cum*
	Section 3-3	*2*	*4.39*	*0.40*	*0.45*	*1.56*	*Cum*
		2	*4.39*	*0.82*	*0.50*	*3.60*	*Cum*
		2	*4.39*	*0.91*	*0.30*	*2.39*	*Cum*
		2	*4.39*	*1.15*	*1.50*	*15.13*	*Cum*
	Section 5-5	*2*	*1.92*	*0.45*	*0.45*	*0.78*	*Cum*
		2	*1.92*	*0.97*	*1.72*	*6.39*	*Cum*
		2	*1.92*	*1.63*	*0.65*	*4.08*	*Cum*
	Section 6-6	*2*	*1.03*	*0.40*	*0.45*	*0.36*	*Cum*
		2	*1.03*	*0.82*	*0.50*	*0.84*	*Cum*
		2	*1.03*	*0.91*	*0.30*	*0.56*	*Cum*
	Floor	*1*	*0.59*	*0.90*	*0.55*	*0.29*	*Cum*
		1	*6.12*	*0.90*	*0.65*	*3.58*	*Cum*
		1	*0.28*	*0.90*	*0.65*	*0.16*	*Cum*
		1	*4.60*	*0.90*	*0.50*	*2.07*	*Cum*
		1	*0.70*	*0.90*	*1.00*	*0.63*	*Cum*
	Crest	*1*	*1.13*	*0.90*	*1.42*	*1.44*	*Cum*
	TOTAL					**67.04**	**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*	*0.90*	*0.90*	*0.15*	*0.12*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.17*	*0.45*	*0.05*	*0.27*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.17*	*0.45*	*0.05*	*0.27*	*Cum*
	Slab Bridge						
	Slab	*1*	*2.54*	*6.5*	*0.34*	*5.53*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Wearing coat	*1*	*2.54*	*5.50*	*0.07*	*0.98*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*6.5*	*0.30*	*3.20*	*Cum*
	Parapet Wall	*2*	*3.00*	*0.45*	*0.18*	*0.47*	*Cum*
		2	*3.00*	*0.35*	*0.25*	*0.53*	*Cum*
		2	*3.00*	*0.22*	*0.55*	*0.72*	*Cum*
	TOTAL					**12.09**	*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*	*30*	*2.21*		*1.578*	*104.6*	*Kg*
a2	*10*	*9*	*5.90*		*0.616*	*32.7*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.08*		*0.616*	*24.4*	*Kg*
a5	*10*	*7*	*5.80*		*0.616*	*25.0*	*Kg*
x1	*12*	*26*	*2.50*		*0.888*	*57.7*	*Kg*
x2	*16*	*26*	*1.94*		*1.578*	*79.6*	*Kg*
x3	*12*	*20*	*1.60*		*0.888*	*28.4*	*Kg*
	Total Reinforcement Steel (in kg)					*359.1*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	67.04	0.30%	0.20	7850	1578.89	Kg
	TOTAL REINFORCEMENT STEEL (in MT)					**1.9**	**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*		*0.45*	*2.10*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.17*		*1.72*	*8.03*	*Sqm*
		4		*0.97*	*1.72*	*6.65*	*Sqm*
		4	*1.17*		*0.65*	*3.03*	*Sqm*
		4		*1.63*	*0.65*	*4.24*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.45*	*5.34*	*Sqm*
		4		*0.40*	*0.45*	*0.71*	*Sqm*
		4	*3.00*		*0.50*	*6.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*3.00*		*0.50*	*6.00*	*Sqm*
		4		*0.97*	*0.50*	*1.94*	*Sqm*
		4	*3.00*		*1.30*	*15.60*	*Sqm*
		4		*1.27*	*1.30*	*6.60*	*Sqm*
	Section 3-3	*4*	*4.39*		*0.45*	*7.81*	*Sqm*
		4		*0.40*	*0.45*	*0.71*	*Sqm*
		4	*4.39*		*0.50*	*8.77*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*4.39*		*0.30*	*5.26*	*Sqm*
		4		*0.91*	*0.30*	*1.09*	*Sqm*
		4	*4.39*		*1.50*	*26.31*	*Sqm*
		4		*1.15*	*1.50*	*6.90*	*Sqm*
	Section 5-5	*4*	*1.92*		*0.45*	*3.46*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.92*		*1.72*	*13.24*	*Sqm*
		4		*0.97*	*1.72*	*6.65*	*Sqm*
		4	*1.92*		*0.65*	*5.00*	*Sqm*
		4		*1.63*	*0.65*	*4.24*	*Sqm*
	Section 6-6	*4*	*1.03*		*0.45*	*1.82*	*Sqm*
		4		*0.40*	*0.45*	*0.71*	*Sqm*
		4	*1.03*		*0.50*	*2.05*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.03*		*0.30*	*1.23*	*Sqm*
		4		*0.91*	*0.30*	*1.09*	*Sqm*
	Floor	*2*	*0.59*		*0.55*	*0.65*	*Sqm*
		2		*0.90*	*0.55*	*0.99*	*Sqm*
		2	*6.12*		*0.65*	*7.96*	*Sqm*
		2		*0.90*	*0.65*	*1.17*	*Sqm*
		2	*0.28*		*0.65*	*0.37*	*Sqm*
		2		*0.90*	*0.65*	*1.17*	*Sqm*
		2	*4.60*		*0.50*	*4.60*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*0.70*		*1.00*	*1.40*	*Sqm*
		2		*0.90*	*1.00*	*1.80*	*Sqm*
	Crest	*2*	*1.1275*		*1.415*	*3.19*	*Sqm*
		2		*0.9*	*1.415*	*2.55*	*Sqm*
	Parapet	*4*	*3.00*		*0.18*	*2.10*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*3.00*		*0.25*	*3.00*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.00*		*0.55*	*6.56*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.50*		*0.30*	*2.10*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.20*		*0.60*	*3.84*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.65*	*0.15*	*0.39*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**221.23**	**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*	*1.69*	*1.50*		*5.07*	*Sqm*
	TOTAL					**5.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.30*	*0.30*	**0.14**	**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*	*0.30*	*0.15*	**0.14**	**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*	*12.17*	*0.45*		*5.48*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.17*	*0.45*		*5.48*	*Sqm*
	TOTAL					**10.96**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		9.01		9.01	Cum
	TOTAL					**9.01**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF PIPE CULVERT OF TETRIA 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)
AOC FOR PIPE CULVERT AT KM 1.030									
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.	70.000	Sqm	**11.80**	826.31			
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.	78.506	Cum	**156.50**	12286.22			
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.	25.09	Cum	**6381.70**	160111.92	8.13	11.29	22.58
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.	36.080	Cum	**6914.20**	249463.32	14.88	15.51	31.03
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.	154.107	Sqm	**578.60**	89166.36			
6	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.	0.71	MT	**73574.90**	52095.97			
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	M-149	Supplying 1200 mm NP3 Pipe	7.50	Rm	**7015.86**	52618.95			
10	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 .	7.50	Rm	**2047.70**	15357.78			
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	Rm	**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.	10.42	Sqm	**680.10**	7083.92			

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)
13	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	37.65	Cum	**149.30**	5620.68			
14	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	**5021.30**	5513.39	0.13	0.35	
15	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.	6.222	Sqm	**340.20**	2116.72	14.335	1.991	
16	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.	2.562	Sqm	**63.20**	161.92	0.004		
17		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	29.147	Cum	**1075.00**	31332.91			
		Coarse Aggregates (60 Km lead)	53.609	Cum	**1398.00**	74945.35			
		Cement (30 km lead)	37.478	MT	**742.00**	27808.43			
		Steel (30 km lead)	0.708	MT	**742.00**	525.39			
		Boulder (60 km lead)	2.160	Cum	**1159.00**	2503.44			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1838.00**	13785.00			
		TOTAL (In Rs.)				**808717.04**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	29.15	Cum	**584.64**	17040.44	1704.04		
		Coarse Aggregate	53.61	Cum	**944.26**	50620.81	5062.08		
		Boulder (60 km lead)	2.16	Cum	**694.61**	1500.36	150.04		
		Total					**6916.16**		

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 CULVERT AT KM 2.890 OF TETRIA MR.									
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.	50.000	Sqm	**11.80**	590.22			
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.	85.403	Cum	**156.50**	13365.59			
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.	22.46	Cum	**6381.70**	143309.33	7.28	10.11	20.21
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.	31.656	Cum	**6914.20**	218878.44	13.06	13.61	27.22
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.	146.098	Sqm	**578.60**	84532.41			
6	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.	0.62	MT	**73574.90**	45708.86			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.16	Cum	**0.00**	0.00			
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	M-149	Supplying 1200 mm NP3 Pipe	7.50	Rm	**7015.86**	52618.95			
10	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 .	7.50	Rm	**2047.70**	15357.78			
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	Rm	**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.	8.78	Sqm	**680.10**	5974.00			
13	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	51.85	Cum	**149.30**	7740.87			

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)
14	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	**5021.30**	5513.39	0.13	0.35	
15	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.	6.222	Sqm	**340.20**	2116.72	14.335	1.991	
16	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.	2.562	Sqm	**63.20**	161.92	0.00		
17		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	26.060	Cum	**1075.00**	28014.47			
		Coarse Aggregates (60 Km lead)	47.435	Cum	**1398.00**	66314.32			
		Cement (30 km lead)	34.800	MT	**742.00**	25821.53			
		Steel (30 km lead)	0.621	MT	**742.00**	460.97			
		Boulder (60 km lead)	2.160	MT	**1159.00**	2503.44			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1838.00**	13785.00			
TOTAL (In Rs.)						**736660.94**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	26.06	Cum	**584.64**	15235.70	1523.57		
		Coarse Aggregate	47.44	Cum	**944.26**	44791.10	4479.11		
		Boulder (60 km lead)	2.16	Cum	**694.61**	1500.36	150.04		
		Total					**6152.72**		

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 CULVERT AT KM 0.635 OF KARMARI MR									
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.	40.000	Sqm	**11.80**	472.18			
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.	70.017	Cum	**156.50**	10957.64			
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.	23.37	Cum	**6381.70**	149157.38	7.57	10.52	21.04
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.	32.561	Cum	**6914.20**	225133.48	13.43	14.00	28.00
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.	148.927	Sqm	**578.60**	86169.05			
6	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.	0.64	MT	**73574.90**	47015.11			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.16	Cum	**0.00**	0.00			
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	M-149	Supplying 1200 mm NP3 Pipe	7.50	Rm	**7015.86**	52618.95			
10	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 .	7.50	Rm	**2047.70**	15357.78			
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	Rm	**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.	8.95	Sqm	**680.10**	6088.26			
13	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	34.72	Cum	**149.30**	5184.36			

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)
14	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	**5021.30**	5513.39	0.13	0.35	
15	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.	6.222	Sqm	**340.20**	2116.72	14.335	1.991	
16	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.	2.562	Sqm	**63.20**	161.92	0.00		
17		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	26.861	Cum	**1075.00**	28875.95			
		Coarse Aggregates (60 Km lead)	49.038	Cum	**1398.00**	68554.97			
		Cement (30 km lead)	35.470	MT	**742.00**	26318.73			
		Steel (30 km lead)	0.639	MT	**742.00**	474.15			
		Boulder (60 km lead)	2.160	MT	**1159.00**	2503.44			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1838.00**	13785.00			
TOTAL (In Rs.)						**750351.18**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	26.86	Cum	**584.64**	15704.22	1570.42		
		Coarse Aggregate	49.04	Cum	**944.26**	46304.52	4630.45		
		Boulder (60 km lead)	2.16	Cum	**694.61**	1500.36	150.04		
		Total					**6350.91**		

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 CULVERT AT KM 1.900 OF KARMARI MR									
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.	50.000	Sqm	**11.80**	590.22			
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.	24.676	Cum	**156.50**	3861.77			
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.	15.72	Cum	**6381.70**	100291.75	5.09	7.07	14.14
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.	13.290	Cum	**6914.20**	91890.76	5.48	5.71	11.43
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.	99.657	Sqm	**578.60**	57661.63			
6	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.	0.26	MT	**73574.90**	19189.75			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.45	Cum	**0.00**	0.00			
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.	2.45	Cum	**1237.00**	3028.18			
9	M-149	Supplying 1200 mm NP3 Pipe	7.50	Rm	**7015.86**	52618.95			
10	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 .	7.50	Rm	**2047.70**	15357.78			
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	4.00	Rm	**152.60**	610.40			
13	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.	0.00	Cum	**680.10**	0.00			
14	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	6.38	Cum	**149.30**	952.53			

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	5.4.6	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.	1.098	Cum	**5021.30**	5513.39	0.13	0.35	
16	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.	6.222	Sqm	**340.20**	2116.72	14.335	1.991	
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.	2.562	Sqm	**63.20**	161.92	0.00		
		Coarse Sand (30 Km lead)	15.129	Cum	**1075.00**	16263.84			
		Coarse Aggregates (60 Km lead)	25.573	Cum	**1398.00**	35751.75			
		Cement (30 km lead)	25.036	MT	**742.00**	18576.71			
		Steel (30 km lead)	0.261	MT	**742.00**	193.53			
		Boulder (60 km lead)	2.448	Cum	**1159.00**	2837.23			
		Hume Pipe (30 Km Lead)	2.448	Rm	**1838.00**	4499.42			
TOTAL (In Rs.)						**431968.22**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	15.13	Cum	**584.64**	8845.11	884.51		
		Coarse Aggregate	25.57	Cum	**944.26**	24148.03	2414.80		
		Boulder (60 km lead)	2.45	Cum	**694.61**	1700.41	170.04		
		Total					**3469.35**		

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)
AOC FOR PIPE CULVERT AT KM 0.110 OF JASOEA MR									
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.	60.000	Sqm	**11.80**	708.26			
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.	75.882	Cum	**156.50**	11875.57			
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.	25.36	Cum	**6381.70**	161847.15	8.22	11.41	22.83
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.	36.396	Cum	**6914.20**	251650.51	15.01	15.65	31.30
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.	155.414	Sqm	**578.60**	89922.42			
6	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.	0.71	MT	**73574.90**	52552.72			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.10	Cum	**0.00**	0.00			
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.	3.10	Cum	**1237.00**	3829.75			
9	M-149	Supplying 1200 mm NP3 Pipe	7.50	Rm	**7015.86**	52618.95			
10	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 .	7.50	Rm	**2047.70**	15357.78			
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	Nos	**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.	10.50	Sqm	**5021.30**	52723.65			
13	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	34.63	Cum	**149.30**	5170.56			

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)
14	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	**5021.30**	5513.39	0.13	0.35	
15	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.	6.222	Sqm	**340.20**	2116.72	14.335	1.991	
16	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.	2.562	Sqm	**63.20**	161.92	0.00		
17		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	29.405	Cum	**1075.00**	31610.67			
		Coarse Aggregates (60 Km lead)	54.126	Cum	**1398.00**	75667.79			
		Cement (30 km lead)	37.696	MT	**742.00**	27970.62			
		Steel (30 km lead)	0.714	MT	**742.00**	529.99			
		Boulder (60 km lead)	3.096	Cum	**1159.00**	3588.26			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1838.00**	13785.00			
		TOTAL (In Rs.)				**860422.49**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	29.41	Cum	**584.64**	17191.50	1719.15		
		Coarse Aggregate	54.13	Cum	**944.26**	51108.77	5110.88		
		Boulder	3.10	Cum	**694.61**	2150.51	215.05		
		Total					**7045.08**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 1.030 OF TETRIA MR.							
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*			**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.						
	U/S Toe Wall	*1*	*1.19*	*0.85*	*1.20*	*1.21*	*Cum*
	D/S Toe Wall	*1*	*1.19*	*0.85*	*1.20*	*1.21*	*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*	*0.57*	*1.00*	*1.20*	*1.38*	*Cum*
		2	*3.09*	*1.90*	*1.20*	*14.06*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.09*	*1.05*	*2.10*	*13.60*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*1.20*	*1.32*	*Cum*
		2	*4.01*	*1.88*	*1.20*	*18.07*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.01*	*1.05*	*2.10*	*17.66*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.09*	*0.45*	*1.25*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*1.09*	*0.45*	*1.73*	*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					**78.51**	**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.						
	PCC Below U/S Curtain Wall	*1*	*1.19*	*0.85*	*0.30*	*0.30*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.19*	*0.45*	*0.90*	*0.48*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.19*	*0.85*	*0.30*	*0.30*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.19*	*0.45*	*0.90*	*0.48*	*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*	*1.09*	*0.45*	*1.25*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*1.09*	*0.45*	*1.73*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.57*	*1.00*	*0.30*	*0.34*	*Cum*
		2	*3.09*	*1.90*	*0.30*	*3.52*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*0.30*	*0.33*	*Cum*
		2	*4.01*	*1.88*	*0.30*	*4.52*	*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*	*0.37*	*3.46*	*Cum*
	TOTAL					**25.09**	**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*	*0.57*	*0.60*	*0.90*	*0.62*	*Cum*
		2	*0.57*	*0.45*	*0.54*	*0.28*	*Cum*
		2	*0.57*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section A-A & Section C-C	*2*	*3.09*	*1.50*	*0.90*	*8.32*	*Cum*
		2	*3.09*	*1.21*	*0.54*	*4.03*	*Cum*
		2	*3.09*	*0.73*	*0.50*	*2.26*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.55*	*0.60*	*0.90*	*0.59*	*Cum*
		2	*0.55*	*0.45*	*0.54*	*0.27*	*Cum*
		2	*0.55*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section E-E & Section G-G	*2*	*4.01*	*1.48*	*0.90*	*10.67*	*Cum*
		2	*4.01*	*1.20*	*0.54*	*5.17*	*Cum*
		2	*4.01*	*0.73*	*0.50*	*2.90*	*Cum*
	Collar Joint	*2*	*1.83*	*0.30*	*1.60*	*1.76*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.13*		*-1.13*	*Cum*
	TOTAL					**36.08**	**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*	*1.19*		*0.90*	*2.13*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.19*		*0.90*	*2.13*	*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		*1.09*	*0.45*	*0.98*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*1.09*	*0.45*	*0.98*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.57*		*0.30*	*0.69*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.09*		*0.30*	*3.70*	*Sqm*
		4		*1.90*	*0.30*	*2.28*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.55*		*0.30*	*0.66*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*4.01*		*0.30*	*4.81*	*Sqm*
		4		*1.88*	*0.30*	*2.26*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.57*		*0.90*	*2.06*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.57*		*0.54*	*1.24*	*Sqm*
		4		*0.45*	*0.54*	*0.97*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*0.57*		*0.50*	*1.15*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*3.09*		*0.90*	*11.11*	*Sqm*
		4		*1.50*	*0.90*	*5.39*	*Sqm*
		4	*3.09*		*0.54*	*6.66*	*Sqm*
		4		*1.21*	*0.54*	*2.61*	*Sqm*
		4	*3.09*		*0.50*	*6.17*	*Sqm*
		4		*0.73*	*0.50*	*1.47*	*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*		*0.54*	*1.19*	*Sqm*
		4		*0.45*	*0.54*	*0.97*	*Sqm*
		4	*0.55*		*0.50*	*1.10*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*4.01*		*0.90*	*14.42*	*Sqm*
		4		*1.48*	*0.90*	*5.33*	*Sqm*
		4	*4.01*		*0.54*	*8.65*	*Sqm*
		4		*1.20*	*0.54*	*2.58*	*Sqm*
		4	*4.01*		*0.50*	*8.01*	*Sqm*
		4		*0.73*	*0.50*	*1.45*	*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*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.92*	*Sqm*
	TOTAL					**154.11**	**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	*36.08*	*0.25%*	*0.09*	*7850*	*708.07*	*Kg*
	TOTAL Weight of steel (in kg)					708.07	Kg
	TOTAL Weight of Steel (in Tonne)					**0.71**	**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 1200 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.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*1.74*	*3.00*		*5.21*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.74*	*3.00*		*5.21*	*Sqm*
	TOTAL					**10.42**	**Sqm**
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						
	U/S Transitions Walls	*2*	*3.09*	*1.05*	*2.10*	*13.60*	*Cum*
	D/S Transitions Walls	*2*	*4.01*	*1.05*	*2.10*	*17.66*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**37.65**	**Cum**
12	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	1.83	0.5	0.6	*1.10*	*Cum*
	TOTAL					**1.10**	**Cum**
13	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**	**1.83**		**1.7**	**6.22**	*Sqm*
	TOTAL					**6.22**	***Sqm***
14	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**	**1.83**		**0.7**	**2.56**	*Sqm*
	TOTAL					**2.56**	***Sqm***

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 2.890 OF TETRIA 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.	*1*		*50.00*		**50.00**	**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*	*0.72*	*0.85*	*1.20*	*0.74*	*Cum*
	D/S Toe Wall	*1*	*0.72*	*0.85*	*1.20*	*0.74*	*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*	*0.54*	*1.00*	*1.20*	*1.30*	*Cum*
		2	*2.88*	*1.53*	*1.20*	*10.60*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.88*	*1.30*	*2.60*	*19.49*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.52*	*1.00*	*1.20*	*1.25*	*Cum*
		2	*3.84*	*1.72*	*1.20*	*15.88*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.84*	*1.30*	*2.60*	*25.98*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*0.88*	*0.45*	*1.00*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*0.88*	*0.45*	*1.40*	*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					**85.40**	**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*	*0.72*	*0.85*	*0.30*	*0.18*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.72*	*0.45*	*0.90*	*0.29*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.72*	*0.85*	*0.30*	*0.18*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.72*	*0.45*	*0.90*	*0.29*	*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*	*0.88*	*0.45*	*1.00*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*0.88*	*0.45*	*1.40*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.54*	*1.00*	*0.30*	*0.33*	*Cum*
		2	*2.88*	*1.53*	*0.30*	*2.65*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.52*	*1.00*	*0.30*	*0.31*	*Cum*
		2	*3.84*	*1.72*	*0.30*	*3.97*	*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*	*0.37*	*3.46*	*Cum*
	TOTAL					**22.46**	**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*	*0.54*	*0.60*	*0.90*	*0.59*	*Cum*
		2	*0.54*	*0.45*	*0.54*	*0.26*	*Cum*
		2	*0.54*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.88*	*1.33*	*0.90*	*6.91*	*Cum*
		2	*2.88*	*1.12*	*0.54*	*3.49*	*Cum*
		2	*2.88*	*0.72*	*0.50*	*2.08*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.52*	*0.60*	*0.90*	*0.56*	*Cum*
		2	*0.52*	*0.45*	*0.54*	*0.25*	*Cum*
		2	*0.52*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.84*	*1.33*	*0.90*	*9.17*	*Cum*
		2	*3.84*	*1.12*	*0.54*	*4.63*	*Cum*
		2	*3.84*	*0.72*	*0.50*	*2.76*	*Cum*
	Collar Joint	*2*	*1.83*	*0.30*	*1.60*	*1.76*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.13*		*-1.13*	*Cum*
	TOTAL					**31.66**	**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*	*0.72*		*0.90*	*1.30*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.72*		*0.90*	*1.30*	*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		*0.88*	*0.45*	*0.79*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*0.88*	*0.45*	*0.79*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.54*		*0.30*	*0.65*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.88*		*0.30*	*3.46*	*Sqm*
		4		*1.53*	*0.30*	*1.84*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.52*		*0.30*	*0.63*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.84*		*0.30*	*4.61*	*Sqm*
		4		*1.72*	*0.30*	*2.07*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.54*		*0.90*	*1.95*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.54*		*0.54*	*1.17*	*Sqm*
		4		*0.45*	*0.54*	*0.97*	*Sqm*
		4	*0.54*		*0.50*	*1.08*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.88*		*0.90*	*10.38*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.33*	*0.90*	*4.80*	*Sqm*
		4	*2.88*		*0.54*	*6.23*	*Sqm*
		4		*1.12*	*0.54*	*2.42*	*Sqm*
		4	*2.88*		*0.50*	*5.77*	*Sqm*
		4		*0.72*	*0.50*	*1.45*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.52*		*0.90*	*1.88*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.52*		*0.54*	*1.13*	*Sqm*
		4		*0.45*	*0.54*	*0.97*	*Sqm*
		4	*0.52*		*0.50*	*1.04*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.84*		*0.90*	*13.83*	*Sqm*
		4		*1.33*	*0.90*	*4.77*	*Sqm*
		4	*3.84*		*0.54*	*8.30*	*Sqm*
		4		*1.12*	*0.54*	*2.41*	*Sqm*
		4	*3.84*		*0.50*	*7.69*	*Sqm*
		4		*0.72*	*0.50*	*1.44*	*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*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.92*	*Sqm*
	TOTAL					**146.10**	**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	*31.66*	*0.25%*	*0.08*	*7850*	*621.26*	*Kg*
	TOTAL Weight of steel (in kg)					621.26	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*	*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 1200 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*	*1.46*	*3.00*		*4.39*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.46*	*3.00*		*4.39*	*Sqm*
	TOTAL					**8.78**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	U/S Transitions Walls	*2*	*2.88*	*1.30*	*2.60*	*19.49*	*Cum*
	D/S Transitions Walls	*2*	*3.84*	*1.30*	*2.60*	*25.98*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**51.85**	**Cum**
12	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**	**1.83**	**0.5**	**0.6**	*1.10*	*Cum*
	TOTAL					**1.10**	**Cum**
13	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**		**1.83**	**1.7**	**6.22**	*Sqm*
	TOTAL					**6.22**	***Sqm***
14	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**		**1.83**	**0.7**	**2.56**	*Sqm*
	TOTAL					**2.56**	***Sqm***

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.635 OF KARMARI 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.	*1*	*40.00*			**40.00**	**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*	*1.00*	*0.85*	*1.20*	*1.02*	*Cum*
	D/S Toe Wall	*1*	*1.00*	*0.85*	*1.20*	*1.02*	*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*	*0.53*	*1.00*	*1.20*	*1.28*	*Cum*
		2	*2.99*	*1.55*	*1.20*	*11.17*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.99*	*1.01*	*2.03*	*12.33*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.53*	*1.00*	*1.20*	*1.28*	*Cum*
		2	*3.89*	*1.73*	*1.20*	*16.14*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.89*	*1.01*	*2.03*	*16.02*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.00*	*0.45*	*1.15*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*1.00*	*0.45*	*1.60*	*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					**70.02**	**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.						
	PCC Below U/S Curtain Wall	*1*	*1.00*	*0.85*	*0.30*	*0.26*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.00*	*0.45*	*0.90*	*0.41*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.00*	*0.85*	*0.30*	*0.26*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.00*	*0.45*	*0.90*	*0.41*	*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*	*1.00*	*0.45*	*1.15*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*1.00*	*0.45*	*1.60*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.53*	*1.00*	*0.30*	*0.32*	*Cum*
		2	*2.99*	*1.55*	*0.30*	*2.79*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.53*	*1.00*	*0.30*	*0.32*	*Cum*
		2	*3.89*	*1.73*	*0.30*	*4.04*	*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*	*0.37*	*3.46*	*Cum*
	TOTAL					**23.37**	**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*	*0.53*	*0.60*	*0.90*	*0.58*	*Cum*
		2	*0.53*	*0.45*	*0.54*	*0.26*	*Cum*
		2	*0.53*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.99*	*1.35*	*0.90*	*7.30*	*Cum*
		2	*2.99*	*1.13*	*0.54*	*3.67*	*Cum*
		2	*2.99*	*0.73*	*0.50*	*2.17*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.53*	*0.60*	*0.90*	*0.57*	*Cum*
		2	*0.53*	*0.45*	*0.54*	*0.26*	*Cum*
		2	*0.53*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section E-E & Section G-G	*2*	*3.89*	*1.33*	*0.90*	*9.30*	*Cum*
		2	*3.89*	*1.12*	*0.54*	*4.70*	*Cum*
		2	*3.89*	*0.72*	*0.50*	*2.80*	*Cum*
	Collar Joint	*2*	*1.83*	*0.30*	*1.60*	*1.76*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.13*		*-1.13*	*Cum*
	TOTAL					**32.56**	**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*	*1.00*		*0.90*	*1.80*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.00*		*0.90*	*1.80*	*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		*1.00*	*0.45*	*0.90*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*1.00*	*0.45*	*0.90*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.53*		*0.30*	*0.64*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.99*		*0.30*	*3.59*	*Sqm*
		4		*1.55*	*0.30*	*1.87*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.53*		*0.30*	*0.64*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.89*		*0.30*	*4.67*	*Sqm*
		4		*1.73*	*0.30*	*2.07*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.53*		*0.90*	*1.92*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.53*		*0.54*	*1.15*	*Sqm*
		4		*0.45*	*0.54*	*0.97*	*Sqm*
		4	*0.53*		*0.50*	*1.07*	*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*	*2.99*		*0.90*	*10.78*	*Sqm*
		4		*1.35*	*0.90*	*4.88*	*Sqm*
		4	*2.99*		*0.54*	*6.47*	*Sqm*
		4		*1.13*	*0.54*	*2.45*	*Sqm*
		4	*2.99*		*0.50*	*5.99*	*Sqm*
		4		*0.73*	*0.50*	*1.45*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.53*		*0.90*	*1.92*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.53*		*0.54*	*1.15*	*Sqm*
		4		*0.45*	*0.54*	*0.97*	*Sqm*
		4	*0.53*		*0.50*	*1.06*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*3.89*		*0.90*	*14.01*	*Sqm*
		4		*1.33*	*0.90*	*4.78*	*Sqm*
		4	*3.89*		*0.54*	*8.40*	*Sqm*
		4		*1.12*	*0.54*	*2.42*	*Sqm*
		4	*3.89*		*0.50*	*7.78*	*Sqm*
		4		*0.72*	*0.50*	*1.44*	*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*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.92*	*Sqm*
	TOTAL					**148.93**	**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	*32.56*	*0.25%*	*0.08*	*7850*	*639.01*	*Kg*
	TOTAL Weight of steel (in kg)					639.01	Kg
	TOTAL Weight of Steel (in Tonne)					**0.64**	**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 1200 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*	*1.49*	*3.00*		*4.48*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.49*	*3.00*		*4.48*	*Sqm*
	TOTAL					**8.95**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	U/S Transitions Walls	*2*	*2.99*	*1.01*	*2.03*	*12.33*	*Cum*
	D/S Transitions Walls	*2*	*3.89*	*1.01*	*2.03*	*16.02*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**34.72**	**Cum**
12	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**	**1.83**	**0.5**	**0.6**	*1.10*	*Cum*
	TOTAL					**1.10**	**Cum**
13	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**	**1.83**		**1.7**	**6.22**	*Sqm*
	TOTAL					**6.22**	***Sqm***
14	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**	**1.83**		**0.7**	**2.56**	*Sqm*
	TOTAL					**2.56**	***Sqm***

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 1.900 OF KARMARI 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.	*1*		*50.00*		**50.00**	**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*	*0.70*	*0.85*	*1.20*	*0.72*	*Cum*
	D/S Toe Wall	*1*	*0.70*	*0.85*	*1.20*	*0.72*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.34*	*1.00*	*1.20*	*8.01*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.34*	*1.00*	*1.20*	*10.41*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*0.86*	*0.45*	*0.99*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*0.86*	*0.45*	*1.38*	*Cum*
	Launching Apron in U/S Portion	*1*	*3.00*	*0.68*	*0.60*	*1.22*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.68*	*0.60*	*1.22*	*Cum*
	TOTAL					**24.68**	**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*	*0.70*	*0.85*	*0.30*	*0.18*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.70*	*0.45*	*0.90*	*0.29*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.70*	*0.85*	*0.30*	*0.18*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.70*	*0.45*	*0.90*	*0.29*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*0.86*	*0.45*	*0.99*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*0.86*	*0.45*	*1.38*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.34*	*1.00*	*0.30*	*2.00*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.34*	*1.00*	*0.30*	*2.60*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.73*	*0.34*	*4.35*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.63*	*0.37*	*3.46*	*Cum*
	TOTAL					**15.72**	**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.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*3.34*	*0.60*	*0.90*	*3.60*	*Cum*
		2	*3.34*	*0.45*	*0.30*	*0.90*	*Cum*
		2	*3.34*	*0.30*	*0.50*	*1.00*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*4.34*	*0.60*	*0.90*	*4.69*	*Cum*
		2	*4.34*	*0.45*	*0.30*	*1.17*	*Cum*
		2	*4.34*	*0.30*	*0.50*	*1.30*	*Cum*
	Collar Joint	*2*	*1.83*	*0.30*	*1.60*	*1.76*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Deduct Hume Pipe Area	*1*		*1.13*		*-1.13*	*Cum*
	TOTAL					**13.29**	**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*	*0.70*		*0.90*	*1.27*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.70*		*0.90*	*1.27*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.86*	*0.45*	*0.78*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*0.86*	*0.45*	*0.78*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*3.34*		*0.30*	*4.00*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*4.34*		*0.30*	*5.21*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*3.34*		*0.90*	*12.01*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*3.34*		*0.30*	*4.00*	*Sqm*
		4		*0.45*	*0.30*	*0.54*	*Sqm*
		4	*3.34*		*0.50*	*6.67*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*4.34*		*0.90*	*15.62*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*4.34*		*0.30*	*5.21*	*Sqm*
		4		*0.45*	*0.30*	*0.54*	*Sqm*
		4	*4.34*		*0.50*	*8.68*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.34*	*5.03*	*Sqm*
		2		*1.73*	*0.34*	*1.16*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.92*	*Sqm*
	TOTAL					**99.66**	**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	*13.29*	*0.25%*	*0.03*	*7850*	*260.82*	*Kg*
	TOTAL Weight of steel (in kg)					260.82	Kg
	TOTAL Weight of Steel (in Tonne)					**0.26**	**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*	*0.68*	*0.60*	*1.22*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.68*	*0.60*	*1.22*	*Cum*
	TOTAL					**2.45**	**Cum**
8	Providing 1200 mm RCC NP2 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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	4				**4.00**	**Nos.**
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						
	Above Hume Pipe	*1*	*6.38*			*6.38*	*Cum*
	TOTAL					**6.38**	**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**	**1.83**	**0.5**	**0.6**	*1.10*	*Cum*
	TOTAL					**1.10**	**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.						
	Parapet	**2**	**1.83**		**1.7**	**6.22**	*Sqm*
	TOTAL					**6.22**	***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**	**1.83**		**0.7**	**2.56**	*Sqm*
	TOTAL					**2.56**	***Sqm***

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 0.110 OF JASOEA 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.	*1*		*60.00*		**60.00**	**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*	*1.43*	*0.85*	*1.20*	*1.45*	*Cum*
	D/S Toe Wall	*1*	*1.43*	*0.85*	*1.20*	*1.45*	*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*	*0.58*	*1.00*	*1.20*	*1.39*	*Cum*
		2	*2.99*	*1.71*	*1.20*	*12.31*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.99*	*1.00*	*2.00*	*11.98*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.56*	*1.00*	*1.20*	*1.33*	*Cum*
		2	*4.07*	*1.89*	*1.20*	*18.47*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.07*	*1.00*	*2.00*	*16.28*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.20*	*0.45*	*1.37*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.52*	*1.20*	*0.45*	*1.89*	*Cum*
	Launching Apron in U/S Portion	*1*	*3.00*	*0.86*	*0.60*	*1.55*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.86*	*0.60*	*1.55*	*Cum*
	TOTAL					**75.88**	**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.						
	PCC Below U/S Curtain Wall	*1*	*1.43*	*0.85*	*0.30*	*0.36*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.43*	*0.45*	*0.90*	*0.58*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.43*	*0.85*	*0.30*	*0.36*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.43*	*0.45*	*0.90*	*0.58*	*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*	*1.20*	*0.45*	*1.37*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.52*	*1.20*	*0.45*	*1.89*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*2.99*	*1.71*	*0.30*	*3.08*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.56*	*1.00*	*0.30*	*0.33*	*Cum*
		2	*4.07*	*1.89*	*0.30*	*4.62*	*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*	*0.37*	*3.46*	*Cum*
	TOTAL					**25.36**	**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*	*0.55*	*0.29*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.99*	*1.51*	*0.90*	*8.15*	*Cum*
		2	*2.99*	*1.22*	*0.55*	*4.01*	*Cum*
		2	*2.99*	*0.74*	*0.50*	*2.21*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.56*	*0.60*	*0.90*	*0.60*	*Cum*
		2	*0.56*	*0.45*	*0.55*	*0.28*	*Cum*
		2	*0.56*	*0.30*	*0.50*	*0.17*	*Cum*
	Average of Section E-E & Section G-G	*2*	*4.07*	*1.49*	*0.90*	*10.92*	*Cum*
		2	*4.07*	*1.20*	*0.55*	*5.38*	*Cum*
		2	*4.07*	*0.73*	*0.50*	*2.96*	*Cum*
	Collar Joint	*2*	*1.83*	*0.30*	*1.60*	*1.76*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.13*		*-1.13*	*Cum*
	TOTAL					**36.40**	**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*	*1.43*		*0.90*	*2.57*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.43*		*0.90*	*2.57*	*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		*1.20*	*0.45*	*1.08*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.52*		*0.45*	*3.16*	*Sqm*
		2		*1.20*	*0.45*	*1.08*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.70*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.99*		*0.30*	*3.59*	*Sqm*
		4		*1.71*	*0.30*	*2.06*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.56*		*0.30*	*0.67*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*4.07*		*0.30*	*4.88*	*Sqm*
		4		*1.89*	*0.30*	*2.27*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.58*		*0.90*	*2.09*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.55*	*1.28*	*Sqm*
		4		*0.45*	*0.55*	*0.99*	*Sqm*
		4	*0.58*		*0.50*	*1.16*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.99*		*0.90*	*10.78*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.51*	*0.90*	*5.45*	*Sqm*
		4	*2.99*		*0.55*	*6.59*	*Sqm*
		4		*1.22*	*0.55*	*2.68*	*Sqm*
		4	*2.99*		*0.50*	*5.99*	*Sqm*
		4		*0.74*	*0.50*	*1.48*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.56*		*0.90*	*2.00*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.56*		*0.55*	*1.22*	*Sqm*
		4		*0.45*	*0.55*	*0.99*	*Sqm*
		4	*0.56*		*0.50*	*1.11*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*4.07*		*0.90*	*14.65*	*Sqm*
		4		*1.49*	*0.90*	*5.37*	*Sqm*
		4	*4.07*		*0.55*	*8.95*	*Sqm*
		4		*1.20*	*0.55*	*2.65*	*Sqm*
		4	*4.07*		*0.50*	*8.14*	*Sqm*
		4		*0.73*	*0.50*	*1.45*	*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*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.92*	*Sqm*
	TOTAL					**155.41**	**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	*36.40*	*0.25%*	*0.09*	*7850*	*714.28*	*Kg*
	TOTAL Weight of steel (in kg)					714.28	Kg
	TOTAL Weight of Steel (in Tonne)					**0.71**	**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*	*0.86*	*0.60*	*1.55*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.86*	*0.60*	*1.55*	*Cum*
	TOTAL					**3.10**	**Cum**
8	Providing 1200 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*	*1.75*	*3.00*		*5.25*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.75*	*3.00*		*5.25*	*Sqm*
	TOTAL					**10.50**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	U/S Transitions Walls	*2*	*2.99*	*1.00*	*2.00*	*11.98*	*Cum*
	D/S Transitions Walls	*2*	*4.07*	*1.00*	*2.00*	*16.28*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**34.63**	**Cum**
12	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**	**1.83**	**0.5**	**0.6**	*1.10*	*Cum*
	TOTAL					**1.10**	**Cum**
13	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		1.83	1.7	6.22	*Sqm*
	TOTAL					**6.22**	***Sqm***
14	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		1.83	0.7	2.56	*Sqm*
	TOTAL					**2.56**	***Sqm***

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	Ruir Branch Canal	29350-30130	780.000	0.560	436.800	Cum	5021.30	₹ 21,93,303.84	50.32	139.78
2	Panti Minor	7050-7200	150.000	0.560	84.000	Cum	5021.30	₹ 4,21,789.20	9.68	26.88
3	Chapri Minor	1650-2450	800.000	0.540	432.000	Cum	5021.30	₹ 21,69,201.60	49.77	138.24
4	Karmari Minor	1700-2200	500.000	0.536	268.000	Cum	5021.30	₹ 13,45,708.40	30.87	85.76
5	Mirzapur Minor	2900-3950	1050.000	0.520	546.000	Cum	5021.30	₹ 27,41,629.80	62.90	174.72
6	Sendhokhap Minor	2250-2450	200.000	0.530	106.000	Cum	5021.30	₹ 5,32,257.80	12.21	33.92
	Total				***1872.80***			***₹ 94,03,890.64***	***215.75***	***599.30***
5	**Carriage of materials(As per Bihar SOR 2025)**									
	Coarse Sand (30 Km lead)				599.296	Cum	**1075.00**	₹ 6,44,243.20		
	Cement (30 km lead)				215.747	MT	**742.00**	₹ 1,60,083.95		
	Brick (30 km lead)				936400.00	No.	**3.18**	₹ 29,77,752.00		
	Carriage of materials Total (In Rs.)							**₹ 37,82,079.15**		
	SUB TOTAL (In Rs.)							**₹ 1,31,85,969.79**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	599.30	Cum		**584.64**	350372.41	35037.24			
	Total						**₹ 35,037.24**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF RUIR BRANCH CANAL			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	NEW FALL (0.610 m)	0.400	₹ 0.00
2	FALL (0.610 M)	0.820	₹ 0.00
3	BRIDGE	1.325	₹ 12,969.81
4	BRIDGE / FALL (0.915 M)	2.060	₹ 13,549.77
5	FALL (1.220 M) / HR PANTI MR.	2.720	₹ 10,967.35
6	FALL (0.610 M)	3.630	₹ 1,10,893.83
7	BRIDGE	4.620	₹ 1,79,228.07
8	HR FOR CHAPRI MR.	6.060	₹ 26,172.09
9	BRIDGE	6.620	₹ 96,941.08
10	FALL (1.220 M) / CR+HR FOR BISHUNPUR SUB-DY.	7.220	₹ 77,337.40
11	CULVERT / FALL (1.070 M)	7.530	₹ 0.00
12	CULVERT / FALL (0.610 M)	7.870	₹ 2,29,342.47
13	FALL (1.220 M)	8.070	₹ 1,04,813.36
14	BRIDGE / FALL (1.676 M)	8.410	₹ 81,213.60
15	HR FOR KARMARI MR.	8.650	₹ 7,885.28
16	BRIDGE / FALL (0.457 M)	8.950	₹ 52,593.49
17	BRIDGE	9.450	₹ 15,961.37
18	FALL (0.915 M)	9.650	₹ 0.00
19	BRIDGE / FALL (0.610 M)	10.010	₹ 2,88,894.56
20	FALL (1.067 M)	11.030	₹ 1,57,578.85
21	HR FOR PROPOSED MR.-1 / FALL 0.914 M	11.760	₹ 0.00
22	BRIDGE / FALL (1.220 M)	12.870	₹ 1,48,966.90
23	FALL (1.067 M)	13.310	₹ 2,03,246.61
24	BRIDGE	14.630	₹ 2,03,246.61
25	BRIDGE	14.900	₹ 8,763.17
26	FALL (0.305 M)	15.850	₹ 3,66,947.95
27	FALL (1.830 M) / HR MIRZAPUR MR.	16.870	₹ 17,834.41
28	BRIDGE / PIER-1 NO.	17.710	₹ 53,757.58
29	NEW FALL (0.305 m)	18.325	₹ 0.00
30	AQUEDUCT	19.120	₹ 0.00
31	BRIDGE	19.875	₹ 0.00
32	BRIDGE	21.015	₹ 0.00
33	BRIDGE /FALL (0.457 M)	21.720	₹ 51,739.31
34	BRIDGE	22.910	₹ 21,093.19
35	HR FOR PROPOSED MR.-5	23.390	₹ 0.00
36	CULVERT / HR FOR JASOEA MR.	23.419	₹ 17,834.41
37	FALL (0.915 M)	23.700	₹ 0.00
38	CULVERT / FALL (0.915 M)	24.400	₹ 1,09,571.70
39	HR FOR PROPOSED MR.-6	25.200	₹ 0.00

40	HR FOR SENDHOKHAP MR.	25.470	₹ 17,834.41
41	FALL (1.680 M) / BRIDGE	26.120	₹ 8,093.47
42	BRIDGE / FALL (1.524M)	27.340	₹ 4,103.13
43	BRIDGE / FALL (1.220 M)	28.170	₹ 43,515.23
44	CROSS DRAINAGE	28.955	₹ 0.00
45	BRIDGE	29.420	₹ 56,390.20
Total In Rs.			**₹ 27,99,280.67**
Total In Lakhs.			**₹ 27.99**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF PANTI MR.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (1.524 M)	0.890	₹ 49,078.16
2	FALL (1.220 M)	1.400	₹ 46,008.13
3	NEW FALL (0.457 M)	1.800	₹ 0.00
4	FALL (1.524 M)	2.075	₹ 56,448.35
5	NEW FALL (0.914 M)	2.550	₹ 0.00
6	FALL (0.610 M)	2.745	₹ 20,406.15
7	NEW FALL (1.067 M)	3.000	₹ 0.00
8	FALL (0.914 M)	3.200	₹ 21,773.70
9	FALL (0.914 M)	3.810	₹ 0.00
10	FALL (0.762 M)	4.200	₹ 19,375.12
11	FALL (0.914 M)	5.300	₹ 0.00
12	FALL (1.067 M)	5.490	₹ 21,013.60
13	FALL (1.220 M)	5.850	₹ 9,320.56
14	FALL (1.524 M)	6.700	₹ 21,178.73
Total In Rs.			**₹ 2,64,602.52**
Total In Lakhs.			**₹ 2.65**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF CHAPRI MR.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	NEW FALL (0.457 m)	0.000	₹ 0.00
2	CULVERT	0.290	₹ 0.00
3	BRIDGE	0.630	₹ 4,853.93
4	FALL (0.915 M)	0.760	₹ 18,705.04
5	FALL (1.828 M)	1.340	₹ 11,701.58
6	FALL (0.914 M)	1.500	₹ 0.00
7	BRIDGE	1.595	₹ 25,741.53
8	NEW FALL (1.220 M)	1.850	₹ 0.00
9	PIPE CULVERT	1.900	₹ 15,395.25
10	FALL (0.914 M)	2.200	₹ 0.00
Total In Rs.			**₹ 76,397.34**
Total In Lakhs.			**₹ 0.76**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF BISHUNPUR SUB-DY			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	HR/ FALL (0.305 M)	0.000	₹ 0.00
2	BRIDGE	0.080	₹ 18,635.42
3	RAILWAY BRIDGE	0.210	₹ 1,770.66
4	FALL (1.524 M) / BRIDGE	0.500	₹ 17,238.18
5	FALL (1.524 M)	0.930	₹ 12,765.61
6	HR PROPOSED MR.-4	0.990	₹ 0.00
7	BRIDGE	2.230	₹ 51,073.88
8	FALL (0.915 M)	2.550	₹ 63,887.08
9	BRIDGE	3.400	₹ 60,574.73
10	BRIDGE	3.970	₹ 0.00
11	BRIDGE	4.030	₹ 52,784.71
12	BRIDGE / FALL (1.524 M)	4.550	₹ 1,31,771.53
13	HR FOR TETRIA MR.	5.363	₹ 14,267.53
14	FALL (0.610 M)	5.400	₹ 59,481.26
15	BRIDGE / FALL (1.830 M)	5.880	₹ 92,952.73
16	BRIDGE	6.390	₹ 43,624.60
17	FALL (1.220 M)	6.670	₹ 19,117.21
18	BRIDGE / FALL (1.372 M)	6.970	₹ 56,754.19
19	HR PROPOSED MR.-7	7.380	₹ 0.00
20	FALL (1.830 M)	7.870	₹ 33,023.35
21	BRIDGE / FALL (0.914 M)	8.320	₹ 22,633.17
22	HR PROPOSED MR.-2	9.360	₹ 0.00
23	BRIDGE / FALL (0.990 M)	9.460	₹ 48,762.32
24	BRIDGE / FALL (0.915 M)	10.140	₹ 48,762.32
25	BRIDGE	10.600	₹ 44,025.67
26	FALL (0.305 M)	10.900	₹ 41,169.36
27	BRIDGE / FALL (1.067 M)	11.500	₹ 29,189.36
28	HR PROPOSED MR.-3	11.760	₹ 0.00
29	FALL (0.914 M)	12.300	₹ 21,214.57
30	BRIDGE	13.830	₹ 906.99
Total In Rs.			**₹ 9,86,386.44**
Total In Lakhs.			**₹ 9.86**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF TETRIA MR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	PIPE CULVERT / FALL (1.067 M)	0.030	₹ 6,398.46
2	PIPE CULVERT / FALL (1.070 M)	0.640	₹ 6,924.67
3	CULVERT	1.030	₹ 0.00
4	PIPE CULVERT / FALL (0.915 M)	1.220	₹ 0.00
5	PIPE CULVERT / FALL (1.067 M)	2.060	₹ 12,829.50
6	PIPE CULVERT / FALL (0.762 M)	2.710	₹ 1,534.57
7	PIPE CULVERT	2.890	₹ 0.00
Total In Rs.			**₹ 27,687.20**
Total In Lakhs.			**₹ 0.28**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KARMARI MR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	PIPE CULVERT	0.310	₹ 16,144.89
2	PIPE CULVERT	0.635	₹ 0.00
3	FALL (0.914 M)	1.050	₹ 5,330.34
4	PIPE CULVERT	1.270	₹ 21,300.65
5	PIPE CULVERT	1.900	₹ 0.00
Total In Rs.			**₹ 42,775.88**
Total In Lakhs.			**₹ 0.43**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF MIRZAPUR MR.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.457 M)	0.000	₹ 0.00
2	FALL (0.610 M)	0.330	₹ 9,296.55
3	FALL (0.914 M)	0.990	₹ 12,496.03
4	CULVERT	1.090	₹ 29,189.36
5	PIPE CULVERT	1.400	₹ 9,826.81
6	PIPE CULVERT / FALL (0.762M)	1.770	₹ 25,505.44
7	FALL (1.372 M)	2.260	₹ 3,441.64
8	CULVERT	2.560	₹ 29,189.36
9	PIPE CULVERT / FALL (0.610 M)	2.900	₹ 1,416.53
10	PIPE CULVERT / FALL (0.610 M)	3.120	₹ 0.00
11	CULVERT	3.315	₹ 13,195.03
12	CULVERT	3.655	₹ 14,225.78
13	PIPE CULVERT	3.770	₹ 53,723.40
Total In Rs.			**₹ 2,01,505.94**
Total In Lakhs.			**₹ 2.02**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF JASOEA MR.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	PIPE CULVERT	0.110	₹ 0.00
2	FALL (0.610 M)	0.150	₹ 0.00
3	NEW FALL (1.220 M) / CULVERT	0.550	₹ 0.00
4	FALL (0.457 M)	1.050	₹ 0.00
5	FALL (0.762 M)	1.250	₹ 26,628.97
6	NEW FALL (1.524 M)	1.700	₹ 0.00
7	PIPE CULVERT	2.020	₹ 16,144.89
8	FALL (0.610 M)	2.150	₹ 0.00
9	NEW FALL (0.914 M)	2.350	₹ 0.00
Total In Rs.			**₹ 42,773.86**
Total In Lakhs.			**₹ 0.43**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SENDHOKHAP MR.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	CULVERT/ FALL (0.610 M)	0.260	₹ 20,338.03
2	FALL (0.914 M)	0.540	₹ 9,370.55
3	CULVERT/ FALL (0.457 M)	0.825	₹ 25,623.48
4	PIPE CULVERT/ FALL (0.914 M)	1.030	₹ 0.00
5	PIPE CULVERT	1.560	₹ 6,388.49
6	FALL (0.610 M)	1.600	₹ 0.00
7	FALL (0.610 M)	1.700	₹ 10,284.88
8	PIPE CULVERT / FALL (1.22 M)	2.060	₹ 0.00
Total In Rs.			**₹ 72,005.43**
Total In Lakhs.			**₹ 0.72**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		42.000	₹ 2,18,82,779.10
Total In Rs.			₹ 2,18,82,779.10
Total In Lakhs.			₹ 218.83

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF RUIR 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 FALL (Ch.-0.820 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR BRIDGE (Ch.1.325 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.	0.65	Cum	**5021.30**	3248.47	0.07	0.21	
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.	7.332	Sqm	**340.20**	2494.33	7.602	0.107	
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.	2.588	Sqm	**63.20**	163.55	0.004		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.314	Cum	**1075.00**	337.62			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.680	MT	**742.00**	5698.70			
		Brick (30 km lead)	323.00	No.	**3.18**	1027.14			
		TOTAL (In Rs.)				**12969.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.31	Cum	**584.64**	183.62	18.36		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**18.36**		
AOC FOR BRIDGE/FALL (Ch.2.060 Km)									
1	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.	1.62	Cum	**6381.70**	10338.35	0.52	0.73	1.46
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.729	Cum	**1075.00**	783.68			
		Coarse Aggregates (60 Km lead)	1.458	Cum	**1398.00**	2038.28			
		Cement (30 km lead)	0.525	MT	**742.00**	389.46			
		TOTAL (In Rs.)				**13549.77**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	426.20	42.62		
		Coarse Aggregate	1.46	Cum	**944.26**	1376.73	137.67		
		Total					**180.29**		
AOC FOR FALL/HR PANTI MR (Ch.2.720 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.	4.400	Cum	**2492.58**	10967.35			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**10967.35**			
		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**		

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.3.630 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.	44.490	Cum	**2492.58**	110893.83			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**110893.83**			
		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.4.620 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	5.8.9	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.	0.329	Cum	**2492.58**	820.52			
3	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.	5.52	Cum	**5021.30**	27717.58	0.64	1.77	
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.	50.160	Sqm	**340.20**	17064.43	52.006	0.732	
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.	7.200	Sqm	**63.20**	455.04	0.011		
6	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.	8.010	Cum	**8151.40**	65293.89	4.54	3.12	6.33
7		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	5.623	Cum	**1075.00**	6044.39			
		Coarse Aggregates (60 Km lead)	6.328	Cum	**1398.00**	8846.56			
		Cement (30 km lead)	57.194	MT	**742.00**	42438.20			
		Brick (30 km lead)	2760.00	No.	**3.18**	8776.80			
		TOTAL (In Rs.)				**179228.07**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.62	Cum	**584.64**	3287.25	328.73		
		Coarse Aggregate	6.33	Cum	**944.26**	5975.29	597.53		
		Total					**926.25**		
		AOC FOR HR CHAPRI MR (Ch.6.060 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.	10.500	Cum	**2492.58**	26172.09			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**26172.09**			
		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 BRIDGE (Ch.6.620 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.	0.470	Cum	**2492.58**	1172.34	0.00		
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.	5.52	Cum	**5021.30**	27717.58	0.64	1.77	
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.	50.160	Sqm	**340.20**	17064.43	52.006	0.732	
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.	7.200	Sqm	**63.20**	455.04	0.01		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	2.499	Cum	**1075.00**	2686.14			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	52.653	MT	**742.00**	39068.75			
		Brick (30 km lead)	2760.00	No.	**3.18**	8776.80			
		TOTAL (In Rs.)				**96941.08**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.50	Cum	**584.64**	1460.86	146.09		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**146.09**		
		AOC FOR FALL/CR+HR FOR BISHUNPUR SUB DY (Ch.7.220 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.	31.027	Cum	**2492.58**	77337.40			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**77337.40**			
		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 CULVERT/FALL (Ch.7.530 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR CULVERT/FALL (Ch.7.870 Km)							
1	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.	27.42	Cum	**6381.70**	174986.21	8.88	12.34	24.68
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	12.339	Cum	**1075.00**	13264.43			
		Coarse Aggregates (60 Km lead)	24.678	Cum	**1398.00**	34499.84			
		Cement (30 km lead)	8.884	MT	**742.00**	6591.99			
		TOTAL (In Rs.)				**229342.47**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	12.34	Cum	**584.64**	7213.87	721.39		
		Coarse Aggregate	24.68	Cum	**944.26**	23302.45	2330.24		
		Total					**3051.63**		
		AOC FOR FALL (Ch.8.070 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.	42.031	Cum	**2492.58**	104766.58	0.06		
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 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 (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.063	MT	**742.00**	46.78			
		TOTAL (In Rs.)				**104813.36**			
		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 BRIDGE/FALL (Ch.8.410 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.	32.568	Cum	**2492.58**	81177.35	0.05		
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.049	MT	**742.00**	36.25			
		TOTAL (In Rs.)				**81213.60**			
		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**		
		AOC FOR HR KARMARI MR (Ch.8.650 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.	3.164	Cum	**2492.58**	7885.28			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**7885.28**			
		AOC FOR BRIDGE/FALL (Ch.8.950 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.	21.100	Cum	**2492.58**	52593.49			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**52593.49**			
		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.9.450 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.	0.92	Cum	**5021.30**	4619.60	0.11	0.29	
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.	8.360	Sqm	**340.20**	2844.07	8.668	0.122	
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.	1.200	Sqm	**63.20**	75.84	0.00		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.416	Cum	**1075.00**	447.69			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	8.775	MT	**742.00**	6511.37			
		Brick (30 km lead)	460.00	No.	**3.18**	1462.80			
		TOTAL (In Rs.)				**15961.37**			

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)
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.42	Cum	**584.64**	243.48	24.35		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**24.35**		
		AOC FOR FALL (Ch.9.650 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL/CR+HR FOR FALL/BRIDGE (Ch.10.010 Km)							
1	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.	34.54	Cum	**6381.70**	220423.92	11.19	15.54	31.09
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	15.543	Cum	**1075.00**	16708.73			
		Coarse Aggregates (60 Km lead)	31.086	Cum	**1398.00**	43458.23			
		Cement (30 km lead)	11.191	MT	**742.00**	8303.69			
		TOTAL (In Rs.)				**288894.56**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	15.54	Cum	**584.64**	9087.06	908.71		
		Coarse Aggregate	31.09	Cum	**944.26**	29353.27	2935.33		
		Total					**3844.03**		
		AOC FOR FALL/CR+HR FOR FALL (Ch.11.030 Km)							
1	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.	18.84	Cum	**6381.70**	120231.23	6.10	8.48	16.96
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	8.478	Cum	**1075.00**	9113.85			
		Coarse Aggregates (60 Km lead)	16.956	Cum	**1398.00**	23704.49			
		Cement (30 km lead)	6.104	MT	**742.00**	4529.29			
		TOTAL (In Rs.)				**157578.85**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	8.48	Cum	**584.64**	4956.58	495.66		
		Coarse Aggregate	16.96	Cum	**944.26**	16010.87	1601.09		
		Total					**2096.75**		
		AOC FOR FALL (Ch.11.760 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL/BRIDGE (Ch.12.870 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.	100.454	Sqm	**340.20**	34174.51	104.151	1.467	
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.	6.096	Sqm	**63.20**	385.27	0.01		
3	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.	1.96	Cum	**8151.40**	16016.68	22.28	0.77	1.55
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	2.233	Cum	**1075.00**	2400.41			
		Coarse Aggregates (60 Km lead)	1.552	Cum	**1398.00**	2170.07			
		Cement (30 km lead)	126.442	MT	**742.00**	93819.95			
		TOTAL (In Rs.)				**148966.90**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.23	Cum	**584.64**	1305.47	130.55		
		Coarse Aggregate	1.55	Cum	**944.26**	1465.75	146.57		
		Total					**277.12**		

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)
		AOC FOR FALL (Ch.13.310 Km)							
1	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.	24.30	Cum	**6381.70**	155075.31	7.87	10.94	21.87
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	10.935	Cum	**1075.00**	11755.13			
		Coarse Aggregates (60 Km lead)	21.870	Cum	**1398.00**	30574.26			
		Cement (30 km lead)	7.873	MT	**742.00**	5841.91			
		TOTAL (In Rs.)				**203246.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	10.94	Cum	**584.64**	6393.04	639.30		
		Coarse Aggregate	21.87	Cum	**944.26**	20650.97	2065.10		
		Total					**2704.40**		
		AOC FOR BRIDGE (Ch.14.630 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.	13.320	Sqm	**340.20**	4531.38	13.810	0.194	
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.	2.316	Sqm	**63.20**	146.40	0.00		
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.194	Cum	**1075.00**	209.05			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	13.813	MT	**742.00**	10249.54			
		TOTAL (In Rs.)				**15136.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.19	Cum	**584.64**	113.69	11.37		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**11.37**		
		AOC FOR BRIDGE (Ch.14.900 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.	7.711	Sqm	**340.20**	2623.43	7.995	0.113	
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.	1.341	Sqm	**63.20**	84.76	0.00		
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.113	Cum	**1075.00**	121.03			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.997	MT	**742.00**	5933.95			
		TOTAL (In Rs.)				**8763.17**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.11	Cum	**584.64**	65.82	6.58		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**6.58**		
		AOC FOR FALL (Ch.15.850 Km)							
1	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.	43.87	Cum	**6381.70**	279977.94	14.21	19.74	39.48
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	19.742	Cum	**1075.00**	21223.08			
		Coarse Aggregates (60 Km lead)	39.485	Cum	**1398.00**	55199.75			
		Cement (30 km lead)	14.215	MT	**742.00**	10547.18			
		TOTAL (In Rs.)				**366947.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	19.74	Cum	**584.64**	11542.20	1154.22		

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 Aggregate	39.48	Cum	**944.26**	37283.92	3728.39		
		Total					**4882.61**		
		AOC FOR FALL/HR MIRZAPUR MR (Ch.16.870 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.	7.155	Cum	**2492.58**	17834.41			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**17834.41**			
		AOC FOR BRIDGE (Ch.17.710 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.	3.10	Cum	**5021.30**	15558.98	0.36	0.99	
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.	28.157	Sqm	**340.20**	9578.95	29.193	0.411	
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.	4.042	Sqm	**63.20**	255.43	0.01		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.403	Cum	**1075.00**	1507.84			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	29.556	MT	**742.00**	21930.56			
		Brick (30 km lead)	1549.00	No.	**3.18**	4925.82			
		TOTAL (In Rs.)				**53757.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.40	Cum	**584.64**	820.04	82.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**82.00**		
		AOC FOR AQUEDUCT (Ch.19.120 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR BRIDGE (Ch.19.875 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR BRIDGE (Ch. 21.015 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR BRIDGE/FALL (Ch.21.720 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.	0.575	Cum	**2492.58**	1433.23			
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.	1.84	Cum	**680.10**	1251.06	0.21	0.59	
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.	16.716	Sqm	**340.20**	5686.69	17.331	0.244	
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.	2.399	Sqm	**63.20**	151.64	0.004		

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)
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.	2.490	Cum	**6914.20**	17215.30	1.03	1.07	2.14
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.	7.359	Sqm	**578.60**	4257.90			
7		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.903	Cum	**1075.00**	2046.08			
		Coarse Aggregates (60 Km lead)	2.141	Cum	**1398.00**	2993.49			
		Cement (30 km lead)	18.573	MT	**742.00**	13781.49			
		Brick (30 km lead)	919.00	No.	**3.18**	2922.42			
		TOTAL (In Rs.)				**51739.31**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.90	Cum	**584.64**	1112.76	111.28		
		Coarse Aggregate	2.14	Cum	**944.26**	2021.91	202.19		
		Total					**313.47**		
		AOC FOR BRIDGE (Ch.22.910 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.	0.15	Cum	**5021.30**	753.20	0.02	0.05	
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.	1.600	Sqm	**340.20**	544.32	1.659	0.023	
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.	0.600	Sqm	**63.20**	37.92	0.00		
4	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.	1.803	Cum	**8151.40**	14693.32	1.02	0.70	1.42
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.774	Cum	**1075.00**	832.43			
		Coarse Aggregates (60 Km lead)	1.424	Cum	**1398.00**	1990.77			
		Cement (30 km lead)	2.699	MT	**742.00**	2002.74			
		Brick (30 km lead)	75.00	No.	**3.18**	238.50			
		TOTAL (In Rs.)				**21093.19**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.77	Cum	**584.64**	452.72	45.27		
		Coarse Aggregate	1.42	Cum	**944.26**	1344.64	134.46		
		Total					**179.74**		
		AOC FOR CULVERT/HR FOR JASOEA MR (Ch. 23.419 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.	7.155	Cum	**2492.58**	17834.41			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**17834.41**			
		AOC FOR FALL (Ch. 23.700 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR CULVERT/FALL (Ch.24.400 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	5.3.4	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.	13.10	Cum	**6381.70**	83602.21	4.24	5.90	11.79
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	5.895	Cum	**1075.00**	6337.27			
		Coarse Aggregates (60 Km lead)	11.790	Cum	**1398.00**	16482.80			
		Cement (30 km lead)	4.244	MT	**742.00**	3149.42			
TOTAL (In Rs.)						**109571.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.90	Cum	**584.64**	3446.53	344.65		

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 Aggregate	11.79	Cum	**944.26**	11133.08	1113.31		
		Total					**1457.96**		
		AOC FOR HR OF SENDHOKHAP MR (Ch. 25.470 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.	7.155	Cum	**2492.58**	17834.41			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**17834.41**			
		AOC FOR BRIDGE/FALL (Ch.26.120 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.	0.045	Cum	**2492.58**	112.79			
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.	0.46	Cum	**5021.30**	2309.80	0.05	0.15	
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.	4.180	Sqm	**340.20**	1422.04	4.334	0.061	
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.	0.600	Sqm	**63.20**	37.92	0.00		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.208	Cum	**1075.00**	223.85			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.388	MT	**742.00**	3255.69			
		Brick (30 km lead)	230.00	No.	**3.18**	731.40			
		TOTAL (In Rs.)				**8093.47**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.21	Cum	**584.64**	121.74	12.17		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**12.17**		
		AOC FOR BRIDGE/FALL (Ch.27.340 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.	0.045	Cum	**2492.58**	112.79			
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.	0.23	Cum	**5021.30**	1154.90	0.03	0.07	
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.	2.090	Sqm	**340.20**	711.02	2.167	0.031	
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.	0.300	Sqm	**63.20**	18.96	0.00		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.104	Cum	**1075.00**	111.92			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.194	MT	**742.00**	1627.84			
		Brick (30 km lead)	115.00	No.	**3.18**	365.70			
		TOTAL (In Rs.)				**4103.13**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.10	Cum	**584.64**	60.87	6.09		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**6.09**		

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 BRIDGE/FALL (Ch.28.170 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.	140.000	Sqm	**11.80**	1652.61			
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.	1.53	Cum	**5021.30**	7673.89	0.18	0.49	
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.	13.887	Sqm	**340.20**	4724.46	14.398	0.203	
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.	1.993	Sqm	**63.20**	125.98	0.003		
5	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.	2.16	Cum	**6381.70**	13784.47	0.70	0.97	1.94
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.664	Cum	**1075.00**	1788.59			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	15.277	MT	**742.00**	11335.71			
		Brick (30 km lead)	764.00	No.	**3.18**	2429.52			
TOTAL (In Rs.)						**43515.23**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.66	Cum	**584.64**	972.72	97.27		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**97.27**		
AOC FOR BRIDGE (Ch.29.420 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	5.4.6	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.	3.17	Cum	**5021.30**	15911.00	0.37	1.01	
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.	28.794	Sqm	**340.20**	9795.67	29.853	0.420	
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.	4.133	Sqm	**63.20**	261.21	0.01		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.434	Cum	**1075.00**	1541.95			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	30.225	MT	**742.00**	22426.72			
		Brick (30 km lead)	1584.00	No.	**3.18**	5037.12			
TOTAL (In Rs.)						**56390.20**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.43	Cum	**584.64**	838.59	83.86		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**83.86**		

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 PANTI MR.									
AOC FOR FALL (Ch.-0.890 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	5.3.4	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.	5.71	Cum	**6381.70**	36455.46	1.85	2.57	5.14
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	2.571	Cum	**1075.00**	2763.42			
		Coarse Aggregates (60 Km lead)	5.141	Cum	**1398.00**	7187.47			
		Cement (30 km lead)	1.851	MT	**742.00**	1373.33			
TOTAL (In Rs.)						**49078.16**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.57	Cum	**584.64**	1502.89	150.29		
		Coarse Aggregate	5.14	Cum	**944.26**	4854.68	485.47		
		Total					**635.76**		
AOC FOR FALL (Ch.1.400 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.	18.458	Cum	**2492.58**	46008.13			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**46008.13**			
		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.2.075 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.	22.647	Cum	**2492.58**	56448.35			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**56448.35**			
		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 FALL (Ch.2.745 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.	8.187	Cum	**2492.58**	20406.15			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**20406.15**			
		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.3.200 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.	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	5.3.4	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.	2.45	Cum	**6381.70**	15622.40	0.79	1.10	2.20
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.102	Cum	**1075.00**	1184.22			
		Coarse Aggregates (60 Km lead)	2.203	Cum	**1398.00**	3080.07			
		Cement (30 km lead)	0.793	MT	**742.00**	588.52			
		TOTAL (In Rs.)				**21773.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.10	Cum	**584.64**	644.04	64.40		
		Coarse Aggregate	2.20	Cum	**944.26**	2080.39	208.04		
		Total					**272.44**		
		AOC FOR FALL (Ch. 3.810 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch. 4.200 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.	7.773	Cum	**2492.58**	19375.12			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**19375.12**			
		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 FALL (Ch. 5.490 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.	8.430	Cum	**2492.58**	21013.60			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**21013.60**			
		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**		

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. 5.850 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.	120.000	Sqm	**11.80**	1416.53			
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.	0.95	Cum	**6381.70**	6030.71	0.31	0.43	0.85
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.425	Cum	**1075.00**	457.14			
		Coarse Aggregates (60 Km lead)	0.851	Cum	**1398.00**	1189.00			
		Cement (30 km lead)	0.306	MT	**742.00**	227.19			
TOTAL (In Rs.)						**9320.56**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.43	Cum	**584.64**	248.62	24.86		
		Coarse Aggregate	0.85	Cum	**944.26**	803.09	80.31		
		Total					**105.17**		
AOC FOR FALL (Ch. 6.700 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.	130.000	Sqm	**11.80**	1534.57			
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.	2.35	Cum	**6381.70**	14988.32	0.76	1.06	2.11
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.057	Cum	**1075.00**	1136.15			
		Coarse Aggregates (60 Km lead)	2.114	Cum	**1398.00**	2955.06			
		Cement (30 km lead)	0.761	MT	**742.00**	564.63			
TOTAL (In Rs.)						**21178.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.06	Cum	**584.64**	617.90	61.79		
		Coarse Aggregate	2.11	Cum	**944.26**	1995.95	199.60		
		Total					**261.39**		

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 CHAPRI MINOR									
AOC FOR CULVERT (Ch.-0.290 Km)									
1		**Structure requires no repair work.**							
AOC FOR BRIDGE (Ch.-0.630 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	5.3.4	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.	0.44	Cum	**6381.70**	2802.84	0.14	0.20	0.40
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.198	Cum	**1075.00**	212.46			
		Coarse Aggregates (60 Km lead)	0.395	Cum	**1398.00**	552.60			
		Cement (30 km lead)	0.142	MT	**742.00**	105.59			
TOTAL (In Rs.)						**4853.93**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.20	Cum	**584.64**	115.55	11.55		
		Coarse Aggregate	0.40	Cum	**944.26**	373.25	37.32		
		Total					**48.88**		
AOC FOR FALL (Ch.-0.760 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	5.3.4	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.	2.07	Cum	**6381.70**	13190.98	0.67	0.93	1.86
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.930	Cum	**1075.00**	999.91			
		Coarse Aggregates (60 Km lead)	1.860	Cum	**1398.00**	2600.70			
		Cement (30 km lead)	0.670	MT	**742.00**	496.92			
TOTAL (In Rs.)						**18705.04**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.93	Cum	**584.64**	543.80	54.38		
		Coarse Aggregate	1.86	Cum	**944.26**	1756.61	175.66		
		Total					**230.04**		
AOC FOR FALL (Ch.-1.340 Km)									
1	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.	1.40	Cum	**6381.70**	8928.20	0.45	0.63	1.26
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.630	Cum	**1075.00**	676.78			
		Coarse Aggregates (60 Km lead)	1.259	Cum	**1398.00**	1760.26			
		Cement (30 km lead)	0.453	MT	**742.00**	336.34			
TOTAL (In Rs.)						**11701.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.63	Cum	**584.64**	368.07	36.81		
		Coarse Aggregate	1.26	Cum	**944.26**	1188.94	118.89		
		Total					**155.70**		
AOC FOR FALL (Ch.-1.500 Km)									
1		**Structure requires no repair work.**							
AOC FOR BRIDGE (Ch.-1.595 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.	120.000	Sqm	**11.80**	1416.53			

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.	1.40	Cum	**5021.30**	7040.26	0.16	0.45	
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.	12.741	Sqm	**340.20**	4334.37	13.209	0.186	
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.	1.829	Sqm	**63.20**	115.58	0.00		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.635	Cum	**1075.00**	682.28			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	13.374	MT	**742.00**	9923.33			
		Brick (30 km lead)	701.00	No.	**3.18**	2229.18			
		TOTAL (In Rs.)				**25741.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.63	Cum	**584.64**	371.06	37.11		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**37.11**		
		AOC FOR PIPE CULVERT (Ch.-1.900 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.	0.704	Cum	**2492.58**	1754.28			
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.	0.46	Cum	**5021.30**	2309.80	0.05	0.15	
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.	4.180	Sqm	**340.20**	1422.04	4.334	0.061	
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.	0.600	Sqm	**63.20**	37.92	0.00		
5	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.	0.68	Cum	**6381.70**	4318.75	0.22	0.30	0.61
6		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.513	Cum	**1075.00**	551.22			
		Coarse Aggregates (60 Km lead)	0.609	Cum	**1398.00**	851.47			
		Cement (30 km lead)	4.607	MT	**742.00**	3418.38			
		Brick (30 km lead)	230.00	No.	**3.18**	731.40			
		TOTAL (In Rs.)				**15395.25**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.51	Cum	**584.64**	299.78	29.98		
		Coarse Aggregate	0.61	Cum	**944.26**	575.12	57.51		
		Total					**87.49**		
		AOC FOR FALL (Ch.-2.200 Km)							
1		**Structure requires no repair work.**							

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 BISHUNPUR SUB DY									
AOC FOR BRIDGE (Ch.-0.080 Km)									
1	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.	0.50	Cum	**6381.70**	3190.85	0.16	0.23	0.45
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.	12.741	Sqm	**340.20**	4334.37	13.209	0.186	
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.	1.829	Sqm	**63.20**	115.58	0.00		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.411	Cum	**1075.00**	441.84			
		Coarse Aggregates (60 Km lead)	0.450	Cum	**1398.00**	629.10			
		Cement (30 km lead)	13.374	MT	**742.00**	9923.69			
TOTAL (In Rs.)						**18635.42**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.41	Cum	**584.64**	240.29	24.03		
		Coarse Aggregate	0.45	Cum	**944.26**	424.92	42.49		
		Total					**66.52**		
AOC FOR RAILWAY BRIDGE (Ch.-0.210 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.	150.000	Sqm	**11.80**	1770.66			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**1770.66**			
		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.-0.500 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.	100.000	Sqm	**11.80**	1180.44			
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.	13.499	Sqm	**340.20**	4592.50	13.996	0.197	
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.	13.499	Sqm	**63.20**	853.16	0.02		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.197	Cum	**1075.00**	211.87			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	14.016	MT	**742.00**	10400.21			
TOTAL (In Rs.)						**17238.18**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.20	Cum	**584.64**	115.23	11.52		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**11.52**		
AOC FOR FALL (Ch.-0.930 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.	9.144	Sqm	**340.20**	3110.79	9.480	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.	9.144	Sqm	**63.20**	577.90	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(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.134	Cum	**1075.00**	143.52			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	9.494	MT	**742.00**	7044.71			
		TOTAL (In Rs.)				**12765.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.13	Cum	**584.64**	78.05	7.81		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**7.81**		
		AOC FOR BRIDGE (Ch.-2.230 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.	0.289	Cum	**2492.58**	721.35			
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	**5021.30**	14573.35	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.	26.373	Sqm	**340.20**	8972.14	27.344	0.385	
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.	3.786	Sqm	**63.20**	239.25	0.01		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.314	Cum	**1075.00**	1412.32			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	27.684	MT	**742.00**	20541.29			
		Brick (30 km lead)	1451.00	No.	**3.18**	4614.18			
		TOTAL (In Rs.)				**51073.88**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.31	Cum	**584.64**	768.09	76.81		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**76.81**		
		AOC FOR FALL (Ch.-2.550 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	5.3.4	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.	7.28	Cum	**6381.70**	46446.01	2.36	3.28	6.55
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.	2.76	Sqm	**578.60**	1596.94			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	3.275	Cum	**1075.00**	**3520.73**			
		Coarse Aggregates (60 Km lead)	6.550	Cum	**1398.00**	**9157.18**			
		Cement (30 km lead)	2.358	MT	**742.00**	**1749.69**			
		TOTAL (In Rs.)				**63887.08**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.28	Cum	**584.64**	1914.75	191.48		
		Coarse Aggregate	6.55	Cum	**944.26**	6185.09	618.51		
		Total					**809.98**		
		AOC FOR BRIDGE(Ch.-3.400 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.	18.105	Sqm	**340.20**	6159.36	18.771	0.264	
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.	18.105	Sqm	**63.20**	1144.24	0.03		

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	5.3.11	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.	3.57	Cum	8151.40	29100.50	11.34	0.39	0.79
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.654	Cum	**1075.00**	703.41			
		Coarse Aggregates (60 Km lead)	0.790	Cum	**1398.00**	1104.42			
		Cement (30 km lead)	30.139	MT	**742.00**	22362.80			
		TOTAL (In Rs.)				**60574.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.65	Cum	**584.64**	382.55	38.26		
		Coarse Aggregate	0.79	Cum	**944.26**	745.97	74.60		
		Total					**112.85**		
		AOC FOR RAILWAY BRIDGE (Ch.-3.970 Km)							
1		**Structure requires no repair work.**							
		AOC FOR BRIDGE(Ch.-4.030 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.	3.04	Cum	**5021.30**	15277.37	0.35	0.97	
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.	27.647	Sqm	**340.20**	9405.57	28.665	0.404	
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.	3.968	Sqm	**63.20**	250.81	0.01		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.377	Cum	**1075.00**	1480.55			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	29.021	MT	**742.00**	21533.62			
		Brick (30 km lead)	1521.00	No.	**3.18**	4836.78			
		TOTAL (In Rs.)				**52784.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.38	Cum	**584.64**	805.20	80.52		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**80.52**		
		AOC FOR BRIDGE/ FALL (Ch.-4.550 Km)							
1	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.	15.75	Cum	**6381.70**	100540.48	5.10	7.09	14.18
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	7.090	Cum	**1075.00**	7621.24			
		Coarse Aggregates (60 Km lead)	14.179	Cum	**1398.00**	19822.31			
		Cement (30 km lead)	5.104	MT	**742.00**	3787.51			
		TOTAL (In Rs.)				**131771.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	7.09	Cum	**584.64**	4144.82	414.48		
		Coarse Aggregate	14.18	Cum	**944.26**	13388.71	1338.87		
		Total					**1753.35**		
		AOC FOR HR OF TETRIA MR (Ch.- 5.363 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.	5.724	Cum	**2492.58**	14267.53			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 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			
		TOTAL (In Rs.)				**14267.53**			
		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**		
		AOC FOR FALL (Ch.- 5.400 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.	120.000	Sqm	**11.80**	1416.53			
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.	10.000	Sqm	**340.20**	3402.00	10.368	0.146	
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.	10.000	Sqm	**63.20**	632.00	0.02		
4	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.	5.52	Cum	**6381.70**	35226.98	1.79	2.48	4.97
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	2.630	Cum	**1075.00**	2827.25			
		Coarse Aggregates (60 Km lead)	4.968	Cum	**1398.00**	6945.26			
		Cement (30 km lead)	12.171	MT	**742.00**	9031.24			
		TOTAL (In Rs.)				**59481.26**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.63	Cum	**584.64**	1537.60	153.76		
		Coarse Aggregate	4.97	Cum	**944.26**	4691.08	469.11		
		Total					**622.87**		
		AOC FOR BRIDGE/FALL (Ch.-5.880 Km)							
1	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.	11.11	Cum	**6381.70**	70922.09	3.60	5.00	10.00
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	5.001	Cum	**1075.00**	5376.08			
		Coarse Aggregates (60 Km lead)	10.002	Cum	**1398.00**	13982.82			
		Cement (30 km lead)	3.601	MT	**742.00**	2671.74			
		TOTAL (In Rs.)				**92952.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.00	Cum	**584.64**	2923.79	292.38		
		Coarse Aggregate	10.00	Cum	**944.26**	9444.51	944.45		
		Total					**1236.83**		
		AOC FOR BRIDGE (Ch.-6.390 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.	0.229	Cum	**2492.58**	571.80			
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	**5021.30**	12461.27	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.	22.551	Sqm	**340.20**	7671.83	23.381	0.329	
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.	3.237	Sqm	**63.20**	204.58	0.00		
5		**Carriage of materials(As per Bihar SOR 2025)**							

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 (30 Km lead)	1.123	Cum	**1075.00**	1207.64			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	23.672	MT	**742.00**	17564.29			
		Brick (30 km lead)	1240.00	No.	**3.18**	3943.20			
		TOTAL (In Rs.)				**43624.60**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.12	Cum	**584.64**	656.77	65.68		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**65.68**		
		AOC FOR FALL (Ch.-6.670 Km)							
1	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.	2.29	Cum	**6381.70**	14586.25	0.74	1.03	2.06
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.029	Cum	**1075.00**	1105.68			
		Coarse Aggregates (60 Km lead)	2.057	Cum	**1398.00**	2875.79			
		Cement (30 km lead)	0.741	MT	**742.00**	549.49			
		TOTAL (In Rs.)				**19117.21**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.03	Cum	**584.64**	601.32	60.13		
		Coarse Aggregate	2.06	Cum	**944.26**	1942.41	194.24		
		Total					**254.37**		
		AOC FOR BRIDGE/FALL (Ch.-6.970 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.	13.262	Sqm	**340.20**	4511.79	13.750	0.194	
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.	2.195	Sqm	**63.20**	138.70	0.00		
3	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.	3.90	Cum	8151.40	31752.51	11.34	0.39	0.79
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.584	Cum	**1075.00**	627.40			
		Coarse Aggregates (60 Km lead)	0.790	Cum	**1398.00**	1104.42			
		Cement (30 km lead)	25.094	MT	**742.00**	18619.38			
		TOTAL (In Rs.)				**56754.19**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.58	Cum	**584.64**	341.21	34.12		
		Coarse Aggregate	0.79	Cum	**944.26**	745.97	74.60		
		Total					**108.72**		
		AOC FOR FALL (Ch.-7.870 Km)							
1	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.	2.96	Cum	**6381.70**	18906.78	0.96	1.33	2.67
2	**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.	14.25	Sqm	**578.60**	8243.52			
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.333	Cum	**1075.00**	**1433.18**			
		Coarse Aggregates (60 Km lead)	2.666	Cum	**1398.00**	**3727.61**			
		Cement (30 km lead)	0.960	MT	**742.00**	**712.25**			
		TOTAL (In Rs.)				**33023.35**			

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)
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.33	Cum	**584.64**	779.44	77.94		
		Coarse Aggregate	2.67	Cum	**944.26**	2517.77	251.78		
		Total					**329.72**		
AOC FOR BRIDGE/FALL (Ch.-8.320 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.	0.51	Cum	**5021.30**	2540.78	0.06	0.16	
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.	4.708	Sqm	**340.20**	1601.66	4.881	0.069	
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.	9.416	Sqm	**63.20**	595.09	0.01		
5	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.	0.24	Cum	8151.40	1931.09	11.34	0.39	0.79
6		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.621	Cum	**1075.00**	667.21			
		Coarse Aggregates (60 Km lead)	0.790	Cum	**1398.00**	1104.42			
		Cement (30 km lead)	16.294	MT	**742.00**	12089.90			
		Brick (30 km lead)	253.00	No.	**3.18**	804.54			
TOTAL (In Rs.)						**22633.17**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.62	Cum	**584.64**	362.86	36.29		
		Coarse Aggregate	0.79	Cum	**944.26**	745.97	74.60		
		Total					**110.88**		
AOC FOR BRIDGE/FALL (Ch.-9.460 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			
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.	21.540	Sqm	**340.20**	7327.91	22.333	0.314	
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.	32.700	Sqm	**63.20**	2066.64	0.05		
5	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.	1.27	Cum	8151.40	10359.73	11.34	0.39	0.79
6		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.704	Cum	**1075.00**	757.32			
		Coarse Aggregates (60 Km lead)	0.790	Cum	**1398.00**	1104.42			
		Cement (30 km lead)	33.722	MT	**742.00**	25021.52			
TOTAL (In Rs.)						**48762.32**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.70	Cum	**584.64**	411.87	41.19		
		Coarse Aggregate	0.79	Cum	**944.26**	745.97	74.60		
		Total					**115.78**		
AOC FOR BRIDGE/FALL (Ch.-10.140 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.	2.48	Cum	**5021.30**	12461.27	0.29	0.79	
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.	0.792	Sqm	**340.20**	269.60	0.822	0.012	
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.	0.238	Sqm	**63.20**	15.03	0.00		
4	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.	8.01	Cum	8151.40	65293.89	11.34	0.39	0.79
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.196	Cum	**1075.00**	1285.39			
		Coarse Aggregates (60 Km lead)	0.790	Cum	**1398.00**	1104.42			
		Cement (30 km lead)	12.448	MT	**742.00**	9236.33			
		Brick (30 km lead)	1240.00	No.	**3.18**	3943.20			
		TOTAL (In Rs.)				**93609.12**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.20	Cum	**584.64**	699.06	69.91		
		Coarse Aggregate	0.79	Cum	**944.26**	745.97	74.60		
		Total					**144.50**		
		AOC FOR BRIDGE (Ch.-10.600 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.	2.54	Cum	**5021.30**	12742.88	0.29	0.81	
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.	23.061	Sqm	**340.20**	7845.20	23.909	0.337	
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.	3.310	Sqm	**63.20**	209.20	0.00		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.149	Cum	**1075.00**	1234.93			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	24.207	MT	**742.00**	17961.22			
		Brick (30 km lead)	1268.00	No.	**3.18**	4032.24			
		TOTAL (In Rs.)				**44025.67**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.15	Cum	**584.64**	671.62	67.16		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**67.16**		
		AOC FOR FALL (Ch.-10.900 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.	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.	23.074	Sqm	**340.20**	7849.64	23.923	0.337	
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.	3.312	Sqm	**63.20**	209.32	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)
4	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.	0.43	Cum	8151.40	3521.40	11.34	0.39	0.79
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.727	Cum	**1075.00**	781.39			
		Coarse Aggregates (60 Km lead)	0.790	Cum	**1398.00**	1104.42			
		Cement (30 km lead)	35.268	MT	**742.00**	26168.62			
		TOTAL (In Rs.)				**41169.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	424.96	42.50		
		Coarse Aggregate	0.79	Cum	**944.26**	745.97	74.60		
		Total					**117.09**		
		AOC FOR BRIDGE/FALL (Ch.-11.500 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.	1.68	Cum	**5021.30**	8448.32	0.19	0.54	
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.	15.289	Sqm	**340.20**	5201.24	15.851	0.223	
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.	2.195	Sqm	**63.20**	138.70	0.00		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.762	Cum	**1075.00**	818.74			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	16.049	MT	**742.00**	11907.99			
		Brick (30 km lead)	841.00	No.	**3.18**	2674.38			
		TOTAL (In Rs.)				**29189.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.76	Cum	**584.64**	445.27	44.53		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**44.53**		
		AOC FOR FALL (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.	110.000	Sqm	**11.80**	1298.48			
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.	17.556	Sqm	**340.20**	5972.55	18.202	0.256	
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.	2.520	Sqm	**63.20**	159.26	0.00		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.256	Cum	**1075.00**	275.54			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	18.206	MT	**742.00**	13508.73			
		TOTAL (In Rs.)				**21214.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.26	Cum	**584.64**	149.85	14.99		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**14.99**		
		AOC FOR BRIDGE (Ch.-13.830 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.	0.792	Sqm	**340.20**	269.60	0.822	0.012	
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.	0.238	Sqm	**63.20**	15.03	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)
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.012	Cum	**1075.00**	12.44			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.822	MT	**742.00**	609.92			
		TOTAL (In Rs.)				**906.99**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.01	Cum	**584.64**	6.76	0.68		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.68**		

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 TETRIA MR.									
AOC FOR PIPE CULVERT (Ch.-0.030 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.	150.000	Sqm	**11.80**	1770.66			
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.	0.55	Cum	**6381.70**	3530.97	0.18	0.25	0.50
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.249	Cum	**1075.00**	**267.66**			
		Coarse Aggregates (60 Km lead)	0.498	Cum	**1398.00**	**696.16**			
		Cement (30 km lead)	0.179	MT	**742.00**	**133.02**			
TOTAL (In Rs.)						**6398.46**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.25	Cum	**584.64**	145.57	14.56		
		Coarse Aggregate	0.50	Cum	**944.26**	470.21	47.02		
		Total					**61.58**		
AOC FOR PIPE CULVERT (Ch.-0.640 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.	180.000	Sqm	**11.80**	2124.79			
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.	0.57	Cum	**6381.70**	3662.27	0.19	0.26	0.52
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.258	Cum	**1075.00**	**277.61**			
		Coarse Aggregates (60 Km lead)	0.516	Cum	**1398.00**	**722.04**			
		Cement (30 km lead)	0.186	MT	**742.00**	**137.96**			
TOTAL (In Rs.)						**6924.67**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.26	Cum	**584.64**	150.98	15.10		
		Coarse Aggregate	0.52	Cum	**944.26**	487.69	48.77		
		Total					**63.87**		
AOC FOR PIPE CULVERT (Ch.-2.060 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.	170.000	Sqm	**11.80**	2006.75			
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.	1.29	Cum	**6381.70**	8257.66	0.42	0.58	1.16
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.582	Cum	**1075.00**	**625.95**			
		Coarse Aggregates (60 Km lead)	1.165	Cum	**1398.00**	**1628.06**			
		Cement (30 km lead)	0.419	MT	**742.00**	**311.08**			
TOTAL (In Rs.)						**12829.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.58	Cum	**584.64**	340.43	34.04		
		Coarse Aggregate	1.16	Cum	**944.26**	1099.65	109.97		
		Total					**144.01**		
AOC FOR PIPE CULVERT (Ch.-2.710 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			
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	**0.00**			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	**0.00**			
		Cement (30 km lead)	0.000	MT	**742.00**	**0.00**			
TOTAL (In Rs.)						**1534.57**			

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)
		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)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF KARMARI MR.									
AOC FOR PIPE CULVERT (Ch.-0.310 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	5.3.4	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.	1.42	Cum	**6381.70**	9045.45	0.46	0.64	1.28
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.	4.56	Sqm	**578.60**	2637.03			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.638	Cum	**1075.00**	**685.67**			
		Coarse Aggregates (60 Km lead)	1.276	Cum	**1398.00**	**1783.38**			
		Cement (30 km lead)	0.459	MT	**742.00**	**340.76**			
TOTAL (In Rs.)						**16144.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.64	Cum	**584.64**	372.90	37.29		
		Coarse Aggregate	1.28	Cum	**944.26**	1204.56	120.46		
		Total					**157.75**		
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.	160.000	Sqm	**11.80**	1888.70			
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.	0.41	Cum	**6381.70**	2625.94	0.13	0.19	0.37
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.185	Cum	**1075.00**	**199.05**			
		Coarse Aggregates (60 Km lead)	0.370	Cum	**1398.00**	**517.72**			
		Cement (30 km lead)	0.133	MT	**742.00**	**98.92**			
TOTAL (In Rs.)						**5330.34**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.19	Cum	**584.64**	108.26	10.83		
		Coarse Aggregate	0.37	Cum	**944.26**	349.69	34.97		
		Total					**45.79**		
AOC FOR PIPE CULVERT (Ch.-1.270 Km)									
1	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.	2.55	Cum	**6381.70**	16252.20	0.83	1.15	2.29
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.146	Cum	**1075.00**	**1231.96**			
		Coarse Aggregates (60 Km lead)	2.292	Cum	**1398.00**	**3204.24**			
		Cement (30 km lead)	0.825	MT	**742.00**	**612.24**			
TOTAL (In Rs.)						**21300.65**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.15	Cum	**584.64**	670.00	67.00		
		Coarse Aggregate	2.29	Cum	**944.26**	2164.26	216.43		
		Total					**283.43**		

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)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF MIRZAPUR MR..									
AOC FOR FALL (Ch.-0.330 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	5.3.4	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.	0.96	Cum	**6381.70**	6102.46	0.31	0.43	0.86
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.430	Cum	**1075.00**	**462.58**			
		Coarse Aggregates (60 Km lead)	0.861	Cum	**1398.00**	**1203.14**			
		Cement (30 km lead)	0.310	MT	**742.00**	**229.89**			
TOTAL (In Rs.)						**9296.55**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.43	Cum	**584.64**	251.58	25.16		
		Coarse Aggregate	0.86	Cum	**944.26**	812.65	81.26		
		Total					**106.42**		
AOC FOR FALL (Ch.-0.990 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	5.3.4	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.	1.32	Cum	**6381.70**	8453.56	0.43	0.60	1.19
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.596	Cum	**1075.00**	**640.80**			
		Coarse Aggregates (60 Km lead)	1.192	Cum	**1398.00**	**1666.68**			
		Cement (30 km lead)	0.429	MT	**742.00**	**318.46**			
TOTAL (In Rs.)						**12496.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.60	Cum	**584.64**	348.50	34.85		
		Coarse Aggregate	1.19	Cum	**944.26**	1125.74	112.57		
		Total					**147.42**		
AOC FOR CULVERT (Ch.-1.090 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.	1.68	Cum	**5021.30**	8448.32	0.19	0.54	
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.	15.289	Sqm	**340.20**	5201.24	15.851	0.223	
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.	2.195	Sqm	**63.20**	138.70	0.00		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.762	Cum	**1075.00**	818.74			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	16.049	MT	**742.00**	11907.99			
		Brick (30 km lead)	841.00	No.	**3.18**	2674.38			
TOTAL (In Rs.)						**29189.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.76	Cum	**584.64**	445.27	44.53		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**44.53**		
AOC FOR PIPE CULVERT (Ch.-1.400 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.	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	5.3.4	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.	1.02	Cum	**6381.70**	6507.04	0.33	0.46	0.92
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.459	Cum	**1075.00**	**493.25**			
		Coarse Aggregates (60 Km lead)	0.918	Cum	**1398.00**	**1282.91**			
		Cement (30 km lead)	0.330	MT	**742.00**	**245.13**			
		TOTAL (In Rs.)				**9826.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.46	Cum	**584.64**	268.26	26.83		
		Coarse Aggregate	0.92	Cum	**944.26**	866.52	86.65		
		Total					**113.48**		
		AOC FOR PIPE CULVERT/FALL (Ch.-1.770 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.	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.	1.40	Cum	**5021.30**	7040.26	0.16	0.45	
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.	12.741	Sqm	**340.20**	4334.37	13.209	0.186	
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.	1.829	Sqm	**63.20**	115.58	0.00		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.635	Cum	**1075.00**	682.28			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	13.374	MT	**742.00**	9923.33			
		Brick (30 km lead)	701.00	No.	**3.18**	2229.18			
		TOTAL (In Rs.)				**25505.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.63	Cum	**584.64**	371.06	37.11		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**37.11**		
		AOC FOR FALL(Ch.-2.260 Km)							
1	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.	0.41	Cum	**6381.70**	2625.94	0.13	0.19	0.37
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.185	Cum	**1075.00**	**199.05**			
		Coarse Aggregates (60 Km lead)	0.370	Cum	**1398.00**	**517.72**			
		Cement (30 km lead)	0.133	MT	**742.00**	**98.92**			
		TOTAL (In Rs.)				**3441.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.19	Cum	**584.64**	108.26	10.83		
		Coarse Aggregate	0.37	Cum	**944.26**	349.69	34.97		
		Total					**45.79**		
		AOC FOR PIPE CULVERT (Ch.-2.560 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.	1.68	Cum	**5021.30**	8448.32	0.19	0.54	

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.	15.289	Sqm	**340.20**	5201.24	15.851	0.223	
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.	2.195	Sqm	**63.20**	138.70	0.00		
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.762	Cum	**1075.00**	818.74			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	16.049	MT	**742.00**	11907.99			
		Brick (30 km lead)	841.00	No.	**3.18**	2674.38			
		TOTAL (In Rs.)				**29189.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.76	Cum	**584.64**	445.27	44.53		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**44.53**		
		AOC FOR PIPE CULVERT/FALL (Ch.-2.900 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.	120.000	Sqm	**11.80**	1416.53			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**1416.53**			
		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**		
		AOC FOR CULVERT /FALL (Ch.-3.120 Km)							
1		**Structure requires no repair work.**							
		AOC FOR CULVERT (Ch.-3.315 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	5.3.4	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.	0.99	Cum	**6381.70**	6302.26	0.32	0.44	0.89
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.	5.47	Sqm	**578.60**	3164.43			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.444	Cum	**1075.00**	**477.73**			
		Coarse Aggregates (60 Km lead)	0.889	Cum	**1398.00**	**1242.54**			
		Cement (30 km lead)	0.320	MT	**742.00**	**237.42**			
		TOTAL (In Rs.)				**13195.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.44	Cum	**584.64**	259.81	25.98		
		Coarse Aggregate	0.89	Cum	**944.26**	839.26	83.93		
		Total					**109.91**		
		AOC FOR CULVERT (Ch.-3.655 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.	12.540	Sqm	**340.20**	4266.11	13.001	0.183	
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.	1.800	Sqm	**63.20**	113.76	0.00		
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.183	Cum	**1075.00**	196.82			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	13.004	MT	**742.00**	9649.10			
		TOTAL (In Rs.)				**14225.78**			

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)
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.18	Cum	**584.64**	107.04	10.70		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**10.70**		
AOC FOR PIPE CULVERT (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.	120.000	Sqm	**11.80**	1416.53			
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.	3.78	Cum	**6381.70**	24122.83	1.22	1.70	3.40
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.	35.76	Sqm	**578.60**	20690.74			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.701	Cum	**1075.00**	**1828.58**			
		Coarse Aggregates (60 Km lead)	3.402	Cum	**1398.00**	**4756.00**			
		Cement (30 km lead)	1.225	MT	**742.00**	**908.74**			
TOTAL (In Rs.)						**53723.40**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.70	Cum	**584.64**	994.47	99.45		
		Coarse Aggregate	3.40	Cum	**944.26**	3212.37	321.24		
		Total					**420.68**		

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 JASOEA MR									
AOC FOR FALL (Ch.-1.250 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.	110.000	Sqm	**11.80**	1298.48			
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.	3.03	Cum	**6381.70**	19326.93	0.98	1.36	2.73
3		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	1.363	Cum	**1075.00**	**1465.03**			
		Coarse Aggregates (60 Km lead)	2.726	Cum	**1398.00**	**3810.45**			
		Cement (30 km lead)	0.981	MT	**742.00**	**728.07**			
TOTAL (In Rs.)						**26628.97**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.36	Cum	**584.64**	796.76	79.68		
		Coarse Aggregate	2.73	Cum	**944.26**	2573.72	257.37		
		Total					**337.05**		
AOC FOR PIPE CULVERT (Ch.-2.020 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	5.3.4	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.	1.42	Cum	**6381.70**	9045.45	0.46	0.64	1.28
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.	4.56	Sqm	**578.60**	2637.03			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.638	Cum	**1075.00**	**685.67**			
		Coarse Aggregates (60 Km lead)	1.276	Cum	**1398.00**	**1783.38**			
		Cement (30 km lead)	0.459	MT	**742.00**	**340.76**			
TOTAL (In Rs.)						**16144.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.64	Cum	**584.64**	372.90	37.29		
		Coarse Aggregate	1.28	Cum	**944.26**	1204.56	120.46		
		Total					**157.75**		

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)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF SENDHOKHAP MR.									
AOC FOR CULVERT/FALL (Ch.-0.260 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.	8.159	Cum	**2492.58**	20338.03			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**20338.03**			
		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.-0.540 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	5.3.4	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.	0.95	Cum	**6381.70**	6068.84	0.31	0.43	0.86
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.428	Cum	**1075.00**	**460.03**			
		Coarse Aggregates (60 Km lead)	0.856	Cum	**1398.00**	**1196.52**			
		Cement (30 km lead)	0.308	MT	**742.00**	**228.62**			
TOTAL (In Rs.)						**9370.55**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.43	Cum	**584.64**	250.19	25.02		
		Coarse Aggregate	0.86	Cum	**944.26**	808.17	80.82		
		Total					**105.84**		
AOC FOR CULVERT/FALL (Ch.-0.825 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.	1.40	Cum	**5021.30**	7040.26	0.16	0.45	
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.	12.741	Sqm	**340.20**	4334.37	13.209	0.186	
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.	1.829	Sqm	**63.20**	115.58	0.00		
5		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.635	Cum	**1075.00**	682.28			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	13.374	MT	**742.00**	9923.33			
		Brick (30 km lead)	701.00	No.	**3.18**	2229.18			
TOTAL (In Rs.)						**25623.48**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.63	Cum	**584.64**	371.06	37.11		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**37.11**		
AOC FOR PIPE CULVERT (Ch.-1.560 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			

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	5.3.4	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.	0.59	Cum	**6381.70**	3793.56	0.19	0.27	0.53
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.267	Cum	**1075.00**	**287.56**			
		Coarse Aggregates (60 Km lead)	0.535	Cum	**1398.00**	**747.93**			
		Cement (30 km lead)	0.193	MT	**742.00**	**142.91**			
		TOTAL (In Rs.)				**6388.49**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.27	Cum	**584.64**	156.39	15.64		
		Coarse Aggregate	0.53	Cum	**944.26**	505.18	50.52		
		Total					**66.16**		
		AOC FOR FALL (Ch.-1.700 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.	4.126	Cum	**2492.58**	10284.88			
2		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**10284.88**			
		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 PIPE CULVERT/FALL (Ch.-2.060 Km)							
1		**Structure requires no repair work.**							

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF RUIR BRANCH CANAL								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.820 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.1.325 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	8.62584	0.25	0.3	*0.65*	*Cum*
		TOTAL					**0.65**	**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	8.63		0.85	*7.33*	*Sqm*
		TOTAL					**7.33**	***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	8.63		0.3	*2.59*	*Sqm*
		TOTAL					**2.59**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.2.060 Km)								
1	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.						
		Wing Wall D/S top	2	12.00	0.45	0.15	*1.62*	*Cum*
		TOTAL					**1.62**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL/HR PANTI MR (Ch.2.720 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 wall	1	1.50	0.60	2.00	*1.80*	*Cum*
		Side wall	2	1.00	0.50	2.00	*2.00*	*Cum*
		HR Gate Top	1	1.50	0.20	2.00	*0.60*	*Cum*
		TOTAL					**4.40**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.3.630 Km)								
		New fall is proposed at this location						
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	12.00	5.00	0.35	*21.00*	*Cum*
		Wing Wall	4	3.50	0.45	1.22	*7.69*	*Cum*
		Abutment	2	11.58	0.45	1.22	*12.72*	*Cum*
		Crest	1	5.00	0.45	1.37	*3.09*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**44.49**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.4.620 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**	**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.**						
		Parapet	8	0.30	0.30	0.45	*0.33*	*Cum*
		TOTAL					**0.33**	***Cum***
3	**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	12	0.25	0.92	*5.52*	*Cum*
		TOTAL					**5.52**	**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.**						
		Parapet Wall	2	12.00		2.09	*50.16*	*Sqm*
		TOTAL					**50.16**	***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.**						
		Parapet Wall	2	12.00		0.3	*7.20*	*Sqm*
		TOTAL					**7.20**	***Sqm***
6	**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.**						
		Wearing Coat	2	12	4.4501	0.075	*8.01*	*Cum*
		TOTAL					**8.01**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR HR CHAPRI MR (Ch.6.060 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.**						
		Side wall	2	1.50	0.50	2.00	*3.00*	*Cum*
		HR Gate Top	1	3.00	1.25	2.00	*7.50*	*Cum*
		TOTAL					**10.50**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.6.620 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.**						
		Parapet	9	0.30	0.30	0.45	*0.37*	*Cum*
		Hand Rail	5	2.00	0.10	0.10	*0.10*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**0.47**	***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.**						
		Parapet Wall	2	12	0.25	0.92	*5.52*	*Cum*
		TOTAL					**5.52**	**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	12.00		2.09	*50.16*	*Sqm*
		TOTAL					**50.16**	***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	12.00		0.3	*7.20*	*Sqm*
		TOTAL					**7.20**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/CR+HR FOR BISHUNPUR SUB DY (Ch.7.220 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	3.30	0.50	1.65	*5.45*	*Cum*
			1	4.20	0.50	1.65	*3.47*	*Cum*
		Wing Wall	2	5.70	0.31	1.65	*5.74*	*Cum*
		Floor	1	7.00	3.90	0.60	*16.38*	*Cum*
		TOTAL					**31.03**	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.7.530 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.7.870 Km)								
1	**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.**						
		D/S Floor	1	12.00	5.00	0.457	*27.42*	*Cum*
		TOTAL					**27.42**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.8.070 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	3.05	0.45	1.22	*6.69*	*Cum*
		Abutment	2	11.58	0.45	1.22	*12.72*	*Cum*
		Crest	1	6.00	0.45	1.3716	*3.71*	*Cum*
		Floor	1	7.00	6.00	0.45	*18.91*	*Cum*
		TOTAL					**42.03**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.8.410 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	2.44	0.45	1.22	*5.35*	*Cum*
		Abutment	2	7.62	0.45	1.22	*8.37*	*Cum*
		Crest	1	4.27	0.45	1.3716	*2.63*	*Cum*
		Floor	1	6.00	6.00	0.45	*16.21*	*Cum*
		TOTAL					**32.57**	***Cum***
QUANTITIES OF REPAIRING WORK FOR HR KARMARI MR (Ch.8.650 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.**						
		Side wall	2	0.90	0.50	2.00	*1.80*	*Cum*
		HR Gate	1	0.30	0.90	2.00	*0.54*	*Cum*
			1	0.90	0.61	1.50	*0.82*	*Cum*
		TOTAL					**3.16**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.8.950 Km)								
		New fall is proposed at this location						
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	3.05	0.45	1	*5.49*	*Cum*
		Abutment	2	5.46	0.45	1	*4.91*	*Cum*
		Crest	1	4.36	0.45	0.457	*0.90*	*Cum*
		Floor	1	5.00	4.36	0.45	*9.81*	*Cum*
		TOTAL					**21.10**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.9.450 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	0.25	0.92	*0.92*	*Cum*
		TOTAL					**0.92**	**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		2.09	*8.36*	*Sqm*
		TOTAL					**8.36**	***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		0.3	*1.20*	*Sqm*
		TOTAL					**1.20**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.9.650 Km)								
1		**Structure requires no repair work.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.10.010 Km)						
1	**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.**						
		D/S Floor	1	10.00	6.28	0.55	*34.54*	*Cum*
		TOTAL					**34.54**	***Cum***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.11.030 Km)						
1	**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.**						
		D/S Floor	1	10.00	6.28	0.3	*18.84*	*Cum*
		TOTAL					**18.84**	***Cum***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.11.760 Km)						
1		**Structure requires no repair work.**						
		QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.12.870 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	6.10		2.13	*25.95*	*Sqm*
		U/S Wing wall	2	12.00		3.10	*74.50*	*Sqm*
		TOTAL					**100.45**	***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	6.10		0.50	*6.10*	*Sqm*
		U/S Wing wall	2	12.00		0.50	74.50	Sqm
		TOTAL					**6.10**	***Sqm***
3	**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.**						
		Wearing Coat	1	6.10	4.2977	0.075	*1.96*	*Cum*
		TOTAL					**1.96**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.13.310 Km)								
1	**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.**						
		D/S Floor	1	9.00	6.00	0.45	*24.30*	*Cum*
		TOTAL					**24.30**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.14.630 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	5.79		1.15	*13.32*	*Sqm*
		TOTAL					**13.32**	***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	5.79		0.2	*2.32*	*Sqm*
		TOTAL					**2.32**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.14.900 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	3.35		1.15	*7.71*	*Sqm*
		TOTAL					**7.71**	***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	3.35		0.2	*1.34*	*Sqm*
		TOTAL					**1.34**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.15.850 Km)								
1	**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.**						
		D/S Floor	1	8.00	6.00	0.914	*43.87*	*Cum*
		TOTAL					**43.87**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL/HR MIRZAPUR MR (Ch.16.870 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.**						
		Side wall	2	0.90	0.50	1.50	*1.35*	*Cum*
		HR Gate	1	0.30	0.90	1.50	*0.41*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			4	2.00	0.45	1.50	*5.40*	*Cum*
		TOTAL					**7.16**	***Cum***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.17.710 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	6.73608	0.25	0.92	*3.10*	*Cum*
		TOTAL					**3.10**	**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	6.74		2.09	*28.16*	*Sqm*
		TOTAL					**28.16**	***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	6.74		0.3	*4.04*	*Sqm*
		TOTAL					**4.04**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR AQUEDUCT (Ch.19.120 Km)						
1		**Structure requires no repair work.**						
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.19.875 Km)						
1		**Structure requires no repair work.**						
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch. 21.015 Km)						
1		**Structure requires no repair work.**						
		QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.21.720 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.**						
		Parapet Wall	1	2.50	0.25	0.92	*0.58*	*Cum*
		TOTAL					**0.58**	***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.**						
		Parapet Wall	2	4.00	0.25	0.92	*1.84*	*Cum*
		TOTAL					**1.84**	**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	4.00		2.09	*16.72*	*Sqm*
		TOTAL					**16.72**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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	4.00		0.3	*2.40*	*Sqm*
		TOTAL					**2.40**	***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.**						
		Crest	1	4.00	0.3	0.5	*0.60*	*Cum*
		Floor	1	3	2.1	0.3	*1.89*	*Cum*
		TOTAL					**2.49**	**Cum**
6	**5.3.18**	**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	4.00		0.5	*4.00*	Sqm
			2		0.30	0.5	*0.30*	Sqm
		Floor	2	3		0.3	*1.80*	Sqm
			2		2.10	0.3	*1.26*	Sqm
		TOTAL					**7.36**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.22.910 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	1	0.25	0.3	*0.15*	*Cum*
		TOTAL					**0.15**	**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	1.00		0.8	*1.60*	*Sqm*
		TOTAL					**1.60**	***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.**						
		Parapet Wall	2	1.00		0.3	*0.60*	*Sqm*
		TOTAL					**0.60**	***Sqm***
4	**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.**						
		Wearing Coat	1	6.06552	3.9624	0.075	*1.80*	*Cum*
		TOTAL					**1.80**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT/HR FOR JASOEA MR (Ch. 23.419 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.**						
		Side wall	2	0.90	0.50	1.50	*1.35*	*Cum*
		HR Gate	1	0.30	0.90	1.50	*0.41*	*Cum*
			4	2.00	0.45	1.50	*5.40*	*Cum*
		TOTAL					**7.16**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch. 23.700 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.24.400 Km)								
1	**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.**						
		D/S Floor	1	5.00	4.27	0.614	*13.10*	*Cum*
		TOTAL					**13.10**	***Cum***
QUANTITIES OF REPAIRING WORK OF HR FOR SENDHOKHAP MR (Ch. 25.470 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.**						
		Side wall	2	0.90	0.50	1.50	*1.35*	*Cum*
		HR Gate	1	0.30	0.90	1.50	*0.41*	*Cum*
			4	2.00	0.45	1.50	*5.40*	*Cum*
		TOTAL					**7.16**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.26.120 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.**						
		Hand Rail	1	2.50	0.10	0.1	*0.03*	*Cum*
		Post	2	0.45	0.15	0.15	*0.02*	*Cum*
		TOTAL					**0.05**	***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.**						
		Parapet Wall	2	1	0.25	0.92	*0.46*	*Cum*
		TOTAL					**0.46**	**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	1.00		2.09	*4.18*	*Sqm*
		TOTAL					**4.18**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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	1.00		0.3	*0.60*	*Sqm*
		TOTAL					**0.60**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.27.340 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.**						
		Hand Rail	1	2.50	0.10	0.1	*0.03*	*Cum*
		Post	2	0.45	0.15	0.15	*0.02*	*Cum*
		TOTAL					**0.05**	***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.**						
		Parapet Wall	1	1	0.25	0.92	*0.23*	*Cum*
		TOTAL					**0.23**	**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	1.00		2.09	*2.09*	*Sqm*
		TOTAL					**2.09**	***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	1.00		0.3	*0.30*	*Sqm*
		TOTAL					**0.30**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.28.170 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				**140.00**	**Sqm**
		TOTAL					**140.00**	**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	3.32232	0.25	0.92	*1.53*	*Cum*
		TOTAL					**1.53**	**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	3.32		2.09	*13.89*	*Sqm*
		TOTAL					**13.89**	***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	3.32		0.3	*1.99*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**1.99**	***Sqm***
1	**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.**						
		U/S & D/S wing wall Top	2	16.00	0.45	0.15	*2.16*	*Cum*
		TOTAL					**2.16**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.29.420 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**
		TOTAL					**120.00**	**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	6.88848	0.25	0.92	*3.17*	*Cum*
		TOTAL					**3.17**	**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	6.89		2.09	*28.79*	*Sqm*
		TOTAL					**28.79**	***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	6.89		0.3	*4.13*	*Sqm*
		TOTAL					**4.13**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF PANTI MINOR								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.890 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**
		TOTAL					**110.00**	**Sqm**
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.**						
		D/S Floor	1	5.00	2.50	0.457	*5.71*	*Cum*
		TOTAL					**5.71**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.1.400 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 & D/S	4	1.83	0.45	1.4	*4.61*	*Cum*
		Abutment	2	5.46	0.45	1.4	*6.87*	*Cum*
		Crest	1	2.50	0.45	1.2	*1.35*	*Cum*
		Floor	1	5.00	2.50	0.45	*5.63*	*Cum*
		TOTAL					**18.46**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.2.075 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 U/S & D/S	4	2.44	0.45	1.8	*7.90*	*Cum*
		Abutment	2	4.57	0.45	1.8	*7.41*	*Cum*
		Crest	1	2.50	0.45	1.524	*1.71*	*Cum*
		Floor	1	5.00	2.50	0.45	*5.63*	*Cum*
		TOTAL					**22.65**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.2.745 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 & D/S	4	1.22	0.45	1	*2.19*	*Cum*
		Abutment	2	3.05	0.45	1	*2.74*	*Cum*
		Crest	1	2.00	0.45	0.61	*0.55*	*Cum*
		Floor	1	3.00	2.00	0.45	*2.70*	*Cum*
		TOTAL					**8.19**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.3.200 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.**						
			1				**110.00**	**Sqm**
		TOTAL					**110.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.**						
		D/S Floor	1	4.00	2.00	0.306	*2.45*	*Cum*
		TOTAL					**2.45**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch. 3.810 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch. 4.200 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.**						
		Wing Wall U/S & D/S	4	1.22	0.45	1	*2.19*	*Cum*
		Abutment	2	2.44	0.45	1	*2.19*	*Cum*
		Crest	1	2.00	0.45	0.76	*0.68*	*Cum*
		Floor	1	3.00	2.00	0.45	*2.70*	*Cum*
		TOTAL					**7.77**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch. 5.490 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 & D/S	4	1.83	0.45	1.2	*3.95*	*Cum*
		Abutment	2	1.83	0.45	1.2	*1.98*	*Cum*
		Crest	1	1.50	0.30	1.067	*0.48*	*Cum*
		Floor	1	3.00	1.50	0.45	*2.03*	*Cum*
		TOTAL					**8.43**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch. 5.850 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				**120.00**	**Sqm**
		TOTAL					**120.00**	**Sqm**
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.**						
		Wing wall U/S & D/S Top	2	2.00	0.45	0.15	*0.27*	*Cum*
		Abutment	2	5.00	0.45	0.15	*0.68*	*Cum*
		TOTAL					**0.95**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch. 6.700 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				**130.00**	**Sqm**
		TOTAL					**130.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.**						
		Crest	1	0.80	0.45	1.524	*0.55*	*Cum*
		Floor	1	5.00	0.80	0.45	*1.80*	*Cum*
		TOTAL					**2.35**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF CHAPRI MINOR								
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.290 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.630 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**
		TOTAL					**100.00**	**Sqm**
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.**						
		Left Wing wall	1	0.80	0.45	1.22	*0.44*	*Cum*
		TOTAL					**0.44**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.760 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**
		TOTAL					**120.00**	**Sqm**
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.**						
		U/S & D/S Wing wall top	1	10.67	0.45	0.15	*0.72*	*Cum*
		Abutment top	1	10.67	0.45	0.15	*0.72*	*Cum*
		Crest	1	1.52	0.45	0.914	*0.63*	*Cum*
		TOTAL					**2.07**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.340 Km)								
1	**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.**						
		U/S & D/S Wing wall top	1	10.36	0.45	0.15	*0.70*	*Cum*
		Abutment top	1	10.36	0.45	0.15	*0.70*	*Cum*
		TOTAL					**1.40**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.500 Km)								
1		**Structure requires no repair work.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.595 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				**120.00**	**Sqm**
		TOTAL					**120.00**	**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	3.048	0.25	0.92	*1.40*	*Cum*
		TOTAL					**1.40**	**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	3.05		2.09	*12.74*	*Sqm*
		TOTAL					**12.74**	***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	3.05		0.3	*1.83*	*Sqm*
		TOTAL					**1.83**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.900 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.**						
		Parapet wall	1	1.70	0.45	0.92	*0.70*	*Cum*
		TOTAL					**0.70**	***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.**						
		Parapet Wall	1	2	0.25	0.92	*0.46*	*Cum*
		TOTAL					**0.46**	**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	2.00		2.09	*4.18*	*Sqm*
		TOTAL					**4.18**	***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	2.00		0.3	*0.60*	*Sqm*
		TOTAL					**0.60**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
5	**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.**						
		U/S & D/S Wing wall top	1	3.05	0.45	0.15	*0.21*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		TOTAL					**0.68**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.200 Km)								
1		**Structure requires no repair work.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF BISHUNPUR SUB DY								
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.080 Km)								
1	**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.**						
		Parapet Wall	1	2.00	0.25	1	*0.50*	*Cum*
		TOTAL					**0.50**	***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	6.10		2.09	*12.74*	*Sqm*
		TOTAL					**12.74**	***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	6.10		0.3	*1.83*	*Sqm*
		TOTAL					**1.83**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR RAILWAY BRIDGE (Ch.-0.210 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				**150.00**	**Sqm**
		TOTAL					**150.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.500 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				**100.00**	**Sqm**
		TOTAL					**100.00**	**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	1	4.27		1.73	*7.40*	*Sqm*
		U/S Wing wall Top	2	6.10		0.5	*6.10*	*Sqm*
		TOTAL					**13.50**	***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	1	4.27		1.73	*7.40*	*Sqm*
		U/S Wing wall Top	2	6.10		0.5	*6.10*	*Sqm*
		TOTAL					**13.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.930 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**
		TOTAL					**160.00**	**Sqm**

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.**						
		U/S Wing wall Top	2	4.88		0.5	*4.88*	*Sqm*
		D/S Wing wall Top	2	4.27		0.5	*4.27*	*Sqm*
		TOTAL					**9.14**	***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.**						
		U/S Wing wall Top	2	4.88		0.50	*4.88*	*Sqm*
		D/S Wing wall Top	2	4.27		0.5	*4.27*	*Sqm*
		TOTAL					**9.14**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.230 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.**						
		Hand Rail	8	1.50	0.10	0.1	*0.12*	*Cum*
		Post	7	0.22	0.22	0.5	*0.17*	*Cum*
		TOTAL					**0.29**	***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.**						
		Parapet Wall	2	6.30936	0.25	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	6.31		2.09	*26.37*	*Sqm*
		TOTAL					**26.37**	***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	6.31		0.3	*3.79*	*Sqm*
		TOTAL					**3.79**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.550 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**
		TOTAL					**120.00**	**Sqm**
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.**						
		Wing wall Edge	1	0.70	0.45	1.2	*0.38*	*Cum*
		D/S Side Slope	2	10.00	2.30	0.15	*6.90*	*Cum*
		TOTAL					**7.28**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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 Left Side	2	0.70		1.20	*1.68*	Sqm
			2		0.45	1.20	*1.08*	Sqm
		TOTAL					**2.76**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-3.400 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	6.71		1.35	*18.11*	*Sqm*
		TOTAL					**18.11**	***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	6.71		1.35	*18.11*	*Sqm*
		TOTAL					**18.11**	***Sqm***
3	**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.**						
		Wearing Coat	1	6.8	7	0.075	*3.57*	*Cum*
		TOTAL					**3.57**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR RAILWAY BRIDGE (Ch.-3.970 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-4.030 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	6.61416	0.25	0.92	*3.04*	*Cum*
		TOTAL					**3.04**	**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	6.61		2.09	*27.65*	*Sqm*
		TOTAL					**27.65**	***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	6.61		0.3	*3.97*	*Sqm*
		TOTAL					**3.97**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/ FALL (Ch.-4.550 Km)								
1	**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.**						
		Floor	1	6.10	4.24	0.61	*15.75*	*Cum*
		TOTAL					**15.75**	***Cum***
QUANTITIES OF REPAIRING WORK FOR HR OF TETRIA MR (Ch.- 5.363 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.**						
		Side wall	2	0.90	0.50	1.20	*1.08*	*Cum*
		HR Gate	1	0.30	0.90	1.20	*0.32*	*Cum*
			4	2.00	0.45	1.20	*4.32*	*Cum*
		TOTAL					**5.72**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.- 5.400 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				**120.00**	**Sqm**
		TOTAL					**120.00**	**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		0.5	*10.00*	*Sqm*
		TOTAL					**10.00**	***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.**						
		Abutment	2	10.00		0.5	*10.00*	*Sqm*
		TOTAL					**10.00**	***Sqm***
4	**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.**						
		D/S Side Slope	2	8.00	2.30	0.15	*5.52*	*Cum*
		TOTAL					**5.52**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-5.880 Km)								
1	**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.**						
		Floor	1	3.57	4.08	0.763	*11.11*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**11.11**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-6.390 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.**						
		Hand Rail	4	1.50	0.10	0.1	*0.06*	*Cum*
		Post	7	0.22	0.22	0.5	*0.17*	*Cum*
		TOTAL					**0.23**	***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.**						
		Parapet Wall	2	5.39496	0.25	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	5.39		2.09	*22.55*	*Sqm*
		TOTAL					**22.55**	***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	5.39		0.3	*3.24*	*Sqm*
		TOTAL					**3.24**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-6.670 Km)								
1	**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.**						
		Floor	1	3.66	4.08	0.153	*2.29*	*Cum*
		TOTAL					**2.29**	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-6.970 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	3.66		1.81	*13.26*	*Sqm*
		TOTAL					**13.26**	***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	3.66		0.3	*2.19*	*Sqm*
		TOTAL					**2.19**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	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.**						
		Approach Road U/S & D/S	2	3	4.3282	0.15	*3.90*	*Cum*
		TOTAL					**3.90**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.870 Km)								
1	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 Left Side	1	5.49	0.45	1.2	*2.96*	*Cum*
		TOTAL					**2.96**	***Cum***
2	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 Left Side	2	5.49		1.20	*13.17*	Sqm
			2		0.45	1.20	*1.08*	Sqm
		TOTAL					**14.25**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-8.320 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**
		TOTAL					**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	2.2	0.25	0.92	*0.51*	*Cum*
		TOTAL					**0.51**	**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	2.20		2.14	*4.71*	*Sqm*
		TOTAL					**4.71**	***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	2.20		2.14	*9.42*	*Sqm*
		TOTAL					**9.42**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
5	**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.**						
		Crest Top	1	3.6576	0.4318	0.15	*0.24*	*Cum*
		TOTAL					**0.24**	***Cum***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-9.460 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**	**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.**						
		Hand Rail	8	2.00		0.8	*12.80*	*Sqm*
		Vertical Post	6	0.45		1.2	*3.24*	*Sqm*
		U/S Wing wall	2	5.50		0.5	*5.50*	*Sqm*
		TOTAL					**21.54**	***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	8	2.00		0.8	*12.80*	*Sqm*
		Vertical Post	6	2.00		1.2	*14.40*	*Sqm*
		U/S Wing wall	2	5.50		0.5	*5.50*	*Sqm*
		TOTAL					**32.70**	***Sqm***
4	**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.**						
		Wearing Coat	1	3.6576	4.633	0.075	*1.27*	*Cum*
		TOTAL					**1.27**	***Cum***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-10.140 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	5.39496	0.25	0.92	*2.48*	*Cum*
		TOTAL					**2.48**	**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	5.39		2.09	*22.55*	*Sqm*
		TOTAL					**22.55**	***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	5.39		0.3	*3.24*	*Sqm*
		TOTAL					**3.24**	***Sqm***
4	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.**						
		Wearing Coat	1	12	4.4501	0.15	*8.01*	*Cum*
		TOTAL					**8.01**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-10.600 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	5.52	0.25	0.92	*2.54*	*Cum*
		TOTAL					**2.54**	**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	5.52		2.09	*23.06*	*Sqm*
		TOTAL					**23.06**	***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.**						
		Parapet Wall	2	5.52		0.3	*3.31*	*Sqm*
		TOTAL					**3.31**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-10.900 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				**130.00**	**Sqm**
		TOTAL					**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.**						
		Parapet Wall	2	5.52		2.09	*23.07*	*Sqm*
		TOTAL					**23.07**	***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	5.52		0.3	*3.31*	*Sqm*
		TOTAL					**3.31**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**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.**						
		Wearing Coat	1	4.8	0.45	0.2	*0.43*	*Cum*
		TOTAL					**0.43**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-11.500 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	3.6576	0.25	0.92	*1.68*	*Cum*
		TOTAL					**1.68**	**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	3.66		2.09	*15.29*	*Sqm*
		TOTAL					**15.29**	***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	3.66		0.3	*2.19*	*Sqm*
		TOTAL					**2.19**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (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				**110.00**	**Sqm**
		TOTAL					**110.00**	**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	4.20		2.09	*17.56*	*Sqm*
		TOTAL					**17.56**	***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	4.20		0.3	*2.52*	*Sqm*
		TOTAL					**2.52**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-13.830 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	0.40		1	*0.79*	*Sqm*
		TOTAL					**0.79**	***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 Top	2	0.40		0.3	*0.24*	*Sqm*
		TOTAL					**0.24**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED TETRIA MR.								
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-0.030 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				**150.00**	**Sqm**
		TOTAL					**150.00**	**Sqm**
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.**						
		U/S Parapet	1	1.22	0.45	0.15	*0.08*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		TOTAL					**0.55**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-0.640 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				**180.00**	**Sqm**
		TOTAL					**180.00**	**Sqm**
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.**						
		U/S Parapet	1	1.52	0.45	0.15	*0.10*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		TOTAL					**0.57**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.060 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				**170.00**	**Sqm**
		TOTAL					**170.00**	**Sqm**
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.**						
		U/S Parapet	1	1.52	0.45	1.2	*0.82*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		TOTAL					**1.29**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.710 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**
		TOTAL					**130.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED KARMARI MR.								
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-0.310 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**
		TOTAL					**140.00**	**Sqm**
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.**						
		U/S Parapet	1	1.83	0.45	1	*0.82*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		Well Side walls Top	2	0.91	0.45	0.15	*0.12*	*Cum*
		TOTAL					**1.42**	***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 Left Side	2	1.83		1.00	*3.66*	Sqm
			2		0.45	1.00	*0.90*	Sqm
		TOTAL					**4.56**	**Sqm**
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				**160.00**	**Sqm**
		TOTAL					**160.00**	**Sqm**
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 Top Left & Right	1	2.44	0.45	0.15	*0.16*	*Cum*
		Wing Wall	4	0.91	0.45	0.15	*0.25*	*Cum*
		TOTAL					**0.41**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.270 Km)								
1	**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.**						
		U/S Parapet top	1	1.83	0.45	0.15	*0.12*	*Cum*
		Pitching on Embenkment Slope U/S	2	3.66	1.00	0.15	*1.10*	*Cum*
		Pitching on Embenkment Slope U/S	2	2.44	1.00	0.15	*0.73*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		Well Side walls Top	2	0.91	0.45	0.15	*0.12*	*Cum*
		TOTAL					**2.55**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED MIRZAPUR MR.								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.330 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**
		TOTAL					**110.00**	**Sqm**
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.**						
		Floor	1	3.66	1.72	0.152	*0.96*	*Cum*
		TOTAL					**0.96**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.990 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**
		TOTAL					**120.00**	**Sqm**
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 top Left & Right	2	4.57	0.45	0.15	*0.62*	*Cum*
		Crest	1	1.72	0.45	0.914	*0.71*	*Cum*
		TOTAL					**1.32**	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.090 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	3.6576	0.25	0.92	*1.68*	*Cum*
		TOTAL					**1.68**	**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	3.66		2.09	*15.29*	*Sqm*
		TOTAL					**15.29**	***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	3.66		0.3	*2.19*	*Sqm*
		TOTAL					**2.19**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.400 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				**110.00**	**Sqm**
		TOTAL					**110.00**	**Sqm**
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.**						
		U/S Parapet	1	2.44	0.45	0.5	*0.55*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		TOTAL					**1.02**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-1.770 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				**100.00**	**Sqm**
		TOTAL					**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	3.048	0.25	0.92	*1.40*	*Cum*
		TOTAL					**1.40**	**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	3.05		2.09	*12.74*	*Sqm*
		TOTAL					**12.74**	***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	3.05		0.3	*1.83*	*Sqm*
		TOTAL					**1.83**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-2.260 Km)								
1	**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 top Left & Right	2	3.05	0.45	0.15	*0.41*	*Cum*
		TOTAL					**0.41**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.560 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	3.6576	0.25	0.92	*1.68*	*Cum*
		TOTAL					**1.68**	**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	3.66		2.09	*15.29*	*Sqm*
		TOTAL					**15.29**	***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	3.66		0.3	*2.19*	*Sqm*
		TOTAL					**2.19**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-2.900 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				**120.00**	**Sqm**
		TOTAL					**120.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT /FALL (Ch.-3.120 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-3.315 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**	**Sqm**
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.**						
		Wing Wall left side U/S	1	1.83	0.45	1.2	*0.99*	*Cum*
		TOTAL					**0.99**	***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.**						
		Wing Wall left side U/S	2	1.83		1.2	*4.39*	Sqm
			2		0.45	1.2	*1.08*	Sqm
		TOTAL					**5.47**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-3.655 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	3.00		2.09	*12.54*	*Sqm*
		TOTAL					**12.54**	***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	3.00		0.3	*1.80*	*Sqm*
		TOTAL					**1.80**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (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				**120.00**	**Sqm**
		TOTAL					**120.00**	**Sqm**
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.**						
		U/S Abutment Wall	1	7.00	0.45	1.2	*3.78*	*Cum*
		D/S Abutment Wall	1	7.00	0.45	1.2	*3.78*	*Cum*
		TOTAL					**3.78**	***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.**						
		Wing Wall left side U/S	2	7.00		1.2	*16.80*	Sqm
			2		0.45	1.2	*1.08*	Sqm
		D/S Abutment Wall	2	7.00		1.2	*16.80*	Sqm
			2		0.45	1.2	*1.08*	Sqm
		TOTAL					**35.76**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED JASOEA MR.								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.250 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				**110.00**	**Sqm**
		TOTAL					**110.00**	**Sqm**
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 Left & Right Top	2	4.57	0.45	0.152	*0.63*	*Cum*
		Floor	1	3.66	1.46	0.45	*2.40*	*Cum*
		TOTAL					**3.03**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.020 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**
		TOTAL					**140.00**	**Sqm**
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.**						
		U/S Parapet	1	1.83	0.45	1	*0.82*	*Cum*
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		Well Side walls Top	2	0.91	0.45	0.15	*0.12*	*Cum*
		TOTAL					**1.42**	***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.**						
		U/S Parapet	2	1.83		1.00	*3.66*	Sqm
			2		0.45	1.00	*0.90*	Sqm
		TOTAL					**4.56**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SENDHOKHAP MR.								
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-0.260 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 Left & Right	2	4.57	0.45	1.2	*4.94*	*Cum*
		Crest	1	1.70	0.30	1.067	*0.54*	*Cum*
		Floor	1	3.50	1.70	0.45	*2.68*	*Cum*
		TOTAL					**8.16**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.540 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**
		TOTAL					**120.00**	**Sqm**
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.**						
		Floor	1	3.66	1.30	0.2	*0.95*	*Cum*
		TOTAL					**0.95**	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-0.825 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**
		TOTAL					**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	2	3.048	0.25	0.92	*1.40*	*Cum*
		TOTAL					**1.40**	**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	3.05		2.09	*12.74*	*Sqm*
		TOTAL					**12.74**	***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	3.05		0.3	*1.83*	*Sqm*
		TOTAL					**1.83**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.560 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**
		TOTAL					**120.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.**						
		Well Top	1	3.14		0.15	*0.47*	*Cum*
		Well Side walls Top	2	0.91	0.45	0.15	*0.12*	*Cum*
		TOTAL					**0.59**	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.700 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 Left & Right	2	3.05	0.45	1	*2.74*	*Cum*
		Crest	1	1.00	0.30	0.61	*0.18*	*Cum*
		Floor	1	3.00	1.00	0.4	*1.20*	*Cum*
		TOTAL					**4.13**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-2.060 Km)								
1		**Structure requires no repair work.**						

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	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.	60.00	Cum	**1044.90**	62694.00			
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.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials(As per Bihar SOR 2025)**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (60 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
TOTAL (In Rs.)					**521018.55**			
TOTAL (In Rs.)					**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 42 no., Total Seigniorage charges					**90943.14**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	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.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	#REF!	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost 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	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

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)	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(As per Bihar SOR 2025)**								
		Coarse Sand (30 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (60 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 191 nos. outlet, Total Seigniorage charges					**210133.06**			

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	
		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				83.18	
	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)				₹ 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% I like the coffee				₹ 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				6.15	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441.00	
	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**				**₹ 420.40**	
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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 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**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**
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

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**
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**
	5.6.2	Labour Charges for Laying, fitting and fixing 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 .					
	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 2.5m 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	1.50	nos	569.00	853.50	
		Unskilled Mazdoor	7.00	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	**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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					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 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**
22	**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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**
23	**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
24	**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**
25	**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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 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 2025 & PL 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	**420.40**	**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 Charges for Laying, fitting and fixing 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 .	**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

Nabinagar Division – Kusha Minor
(Total Cost – Rs. 2.76 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (KUSAH MINOR)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork	1	Job	11941991.39	0.00	₹ 1,19,41,991.39	AOC Earthwork Kusah minor	8
2	Falls							
	0.610 m Fall at Ch. 2.600 Km	1.00	No.	849832.72	7323.12	₹ 8,57,155.84	Fall (AOC) Kusah Minor	12
	1.524 m Fall at Ch. 3.750 Km	1.00	No.	1355372.08	11775.39	₹ 13,67,147.47		13
	1.220 m Fall at Ch. 4.220 Km	1.00	No.	920719.18	7881.21	₹ 9,28,600.39		14
	1.220 m Fall at Ch. 4.500 Km	1.00	No.	920721.44	7881.21	₹ 9,28,602.65		15
	0.762 m Fall at Ch. 5.450 Km	1.00	No.	491657.83	4104.06	₹ 4,95,761.89		16
3	*SLR BRIDGE AT CH.0.500 KM*	1.00	No.	1899925.99	10930.36	₹ 19,10,856.35	Slab-AOC Baria minor	32
4	*Repair of Structures*	7.00	No.	2637930.22	7155.12	₹ 26,45,085.34	Abstract (Repair St.) Baria minor	37
5	*Approach Road*	6.00	No.	521018.55	7578.59	₹ 31,71,582.87	Approach Road AOC	38
6	Outlets	26	No.	127744.47	1100.17	₹ 33,49,960.66	Outlet-AOC	49
7	Kilometer Stone	7	No.	3853.40	0.00	₹ 26,973.80	Rates '!F61	64
	TOTAL (In Rs.)					**27623718.66**		
	TOTAL (In Lacs)					**276.24**		

	As Per Latest Approved Rates Feb.		
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	1.037	0.015		
9	Cement Punning	1.00	0.0015			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
KUSHA MINOR OFFTAKING FROM 39.39 KM OF RMC				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 2.450	2450	3.80	9310.00	Sqm
2.450-3.292	842	3.35	2820.70	Sqm
3.292-4.000	708	2.98	2109.84	Sqm
4.000-4.600	600	2.69	1614.00	Sqm
4.600-5.200	600	2.28	1368.00	Sqm
5.200-5.900	700	1.81	1267.00	Sqm
5.900-6.100	200	1.42	284.00	Sqm
6.100-6.300	200	1.25	250.00	Sqm
	TOTAL		**19023.54**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 2.450	2450	3.80	0.15	1396.50	Cum
2.450-3.292	842	3.35	0.15	423.11	Cum
3.292-4.000	708	2.98	0.15	316.48	Cum
4.000-4.600	600	2.69	0.15	242.10	Cum
4.600-5.200	600	2.28	0.15	205.20	Cum
5.200-5.900	700	1.81	0.15	190.05	Cum
5.900-6.100	200	1.42	0.15	42.60	Cum
6.100-6.300	200	1.25	0.15	37.50	Cum
	TOTAL			**2853.53**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

KUSHA MINOR. - KM 0.000 TO KM 6.300

		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		0.000	0	0	0.000	0	0.000
100	100	2.793	1.397	139.650	6.615	3.308	330.750
200	100	1.688	2.241	224.050	6.309	6.462	646.200
300	100	1.894	1.791	179.100	6.356	6.333	633.250
400	100	2.367	2.131	213.050	6.006	6.181	618.100
500	100	2.059	2.213	221.300	6.387	6.197	619.650
600	100	2.064	2.062	206.150	6.430	6.409	640.850
700	100	1.768	1.916	191.600	6.523	6.477	647.650
800	100	1.752	1.760	176.000	6.322	6.423	642.250
900	100	1.396	1.574	157.400	7.004	6.663	666.300
1000	100	1.353	1.375	137.450	7.589	7.297	729.650
1100	100	1.476	1.415	141.450	7.361	7.475	747.500
1200	100	1.666	1.571	157.100	7.798	7.580	757.950
1300	100	1.975	1.821	182.050	7.421	7.610	760.950
1400	100	2.415	2.195	219.500	6.892	7.157	715.650
1500	100	1.899	2.157	215.700	5.152	6.022	602.200
1600	100	1.206	1.553	155.250	5.600	5.376	537.600
1700	100	1.200	1.203	120.300	5.240	5.420	542.000
1800	100	0.843	1.022	102.150	6.911	6.076	607.550
1900	100	0.623	0.733	73.300	6.836	6.874	687.350
2000	100	0.375	0.499	49.900	7.000	6.918	691.800
2100	100	0.000	0.188	18.750	5.718	6.359	635.900
2200	100	3.165	1.583	158.250	1.400	3.559	355.900
2300	100	0.152	1.659	165.850	7.348	4.374	437.400
2400	100	0.000	0.076	7.600	8.491	7.920	791.950
2500	100	0.000	0.000	0.000	9.127	8.809	880.900
2600	100	0.147	0.074	7.350	4.491	6.809	680.900
2700	100	0.000	0.074	7.350	7.430	5.961	596.050
2800	100	0.000	0.000	0.000	10.200	8.815	881.500
2900	100	0.000	0.000	0.000	8.832	9.516	951.600
3000	100	0.050	0.025	2.500	2.810	5.821	582.100
3100	100	0.000	0.025	2.500	7.107	4.959	495.850
3200	100	1.823	0.912	91.150	0.690	3.899	389.850
3300	100	0.023	0.923	92.300	5.235	2.963	296.250
3400	100	0.063	0.043	4.300	3.933	4.584	458.400
3500	100	0.000	0.032	3.150	6.551	5.242	524.200
3600	100	0.000	0.000	0.000	8.293	7.422	742.200
3700	100	0.000	0.000	0.000	10.152	9.223	922.250
3800	100	1.499	0.750	74.950	1.757	5.955	595.450
3900	100	0.117	0.808	80.800	5.330	3.544	354.350
4000	100	0.024	0.071	7.050	5.595	5.463	546.250
4100	100	0.000	0.012	1.200	8.014	6.805	680.450
4200	100	0.000	0.000	0.000	11.706	9.860	986.000
4300	100	1.258	0.629	62.900	1.397	6.552	655.150
4400	100	0.129	0.694	69.350	4.325	2.861	286.100
4500	100	0.679	0.404	40.400	1.639	2.982	298.200
4600	100	0.125	0.402	40.200	3.548	2.594	259.350

		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
4700	100	0.000	0.063	6.250	4.404	3.976	397.600
4800	100	0.000	0.000	0.000	8.349	6.377	637.650
4900	100	0.394	0.197	19.700	2.472	5.411	541.050
5000	100	0.002	0.198	19.800	5.006	3.739	373.900
5100	100	0.344	0.173	17.300	3.239	4.123	412.250
5200	100	2.902	1.623	162.300	2.540	2.890	288.950
5300	100	0.338	1.620	162.000	2.269	2.405	240.450
5400	100	0.000	0.169	16.900	4.030	3.150	314.950
5500	100	0.665	0.333	33.250	1.393	2.712	271.150
5600	100	0.000	0.333	33.250	4.333	2.863	286.300
5700	100	0.000	0.000	0.000	3.329	3.831	383.100
5800	100	0.000	0.000	0.000	4.572	3.951	395.050
5900	100	0.019	0.010	0.950	3.643	4.108	410.750
6000	100	0.000	0.010	0.950	5.619	4.631	463.100
6100	100	0.000	0.000	0.000	5.427	5.523	552.300
6200	100	0.000	0.000	0.000	4.710	5.069	506.850
6250	50	0.000	0.000	0.000	6.034	5.372	268.600
Total				**3439.450**			**34853.700**
						Earthwork in Cutting	**3439.450**
						Earthwork in Filling	**34853.700**
						NET QUANTITY OF EARTHWORK IN BACKFILLING	**31414.250**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR KUSHA MINOR .						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
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.	19023.54	Sqm	**11.80**	224561.284
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.				
		100% of Total Cutting for ordinary soil	3439.45	Cum	**156.50**	538273.925
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1375.78	Cum	**17.22**	23687.51158
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.	3439.45	Cum	**165.12**	567908.09
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)	9424.28	Cum	**174.89**	1648211.45
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	7853.56	Cum	**217.92**	1711448.34
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (25% of net filling)	14136.41	Cum	**319.14**	4511494.69
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.				
			2853.53	Cum	**196.10**	559577.43

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.	34853.70	Cum	**61.88**	2156828.68
TOTAL COST OF EARTHWORK (in Rs.)						**11941991.39**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**119.420**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK				
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	*19023.54*	*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	3439.450	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1375.78	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	3439.450	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	9424.28	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	7853.56	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	14136.41	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	2853.53	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.			
	Net quantity of filling	1	34853.70	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KUSHA MR.								
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.600								
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.	77.482	Cum	**195.20**	15124.39			
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 reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.05	Cum	**6381.70**	70500.31	3.58	4.97	9.94
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.	56.14	Cum	**6914.20**	388139.86	23.16	24.14	48.28
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.	0.71	Cum	**8151.40**	5778.77	0.40	0.28	0.56
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.	1.34	MT	**73574.90**	98495.66			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	189.97	Sqm	**578.60**	109914.08			
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.	12.61	Sqm	**680.10**	8572.66			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.79	Cum	**694.61**	547.01			
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.	0.79	Cum	**1237.00**	974.14			
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.	0.79	Cum	**1377.70**	1084.94			
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.	0.79	Cum	**516.50**	406.74			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.97	Sqm	**63.20**	630.17			
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	1.84	Cum	**149.30**	275.28			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	29.387	Cum	**1075.00**	31590.49			
	Coarse Aggregates (60 Km lead)	58.780	Cum	**1398.00**	82174.57			
	Cement (30 km lead)	27.138	MT	**742.00**	20136.13			
	Boulder (60 Km lead)	0.79	Cum	**1159.00**	912.71			
	Brick (30 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 km lead)	1.339	MT	**742.00**	993.32			
	TOTAL (In Rs.)				**849832.72**			
	TOTAL (In Rs.) For KUSHA MR.				**849832.72**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.39	Cum	**584.64**	17180.52	1718.05		
	Coarse Aggregates	58.78	Cum	**944.26**	55503.69	5550.37		
	Boulders	0.79	Cum	**694.61**	547.01	54.70		
	Total					7323.12		
	For 1 nos. fall, Total Seigniorage charges					**7323.12**		

SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 3.750 KM								
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.	209.933	Cum	**195.20**	40978.94			
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.	13.76	Cum	**6381.70**	87798.30	4.46	6.19	12.38
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.	95.06	Cum	**6914.20**	657280.91	39.21	40.88	81.75
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.	0.90	Cum	**8151.40**	7353.87	0.51	0.35	0.71
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.	2.26	MT	**73574.90**	166276.84			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	258.23	Sqm	**578.60**	149409.96			
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.	11.70	Sqm	**680.10**	7957.17			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.68	Cum	**694.61**	468.86			
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.	0.68	Cum	**1237.00**	834.98			
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.	0.68	Cum	**1377.70**	929.95			
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.	0.68	Cum	**516.50**	348.64			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.64	Sqm	**63.20**	799.05			
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	18.14	Cum	**149.30**	2707.99			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	47.420	Cum	**1075.00**	50976.20			
	Coarse Aggregates (60 Km lead)	94.848	Cum	**1398.00**	132598.16			
	Cement (30 km lead)	44.182	MT	**742.00**	32783.29			
	Boulder (60 Km lead)	0.68	Cum	**1159.00**	782.33			
	Brick (30 km lead)	702.00	No.	**3.18**	2232.36			
	Steel (30 km lead)	2.260	MT	**742.00**	1676.90			
	TOTAL (In Rs.)				**1355372.08**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	47.42	Cum	**584.64**	27723.47	2772.35		
	Coarse Aggregate	94.85	Cum	**944.26**	89561.61	8956.16		
	Boulders	0.68	Cum	**694.61**	468.86	46.89		
	Total					11775.39		
	For 1 nos. fall, Total Seigniorage charges					**11775.39**		

SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.220 KM								
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.	131.594	Cum	**195.20**	25687.14			
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.	11.31	Cum	**6381.70**	72208.20	3.67	5.09	10.18
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.	61.29	Cum	**6914.20**	423800.91	25.28	26.36	52.71
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.	0.74	Cum	**8151.40**	6050.95	0.42	0.29	0.59
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.	1.46	MT	**73574.90**	107490.13			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	201.03	Sqm	**578.60**	116317.78			
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.	8.92	Sqm	**680.10**	6066.49			
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.	11.40	Sqm	**63.20**	720.73			
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	10.10	Cum	**149.30**	1507.46			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	31.738	Cum	**1075.00**	34118.07			
	Coarse Aggregates (60 Km lead)	63.483	Cum	**1398.00**	88749.11			
	Cement (30 km lead)	29.371	MT	**742.00**	21793.14			
	Boulder (60 Km lead)	0.45	Cum	**1159.00**	521.55			
	Brick (30 km lead)	536.00	No.	**3.18**	1704.48			
	Steel (30 km lead)	1.461	MT	**742.00**	1084.03			
	TOTAL (In Rs.)				**920719.18**			
	TOTAL (In Rs.) For KUSHA MR.				**920719.18**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	31.74	Cum	**584.64**	18555.15	1855.52		
	Coarse Aggregate	63.48	Cum	**944.26**	59944.37	5994.44		
	Boulders	0.45	Cum	**694.61**	312.57	31.26		
	Total					7881.21		

SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.500 KM								
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.	131.594	Cum	**195.20**	25687.14			
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.	11.31	Cum	**6381.70**	72208.20	3.67	5.09	10.18
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.	61.29	Cum	**6914.20**	423800.91	25.28	26.36	52.71
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.	0.74	Cum	**8151.40**	6050.95	0.42	0.29	0.59
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.	1.46	MT	**73574.90**	107490.13			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	201.03	Sqm	**578.60**	116317.78			
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.	8.93	Sqm	**680.10**	6071.93			
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.	11.40	Sqm	**63.20**	720.73			
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	10.10	Cum	**149.30**	1507.46			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	31.738	Cum	**1075.00**	34118.07			
	Coarse Aggregates (60 Km lead)	63.483	Cum	**1398.00**	88749.11			
	Cement (30 km lead)	29.371	MT	**742.00**	21793.14			
	Boulder (60 Km lead)	0.45	Cum	**1159.00**	521.55			
	Brick (30 km lead)	535.00	No.	**3.18**	1701.30			
	Steel (30 km lead)	1.461	MT	**742.00**	1084.03			
	TOTAL (In Rs.)				**920721.44**			
	TOTAL (In Rs.) For KUSHA MINOR				**920721.44**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	31.74	Cum	**584.64**	18555.15	1855.52		
	Coarse Aggregate	63.48	Cum	**944.26**	59944.37	5994.44		
	Boulders	0.45	Cum	**694.61**	312.57	31.26		
	Total					7881.21		
	For 1 nos. fall, Total Seigniorage charges					**7881.21**		

SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 5.450 KM								
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.	57.035	Cum	**195.20**	11133.24			
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.	7.63	Cum	**6381.70**	48722.30	2.47	3.44	6.87
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.	30.05	Cum	**6914.20**	207805.63	12.40	12.92	25.85
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.	0.53	Cum	**8151.40**	4344.53	0.30	0.21	0.42
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.	0.72	MT	**73574.90**	52999.29			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	126.38	Sqm	**578.60**	73124.65			
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.	5.88	Sqm	**680.10**	4001.03			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.09	Cum	**694.61**	62.51			
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**	111.33			
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.	0.09	Cum	**1377.70**	123.99			
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**	46.49			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.86	Sqm	**63.20**	559.93			
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	1.92	Cum	**149.30**	286.80			
15	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (60 Km lead)	16.567	Cum	**1075.00**	17809.61			
	Coarse Aggregates (60 Km lead)	33.139	Cum	**1398.00**	46329.01			
	Cement (30 km lead)	15.173	MT	**742.00**	11258.73			
	Boulder (60 Km lead)	0.09	Cum	**1159.00**	104.31			
	Brick (30 km lead)	353.00	No.	**3.18**	1122.54			
	Steel (30 km lead)	0.720	MT	**742.00**	534.50			
	TOTAL (In Rs.)				**491657.83**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	16.57	Cum	**584.64**	9685.78	968.58		
	Coarse Aggregate	33.14	Cum	**944.26**	31292.30	3129.23		
	Boulders	0.09	Cum	**694.61**	62.51	6.25		
	Total					**4104.06**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KUSHA MR.							
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.600							
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.						
		1		77.48		**77.48**	**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*	*0.542*	*1.65*	*0.15*	*0.13*	*Cum*
		1	*0.783*	*1.65*	*0.15*	*0.19*	*Cum*
		1	*4.568*	*1.65*	*0.15*	*1.13*	*Cum*
		1	*0.282*	*1.65*	*0.15*	*0.07*	*Cum*
		1	*0.446*	*1.65*	*0.15*	*0.11*	*Cum*
		1	*0.782*	*1.65*	*0.15*	*0.19*	*Cum*
		1	*0.542*	*1.65*	*0.15*	*0.13*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*2.19*	*1.69*	*0.15*	*1.11*	*Cum*
	Section 2-2	*2*	*1.90*	*1.33*	*0.15*	*0.76*	*Cum*
	Section 3-3	*2*	*1.13*	*1.21*	*0.15*	*0.41*	*Cum*
	Section 5-5	*2*	*2.96*	*1.84*	*0.15*	*1.64*	*Cum*
	Section 6-6	*2*	*1.84*	*1.21*	*0.15*	*0.66*	*Cum*
	Toe Wall D/S Portion	*1*	*6.53*	*0.75*	*0.30*	*1.47*	*Cum*
	Toe Wall D/S Portion	*1*	*6.23*	*0.45*	*0.60*	*1.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
	TOTAL					**11.05**	**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*	*2.92*	*0.45*	*0.45*	*1.18*	*Cum*
		2	*2.92*	*0.92*	*1.57*	*8.44*	*Cum*
		2	*2.92*	*1.54*	*0.50*	*4.50*	*Cum*
	Section 2-2	*2*	*1.90*	*0.45*	*0.45*	*0.77*	*Cum*
		2	*1.90*	*0.74*	*0.96*	*2.69*	*Cum*
		2	*1.90*	*1.18*	*0.50*	*2.23*	*Cum*
	Section 3-3	*2*	*1.36*	*0.45*	*0.45*	*0.55*	*Cum*
		2	*1.36*	*0.68*	*0.76*	*1.40*	*Cum*
		2	*1.36*	*1.06*	*0.50*	*1.43*	*Cum*
	Section 5-5	*2*	*2.92*	*0.45*	*0.45*	*1.18*	*Cum*
		2	*2.92*	*0.92*	*1.57*	*8.44*	*Cum*
		2	*2.92*	*1.54*	*0.50*	*4.50*	*Cum*
	Section 6-6	*2*	*3.89*	*0.45*	*0.45*	*1.58*	*Cum*
		2	*3.89*	*0.68*	*0.76*	*4.01*	*Cum*
		2	*3.89*	*1.06*	*0.50*	*4.11*	*Cum*
	Floor	*1*	*0.63*	*1.65*	*0.70*	*0.72*	*Cum*
		1	*5.00*	*1.65*	*0.50*	*4.13*	*Cum*
		1	*0.50*	*1.65*	*0.20*	*0.16*	*Cum*
		1	*0.20*	*1.65*	*0.40*	*0.13*	*Cum*
		1	*1.80*	*1.65*	*0.50*	*1.49*	*Cum*
		1	*0.63*	*1.65*	*0.70*	*0.72*	*Cum*
	Crest	*1*	*1.02*	*1.65*	*1.06*	*1.78*	*Cum*
	TOTAL					**56.14**	**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*	*0.85*	*1.65*	*0.15*	*0.21*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.08*	*0.45*	*0.05*	*0.25*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.08*	*0.45*	*0.05*	*0.25*	*Sqm*
	TOTAL					**0.71**	**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	**56.85**	**0.30%**	**0.17**	**7850**	**1338.71**	**Kg**
	Total Weight in Metric Tonne					**1.34**	**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*	*2.92*		*0.45*	*5.25*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.92*		*1.57*	*18.33*	*Sqm*
		4		*0.92*	*1.57*	*5.78*	*Sqm*
		4	*2.92*		*0.50*	*5.84*	*Sqm*
		4		*1.54*	*0.50*	*3.08*	*Sqm*
	Section 2-2	*4*	*1.90*		*0.45*	*3.42*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.90*		*0.96*	*7.30*	*Sqm*
		4		*0.74*	*0.96*	*2.83*	*Sqm*
		4	*1.90*		*0.50*	*3.80*	*Sqm*
		4		*1.18*	*0.50*	*2.35*	*Sqm*
	Section 3-3	*4*	*1.36*		*0.45*	*2.44*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.36*		*0.76*	*4.12*	*Sqm*
		4		*0.68*	*0.76*	*2.06*	*Sqm*
		4	*1.36*		*0.50*	*2.71*	*Sqm*
		4		*1.06*	*0.50*	*2.11*	*Sqm*
	Section 5-5	*4*	*2.92*		*0.45*	*5.25*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.92*		*1.57*	*18.33*	*Sqm*
		4		*0.92*	*1.57*	*5.78*	*Sqm*
		4	*2.92*		*0.50*	*5.84*	*Sqm*
		4		*1.54*	*0.50*	*3.08*	*Sqm*
	Section 6-6	*4*	*3.89*		*0.45*	*7.00*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.89*		*0.76*	*11.83*	*Sqm*
		4		*0.68*	*0.76*	*2.06*	*Sqm*
		4	*3.89*		*0.50*	*7.78*	*Sqm*
		4		*1.06*	*0.50*	*2.11*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.65*	*0.70*	*2.31*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*1.65*	*0.50*	*1.65*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*1.65*	*0.20*	*0.66*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.65*	*0.40*	*1.32*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*1.65*	*0.50*	*1.65*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.65*	*0.70*	*2.31*	*Sqm*
	Crest	*2*	*1.018*		*1.058*	*2.15*	*Sqm*
		2		*1.65*	*1.058*	*3.49*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.53*		*0.30*	*3.92*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.23*		*0.60*	*7.48*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**189.97**	**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*	*2.52*		*12.61*	*Sqm*
	TOTAL					**12.61**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.05*	*0.30*	**0.79**	**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*	*1.05*	*0.15*	**0.79**	**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*	*11.08*	*0.45*		*4.99*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.08*	*0.45*		*4.99*	*Sqm*
	TOTAL					**9.97**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.84		1.84	**Cum**
	TOTAL					**1.84**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 3.750 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.						
		1	209.93			**209.93**	**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*	*0.542*	*1.50*	*0.15*	*0.12*	*Cum*
		1	*0.782*	*1.50*	*0.15*	*0.18*	*Cum*
		1	*0.815*	*1.50*	*0.15*	*0.18*	*Cum*
		1	*6.074*	*1.50*	*0.15*	*1.37*	*Cum*
		1	*0.566*	*1.50*	*0.15*	*0.13*	*Cum*
		1	*1.750*	*1.50*	*0.15*	*0.39*	*Cum*
		1	*1.510*	*1.50*	*0.15*	*0.34*	*Cum*
		1	*0.542*	*1.50*	*0.15*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*3.74*	*2.18*	*0.15*	*2.45*	*Cum*
	Section 2-2	*2*	*2.45*	*1.27*	*0.15*	*0.93*	*Cum*
	Section 3-3	*2*	*2.41*	*1.15*	*0.15*	*0.83*	*Cum*
	Section 5-5	*2*	*2.65*	*2.33*	*0.15*	*1.85*	*Cum*
	Section 6-6	*2*	*1.72*	*1.15*	*0.15*	*0.59*	*Cum*
	Toe Wall D/S Portion	*1*	*6.08*	*0.75*	*0.30*	*1.37*	*Cum*
	Toe Wall D/S Portion	*1*	*5.78*	*0.45*	*0.60*	*1.56*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
	TOTAL					**13.76**	**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*	*3.51*	*0.45*	*0.45*	*1.42*	*Cum*
		2	*3.51*	*1.17*	*2.38*	*19.52*	*Cum*
		2	*3.51*	*2.03*	*0.85*	*12.13*	*Cum*
	Section 2-2	*2*	*2.45*	*0.45*	*0.45*	*0.99*	*Cum*
		2	*2.45*	*0.71*	*0.86*	*2.98*	*Cum*
		2	*2.45*	*1.12*	*0.85*	*4.65*	*Cum*
	Section 3-3	*2*	*2.63*	*0.45*	*0.45*	*1.07*	*Cum*
		2	*2.63*	*0.65*	*0.66*	*2.25*	*Cum*
		2	*2.63*	*1.00*	*0.65*	*3.41*	*Cum*
	Section 5-5	*2*	*2.61*	*0.45*	*0.45*	*1.06*	*Cum*
		2	*2.61*	*1.17*	*2.38*	*14.48*	*Cum*
		2	*2.61*	*2.03*	*0.85*	*9.00*	*Cum*
	Section 6-6	*2*	*1.72*	*0.45*	*0.45*	*0.70*	*Cum*
		2	*1.72*	*0.65*	*0.66*	*1.47*	*Cum*
		2	*1.72*	*1.00*	*0.65*	*2.22*	*Cum*
	Floor	*1*	*0.63*	*1.50*	*0.70*	*0.66*	*Cum*
		1	*8.00*	*1.50*	*0.50*	*6.00*	*Cum*
		1	*6.30*	*1.50*	*0.35*	*3.31*	*Cum*
		1	*0.20*	*1.50*	*0.60*	*0.18*	*Cum*
		1	*0.27*	*1.50*	*0.68*	*0.27*	*Cum*
		1	*3.03*	*1.50*	*0.50*	*2.27*	*Cum*
		1	*0.83*	*1.50*	*1.35*	*1.67*	*Cum*
	Crest	*1*	*1.21*	*1.50*	*1.86*	*3.36*	*Cum*
	TOTAL					**95.06**	**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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Over Crest	*1*	*0.90*	*1.50*	*0.20*	*0.27*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*14.05*	*0.45*	*0.05*	*0.32*	*Sqm*
	On Abutment Top (Right Side)	*1*	*14.05*	*0.45*	*0.05*	*0.32*	*Sqm*
	TOTAL					**0.90**	**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	**95.96**	**0.30%**	**0.29**	**7850**	**2259.97**	**Kg**
	Total Weight in Metric Tonne					**2.26**	**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*	*3.51*		*0.45*	*6.33*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.51*		*2.38*	*33.51*	*Sqm*
		4		*1.17*	*2.38*	*11.11*	*Sqm*
		4	*3.51*		*0.85*	*11.95*	*Sqm*
		4		*2.03*	*0.85*	*6.90*	*Sqm*
	Section 2-2	*4*	*2.45*		*0.45*	*4.41*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.45*		*0.86*	*8.43*	*Sqm*
		4		*0.71*	*0.86*	*2.44*	*Sqm*
		4	*2.45*		*0.85*	*8.33*	*Sqm*
		4		*1.12*	*0.85*	*3.79*	*Sqm*
	Section 3-3	*4*	*2.63*		*0.45*	*4.74*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.63*		*0.66*	*6.95*	*Sqm*
		4		*0.65*	*0.66*	*1.71*	*Sqm*
		4	*2.63*		*0.65*	*6.85*	*Sqm*
		4		*1.00*	*0.65*	*2.59*	*Sqm*
	Section 5-5	*4*	*2.61*		*0.45*	*4.69*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.61*		*2.38*	*24.86*	*Sqm*
		4		*1.17*	*2.38*	*11.11*	*Sqm*
		4	*2.61*		*0.85*	*8.86*	*Sqm*
		4		*2.03*	*0.85*	*6.90*	*Sqm*
	Section 6-6	*4*	*1.72*		*0.45*	*3.09*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.72*		*0.66*	*4.53*	*Sqm*
		4		*0.65*	*0.66*	*1.71*	*Sqm*
		4	*1.72*		*0.65*	*4.46*	*Sqm*
		4		*1.00*	*0.65*	*2.59*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.50*	*0.70*	*2.10*	*Sqm*
		2	*8.00*		*0.50*	*8.00*	*Sqm*
		2		*1.50*	*0.50*	*1.50*	*Sqm*
		2	*6.30*		*0.35*	*4.41*	*Sqm*
		2		*1.50*	*0.35*	*1.05*	*Sqm*
		2	*0.27*		*0.68*	*0.36*	*Sqm*
		2		*1.50*	*0.68*	*2.03*	*Sqm*
		2	*3.03*		*0.50*	*3.03*	*Sqm*
		2		*1.50*	*0.50*	*1.50*	*Sqm*
		2	*0.83*		*1.35*	*2.23*	*Sqm*
		2		*1.50*	*1.35*	*4.05*	*Sqm*
	Crest	*2*	*1.209*		*1.855*	*4.49*	*Sqm*
		2		*1.5*	*1.855*	*5.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.08*		*0.30*	*3.65*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.78*		*0.60*	*6.94*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**258.23**	**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*	*2.50*	*2.34*		*11.70*	*Sqm*
	TOTAL					**11.70**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*0.90*	*0.30*	**0.68**	**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	*2.50*	*0.90*	*0.15*	**0.68**	**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*	*14.05*	*0.45*		*6.32*	*Sqm*
	On Abutment Top (Right Side)	*1*	*14.05*	*0.45*		*6.32*	*Sqm*
	TOTAL					**12.64**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		18.14		18.14	Cum
	TOTAL					**18.14**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.220 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.						
		1		131.59		**131.59**	**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*	*0.542*	*1.35*	*0.15*	*0.11*	*Cum*
		1	*0.783*	*1.35*	*0.15*	*0.16*	*Cum*
		1	*6.289*	*1.35*	*0.15*	*1.27*	*Cum*
		1	*0.495*	*1.35*	*0.15*	*0.10*	*Cum*
		1	*1.364*	*1.35*	*0.15*	*0.28*	*Cum*
		1	*1.398*	*1.35*	*0.15*	*0.28*	*Cum*
		1	*0.542*	*1.35*	*0.15*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.36*	*1.96*	*0.15*	*0.80*	*Cum*
	Section 2-2	*2*	*4.00*	*1.23*	*0.15*	*1.48*	*Cum*
	Section 3-3	*2*	*2.13*	*1.11*	*0.15*	*0.71*	*Cum*
	Section 5-5	*2*	*2.57*	*2.11*	*0.15*	*1.63*	*Cum*
	Section 6-6	*2*	*1.65*	*1.11*	*0.15*	*0.55*	*Cum*
	Toe Wall D/S Portion	*1*	*5.75*	*0.75*	*0.30*	*1.29*	*Cum*
	Toe Wall D/S Portion	*1*	*5.45*	*0.45*	*0.60*	*1.47*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**11.31**	**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*	*1.14*	*0.45*	*0.45*	*0.46*	*Cum*
		2	*1.14*	*1.06*	*2.02*	*4.85*	*Cum*
		2	*1.14*	*1.81*	*0.80*	*3.29*	*Cum*
	Section 2-2	*2*	*4.00*	*0.45*	*0.45*	*1.62*	*Cum*
		2	*4.00*	*0.69*	*0.60*	*3.31*	*Cum*
		2	*4.00*	*1.08*	*0.80*	*6.91*	*Cum*
	Section 3-3	*2*	*2.35*	*0.45*	*0.45*	*0.95*	*Cum*
		2	*2.35*	*0.63*	*0.60*	*1.78*	*Cum*
		2	*2.35*	*0.96*	*0.65*	*2.94*	*Cum*
	Section 5-5	*2*	*2.52*	*0.45*	*0.45*	*1.02*	*Cum*
		2	*2.52*	*1.06*	*2.02*	*10.77*	*Cum*
		2	*2.52*	*1.81*	*0.80*	*7.32*	*Cum*
	Section 6-6	*2*	*1.57*	*0.45*	*0.45*	*0.64*	*Cum*
		2	*1.57*	*0.63*	*0.60*	*1.19*	*Cum*
		2	*1.57*	*0.96*	*0.65*	*1.96*	*Cum*
	Floor	*1*	*0.63*	*1.35*	*0.70*	*0.59*	*Cum*
		1	*7.21*	*1.35*	*0.50*	*4.86*	*Cum*
		1	*5.57*	*1.35*	*0.15*	*1.13*	*Cum*
		1	*0.20*	*1.35*	*0.60*	*0.16*	*Cum*
		1	*2.80*	*1.35*	*0.50*	*1.89*	*Cum*
		1	*0.11*	*1.35*	*0.20*	*0.03*	*Cum*
		1	*0.76*	*1.35*	*1.25*	*1.29*	*Cum*
	Crest	*1*	*1.10*	*1.35*	*1.57*	*2.34*	*Cum*
	TOTAL					**61.29**	**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 Crest	*1*	*0.85*	*1.35*	*0.15*	*0.17*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.67*	*0.45*	*0.05*	*0.29*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.67*	*0.45*	*0.05*	*0.29*	*Sqm*
	TOTAL					**0.74**	**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	**62.04**	**0.30%**	**0.19**	**7850**	**1460.96**	**Kg**
	Total Weight in Metric Tonne					**1.46**	**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*	*1.14*		*0.45*	*2.04*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.14*		*2.02*	*9.18*	*Sqm*
		4		*1.06*	*2.02*	*8.53*	*Sqm*
		4	*1.14*		*0.80*	*3.64*	*Sqm*
		4		*1.81*	*0.80*	*5.80*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.45*	*7.20*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.00*		*0.60*	*9.60*	*Sqm*
		4		*0.69*	*0.60*	*1.66*	*Sqm*
		4	*4.00*		*0.80*	*12.80*	*Sqm*
		4		*1.08*	*0.80*	*3.46*	*Sqm*
	Section 3-3	*4*	*2.35*		*0.45*	*4.23*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.35*		*0.60*	*5.64*	*Sqm*
		4		*0.63*	*0.60*	*1.51*	*Sqm*
		4	*2.35*		*0.65*	*6.12*	*Sqm*
		4		*0.96*	*0.65*	*2.50*	*Sqm*
	Section 5-5	*4*	*2.52*		*0.45*	*4.54*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.52*		*2.02*	*20.39*	*Sqm*
		4		*1.06*	*2.02*	*8.53*	*Sqm*
		4	*2.52*		*0.80*	*8.08*	*Sqm*
		4		*1.81*	*0.80*	*5.80*	*Sqm*
	Section 6-6	*4*	*1.57*		*0.45*	*2.83*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.57*		*0.60*	*3.77*	*Sqm*
		4		*0.63*	*0.60*	*1.51*	*Sqm*
		4	*1.57*		*0.65*	*4.08*	*Sqm*
		4		*0.96*	*0.65*	*2.50*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.35*	*0.70*	*1.89*	*Sqm*
		2	*7.21*		*0.50*	*7.21*	*Sqm*
		2		*1.35*	*0.50*	*1.35*	*Sqm*
		2	*5.57*		*0.15*	*1.67*	*Sqm*
		2		*1.35*	*0.15*	*0.41*	*Sqm*
		2	*0.20*		*0.60*	*0.24*	*Sqm*
		2		*1.35*	*0.60*	*1.62*	*Sqm*
		2	*2.80*		*0.50*	*2.80*	*Sqm*
		2		*1.35*	*0.50*	*1.35*	*Sqm*
		2	*0.11*		*0.20*	*0.04*	*Sqm*
		2		*1.35*	*0.20*	*0.54*	*Sqm*
		2	*0.76*		*1.25*	*1.91*	*Sqm*
		2		*1.35*	*1.25*	*3.38*	*Sqm*
	Crest	*2*	*1.104*		*1.573*	*3.47*	*Sqm*
		2		*1.35*	*1.573*	*4.25*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.75*		*0.30*	*3.45*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.45*		*0.60*	*6.54*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**201.03**	**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*	*2.00*	*2.23*		*8.92*	*Sqm*
	TOTAL					**8.92**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.75*	*0.30*	**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	*2.00*	*0.75*	*0.15*	**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*	*12.67*	*0.45*		*5.70*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.67*	*0.45*		*5.70*	*Sqm*
	TOTAL					**11.40**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		10.10		10.10	Cum
	TOTAL					**10.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 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.						
		1		131.59		**131.59**	**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*	*0.542*	*1.35*	*0.15*	*0.11*	*Cum*
		1	*0.783*	*1.35*	*0.15*	*0.16*	*Cum*
		1	*6.289*	*1.35*	*0.15*	*1.27*	*Cum*
		1	*0.495*	*1.35*	*0.15*	*0.10*	*Cum*
		1	*1.364*	*1.35*	*0.15*	*0.28*	*Cum*
		1	*1.398*	*1.35*	*0.15*	*0.28*	*Cum*
		1	*0.542*	*1.35*	*0.15*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.36*	*1.96*	*0.15*	*0.80*	*Cum*
	Section 2-2	*2*	*4.00*	*1.23*	*0.15*	*1.48*	*Cum*
	Section 3-3	*2*	*2.13*	*1.11*	*0.15*	*0.71*	*Cum*
	Section 5-5	*2*	*2.57*	*2.11*	*0.15*	*1.63*	*Cum*
	Section 6-6	*2*	*1.65*	*1.11*	*0.15*	*0.55*	*Cum*
	Toe Wall D/S Portion	*1*	*5.75*	*0.75*	*0.30*	*1.29*	*Cum*
	Toe Wall D/S Portion	*1*	*5.45*	*0.45*	*0.60*	*1.47*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**11.31**	**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*	*1.14*	*0.45*	*0.45*	*0.46*	*Cum*
		2	*1.14*	*1.06*	*2.02*	*4.85*	*Cum*
		2	*1.14*	*1.81*	*0.80*	*3.29*	*Cum*
	Section 2-2	*2*	*4.00*	*0.45*	*0.45*	*1.62*	*Cum*
		2	*4.00*	*0.69*	*0.60*	*3.31*	*Cum*
		2	*4.00*	*1.08*	*0.80*	*6.91*	*Cum*
	Section 3-3	*2*	*2.35*	*0.45*	*0.45*	*0.95*	*Cum*
		2	*2.35*	*0.63*	*0.60*	*1.78*	*Cum*
		2	*2.35*	*0.96*	*0.65*	*2.94*	*Cum*
	Section 5-5	*2*	*2.52*	*0.45*	*0.45*	*1.02*	*Cum*
		2	*2.52*	*1.06*	*2.02*	*10.77*	*Cum*
		2	*2.52*	*1.81*	*0.80*	*7.32*	*Cum*
	Section 6-6	*2*	*1.57*	*0.45*	*0.45*	*0.64*	*Cum*
		2	*1.57*	*0.63*	*0.60*	*1.19*	*Cum*
		2	*1.57*	*0.96*	*0.65*	*1.96*	*Cum*
	Floor	*1*	*0.63*	*1.35*	*0.70*	*0.59*	*Cum*
		1	*7.21*	*1.35*	*0.50*	*4.86*	*Cum*
		1	*5.57*	*1.35*	*0.15*	*1.13*	*Cum*
		1	*0.20*	*1.35*	*0.60*	*0.16*	*Cum*
		1	*2.80*	*1.35*	*0.50*	*1.89*	*Cum*
		1	*0.11*	*1.35*	*0.20*	*0.03*	*Cum*
		1	*0.76*	*1.35*	*1.25*	*1.29*	*Cum*
	Crest	*1*	*1.10*	*1.35*	*1.57*	*2.34*	*Cum*
	TOTAL					**61.29**	**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 Crest	*1*	*0.85*	*1.35*	*0.15*	*0.17*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.67*	*0.45*	*0.05*	*0.29*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.67*	*0.45*	*0.05*	*0.29*	*Sqm*
	TOTAL					**0.74**	**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	**62.04**	**0.30%**	**0.19**	**7850**	**1460.96**	**Kg**
	Total Weight in Metric Tonne					**1.46**	**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*	*1.14*		*0.45*	*2.04*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.14*		*2.02*	*9.18*	*Sqm*
		4		*1.06*	*2.02*	*8.53*	*Sqm*
		4	*1.14*		*0.80*	*3.64*	*Sqm*
		4		*1.81*	*0.80*	*5.80*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.45*	*7.20*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.00*		*0.60*	*9.60*	*Sqm*
		4		*0.69*	*0.60*	*1.66*	*Sqm*
		4	*4.00*		*0.80*	*12.80*	*Sqm*
		4		*1.08*	*0.80*	*3.46*	*Sqm*
	Section 3-3	*4*	*2.35*		*0.45*	*4.23*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.35*		*0.60*	*5.64*	*Sqm*
		4		*0.63*	*0.60*	*1.51*	*Sqm*
		4	*2.35*		*0.65*	*6.12*	*Sqm*
		4		*0.96*	*0.65*	*2.50*	*Sqm*
	Section 5-5	*4*	*2.52*		*0.45*	*4.54*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.52*		*2.02*	*20.39*	*Sqm*
		4		*1.06*	*2.02*	*8.53*	*Sqm*
		4	*2.52*		*0.80*	*8.08*	*Sqm*
		4		*1.81*	*0.80*	*5.80*	*Sqm*
	Section 6-6	*4*	*1.57*		*0.45*	*2.83*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.57*		*0.60*	*3.77*	*Sqm*
		4		*0.63*	*0.60*	*1.51*	*Sqm*
		4	*1.57*		*0.65*	*4.08*	*Sqm*
		4		*0.96*	*0.65*	*2.50*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.35*	*0.70*	*1.89*	*Sqm*
		2	*7.21*		*0.50*	*7.21*	*Sqm*
		2		*1.35*	*0.50*	*1.35*	*Sqm*
		2	*5.57*		*0.15*	*1.67*	*Sqm*
		2		*1.35*	*0.15*	*0.41*	*Sqm*
		2	*0.20*		*0.60*	*0.24*	*Sqm*
		2		*1.35*	*0.60*	*1.62*	*Sqm*
		2	*2.80*		*0.50*	*2.80*	*Sqm*
		2		*1.35*	*0.50*	*1.35*	*Sqm*
		2	*0.11*		*0.20*	*0.04*	*Sqm*
		2		*1.35*	*0.20*	*0.54*	*Sqm*
		2	*0.76*		*1.25*	*1.91*	*Sqm*
		2		*1.35*	*1.25*	*3.38*	*Sqm*
	Crest	*2*	*1.104*		*1.573*	*3.47*	*Sqm*
		2		*1.35*	*1.573*	*4.25*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.75*		*0.30*	*3.45*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.45*		*0.60*	*6.54*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**201.03**	**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*	*2.00*	*2.23*		*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*	*0.75*	*0.30*	**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	*2.00*	*0.75*	*0.15*	**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*	*12.67*	*0.45*		*5.70*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.67*	*0.45*		*5.70*	*Sqm*
	TOTAL					**11.40**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		10.10		10.10	**Cum**
	TOTAL					**10.10**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 5.450 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.						
		1		57.04		**57.04**	**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*	*0.542*	*0.80*	*0.15*	*0.07*	*Cum*
		1	*0.783*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*4.618*	*0.80*	*0.15*	*0.55*	*Cum*
		1	*0.282*	*0.80*	*0.15*	*0.03*	*Cum*
		1	*0.396*	*0.80*	*0.15*	*0.05*	*Cum*
		1	*0.782*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*0.542*	*0.80*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.15*	*1.59*	*0.15*	*0.55*	*Cum*
	Section 2-2	*2*	*3.00*	*1.14*	*0.15*	*1.03*	*Cum*
	Section 3-3	*2*	*1.19*	*1.02*	*0.15*	*0.36*	*Cum*
	Section 5-5	*2*	*2.33*	*1.74*	*0.15*	*1.21*	*Cum*
	Section 6-6	*2*	*1.47*	*1.02*	*0.15*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*4.75*	*0.75*	*0.30*	*1.07*	*Cum*
	Toe Wall D/S Portion	*1*	*4.45*	*0.45*	*0.60*	*1.20*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**7.63**	**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*	*1.00*	*0.45*	*0.45*	*0.41*	*Cum*
		2	*1.00*	*0.87*	*1.40*	*2.43*	*Cum*
		2	*1.00*	*1.44*	*0.50*	*1.44*	*Cum*
	Section 2-2	*2*	*3.00*	*0.45*	*0.45*	*1.22*	*Cum*
		2	*3.00*	*0.65*	*0.65*	*2.52*	*Cum*
		2	*3.00*	*0.99*	*0.50*	*2.97*	*Cum*
	Section 3-3	*2*	*1.42*	*0.45*	*0.45*	*0.57*	*Cum*
		2	*1.42*	*0.59*	*0.45*	*0.74*	*Cum*
		2	*1.42*	*0.87*	*0.50*	*1.23*	*Cum*
	Section 5-5	*2*	*2.28*	*0.45*	*0.45*	*0.92*	*Cum*
		2	*2.28*	*0.87*	*1.40*	*5.54*	*Cum*
		2	*2.28*	*1.44*	*0.50*	*3.28*	*Cum*
	Section 6-6	*2*	*1.39*	*0.45*	*0.45*	*0.56*	*Cum*
		2	*1.39*	*0.59*	*0.45*	*0.73*	*Cum*
		2	*1.39*	*0.87*	*0.50*	*1.21*	*Cum*
	Floor	*1*	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
		1	*5.00*	*0.80*	*0.50*	*2.00*	*Cum*
		1	*0.50*	*0.80*	*0.20*	*0.08*	*Cum*
		1	*0.20*	*0.80*	*0.40*	*0.06*	*Cum*
		1	*1.80*	*0.80*	*0.50*	*0.72*	*Cum*
		1	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
	Crest	*1*	*0.86*	*0.80*	*1.03*	*0.71*	*Cum*
	TOTAL					**30.05**	**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 Crest	*1*	*0.75*	*0.80*	*0.15*	*0.09*	*Cum*
	Coping over Abutment Top						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Left Side)	*1*	*9.84*	*0.45*	*0.05*	*0.22*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.84*	*0.45*	*0.05*	*0.22*	*Sqm*
	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	**30.59**	**0.30%**	**0.09**	**7850**	**720.34**	**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*	*1.00*		*0.45*	*1.80*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.00*		*1.40*	*5.60*	*Sqm*
		4		*0.87*	*1.40*	*4.86*	*Sqm*
		4	*1.00*		*0.50*	*2.01*	*Sqm*
		4		*1.44*	*0.50*	*2.88*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.45*	*5.40*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.00*		*0.65*	*7.80*	*Sqm*
		4		*0.65*	*0.65*	*1.68*	*Sqm*
		4	*3.00*		*0.50*	*6.00*	*Sqm*
		4		*0.99*	*0.50*	*1.98*	*Sqm*
	Section 3-3	*4*	*1.42*		*0.45*	*2.55*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.42*		*0.45*	*2.55*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*1.42*		*0.50*	*2.83*	*Sqm*
		4		*0.87*	*0.50*	*1.74*	*Sqm*
	Section 5-5	*4*	*2.28*		*0.45*	*4.11*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.28*		*1.40*	*12.75*	*Sqm*
		4		*0.87*	*1.40*	*4.86*	*Sqm*
		4	*2.28*		*0.50*	*4.57*	*Sqm*
		4		*1.44*	*0.50*	*2.88*	*Sqm*
	Section 6-6	*4*	*1.39*		*0.45*	*2.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.39*		*0.45*	*2.50*	*Sqm*
		4		*0.59*	*0.45*	*1.05*	*Sqm*
		4	*1.39*		*0.50*	*2.78*	*Sqm*
		4		*0.87*	*0.50*	*1.74*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.80*	*0.20*	*0.32*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.80*	*0.40*	*0.64*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
	Crest	*2*	*0.8625*		*1.025*	*1.77*	*Sqm*
		2		*0.8*	*1.025*	*1.64*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.75*		*0.30*	*2.85*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.45*		*0.60*	*5.34*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**126.38**	**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*	*1.50*	*1.96*		*5.88*	*Sqm*
	TOTAL					**5.88**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.20*	*0.30*	**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	*1.50*	*0.20*	*0.15*	**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*	*9.84*	*0.45*		*4.43*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.84*	*0.45*		*4.43*	*Sqm*
	TOTAL					**8.86**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2			**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						
		1		1.92		1.92	Cum
	TOTAL					**1.92**	**Cum**

ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KUSAH MR.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 0.500								
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.	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.	287.211	Cum	**195.20**	56063.52			
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.	10.85	Cum	**6381.70**	69240.17	3.52	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.	54.02	Cum	**6914.20**	373512.93	22.28	23.23	46.46
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.	37.13	Cum	**8151.40**	302692.81	21.05	14.48	29.34
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.	3.62	MT	**73574.90**	266463.17			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	236.17	Sqm	**578.60**	136646.00			
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**	1220.80			
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	**694.61**	3611.97			
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	209.82	Cum	**149.30**	31326.84			

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)
13	**Carriage of materials(As per Bihar SOR 2025)**							
	Coarse Sand (30 Km lead)	42.594	Cum	**1075.00**	45788.22			
	Coarse Aggregates (60 Km lead)	85.559	Cum	**1398.00**	119611.11			
	Cement (30 km lead)	46.854	MT	**742.00**	34765.63			
	Boulder (60 Km lead)	5.20	Cum	**1159.00**	6026.80			
	Brick (30 km lead)	480.00	No.	**3.18**	1526.40			
	Steel (30 Km lead)	3.62	MT	**742.00**	2687.27			
	TOTAL (In Rs.)				**1899925.99**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	42.59	Cum	**584.64**	24901.98	2490.20		
	Coarse Aggregate	85.56	Cum	**944.26**	80789.69	8078.97		
	Boulders	5.20	Cum	**694.61**	3611.97	361.20		
	Total					10930.36		
	Total Seigniorage charges					**10930.36**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SLAB BRIDGE FOR KUSAH MR.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
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*	*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*	*2.26*	*1.90*	*2.91*	*25.03*	*Cum*
		1	*6.40*	*2.23*	*2.91*	*41.43*	*Cum*
	Extra for Slope (0.5:1)	*2*	*8.66*	*1.90*	*2.91*	*95.83*	*Cum*
	Left abutment	*2*	*2.26*	*2.23*	*2.91*	*29.30*	*Cum*
		1	*6.40*	*2.23*	*2.91*	*41.43*	*Cum*
	Extra for Slope (0.5:1)	*2*	*6.40*	*1.46*	*2.91*	*54.19*	*Cum*
	TOTAL					**287.21**	**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*	*1.26*	*Cum*
		1	*6.10*	*1.93*	*0.20*	*2.35*	*Cum*
	Left abutment	*2*	*1.96*	*1.60*	*0.20*	*1.26*	*Cum*
		1	*6.10*	*1.93*	*0.20*	*2.35*	*Cum*
	Levelling course	*2*	*6.50*	*3.50*	*0.08*	*3.64*	*Cum*
	TOTAL					**10.85**	**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*	*1.73*	*0.20*	*2.10*	*Cum*
		1	*6.10*	*1.53*	*0.80*	*7.44*	*Cum*
		1	*6.10*	*1.07*	*1.02*	*6.64*	*Cum*
		1	*6.10*	*0.82*	*0.50*	*2.50*	*Cum*
	Return wall	*2*	*1.86*	*1.40*	*0.20*	*1.04*	*Cum*
		2	*1.86*	*1.20*	*0.80*	*3.58*	*Cum*
		2	*1.86*	*0.70*	*1.34*	*3.48*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*6.10*	*1.73*	*0.20*	*2.10*	*Cum*
		1	*6.10*	*1.53*	*0.80*	*7.44*	*Cum*
		1	*6.10*	*1.07*	*1.02*	*6.64*	*Cum*
		1	*6.10*	*0.82*	*0.50*	*2.50*	*Cum*
	Return wall	*2*	*1.86*	*1.40*	*0.20*	*1.04*	*Cum*
		2	*1.86*	*1.20*	*0.80*	*3.58*	*Cum*
		2	*1.86*	*0.70*	*1.34*	*3.48*	*Cum*
		2	*1.86*	*0.40*	*0.15*	*0.22*	*Cum*
	TOTAL					**54.02**	**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	3.66	6.50	0.55	*12.99*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*10.66*	*5.50*	*0.08*	*4.40*	*Cum*
	Parapet	*2*	*10.66*	*0.44*	*0.18*	*1.66*	*Cum*
		2	*10.66*	*0.35*	*0.25*	*1.87*	*Cum*
		2	*10.66*	*0.22*	*0.55*	*2.57*	*Cum*
	TOTAL					**37.13**	**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*	*4.22*		*1.578*	*306.3*	*Kg*
a2	*10*	*19*	*6.90*		*0.616*	*80.8*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*26*	*4.08*		*0.616*	*65.4*	*Kg*
a5	*10*	*15*	*5.74*		*0.616*	*53.1*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.71*		*0.888*	*274.0*	*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*	*60*	*2.37*		*0.888*	*126.3*	*Kg*
x2	*16*	*60*	*1.32*		*1.578*	*125.4*	*Kg*
x3	*12*	*24*	*3.56*		*0.888*	*75.8*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*54.02*	*0.0025*	*0.135*	*7850.00*	########	*Kg*
	Total Reinforcement Steel (in kg)					*3621.7*	*Kg*
	Total Weight in Metric Tonne					**3.62**	**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		*1.73*	*0.20*	*0.69*	*Sqm*
		2	*6.10*		*0.80*	*9.76*	*Sqm*
		2		*1.53*	*0.80*	*2.44*	*Sqm*
		2	*6.10*		*1.02*	*12.38*	*Sqm*
		2		*1.07*	*1.02*	*2.18*	*Sqm*
		2	*6.10*		*0.50*	*6.10*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.86*		*0.20*	*0.75*	*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*		*1.34*	*4.97*	*Sqm*
		2		*0.70*	*1.34*	*1.87*	*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		*1.73*	*0.20*	*0.69*	*Sqm*
		2	*6.10*		*0.80*	*9.76*	*Sqm*
		2		*1.53*	*0.80*	*2.44*	*Sqm*
		2	*6.10*		*1.02*	*12.38*	*Sqm*
		2		*1.07*	*1.02*	*2.18*	*Sqm*
		2	*6.10*		*0.50*	*6.10*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.86*		*0.20*	*0.75*	*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*		*1.34*	*4.97*	*Sqm*
		2		*0.70*	*1.34*	*1.87*	*Sqm*
		2	*1.86*		*0.15*	*0.56*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*3.66*		*0.55*	*4.00*	*Sqm*
		1	*3.66*	6.50		*23.79*	*Sqm*
		2		*6.50*	0.55	*7.10*	*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*	*10.66*		*0.18*	*7.46*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*10.66*		*0.25*	*10.66*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*10.66*		*0.55*	*23.45*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**236.17**	**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	6.10	3.51		*42.84*	*Cum*
	Right and left Return wall	4	2.26	1.88		*16.97*	*Cum*
	Extra slope	*2*	*8.6615*	*1.901*	*2.91*	*95.83*	*Cum*
		2	*6.399*	*1.455*	*2.91*	*54.19*	*Cum*
	TOTAL					**209.82**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND		
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KUSAH MINOR		
Sl. No.	**Description of Structures**	**Amount (In Rs.)**
1	Superpassage at Ch. 0.115 KM	₹ 1,888.70
2	Culvert at 0.500 Km	₹ 4,10,901.81
3	Culvert at 0.680 Km	₹ 0.00
4	Bridge at 1.500 Km	₹ 1,84,255.58
5	Fall at 2.180 Km	₹ 0.00
6	Culvert at 2.960 Km	₹ 1,68,797.52
7	Culvert + Fall at 3.140 Km	₹ 2,52,565.20
8	Fall at 3.750 Km	₹ 1,62,715.62
9	Fall at 4.220 Km	₹ 3,15,062.11
10	Fall at 4.500 Km	₹ 3,08,082.89
11	Fall at 4.880 Km	₹ 3,14,065.08
12	Culvert + Fall at 5.170 Km	₹ 1,31,660.22
13	Fall at 5.45 Km	₹ 2,57,982.03
14	Culvert at 5.665 Km	₹ 1,29,953.46
Total In Rs.		**₹ 26,37,930.22**
Total In Lakhs.		**₹ 26.38**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		6.000	₹ 31,26,111.30
Total In Rs.			₹ 31,26,111.30
Total In Lakhs.			₹ 31.26

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR SUPERPASSAGE AT Ch. 0.115 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			
TOTAL (In Rs.)						**1888.70**			
AOC FOR CULVERT (Ch.-0.500 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.	164.850	Cum	**2492.58**	410901.81			
TOTAL (In Rs.)						**410901.81**			
AOC FOR BRIDGE (Ch.-1.500 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.	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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	18.000	Cum	**6914.20**	124455.60	7.43	7.74	15.48
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.	39.600	Sqm	**578.60**	22912.56			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	7.740	Cum	**1075.00**	8320.50			
		Coarse Aggregates (60 Km lead)	15.480	Cum	**1398.00**	21641.04			
		Cement (30 km lead)	7.425	MT	**742.00**	5509.35			
TOTAL (In Rs.)						**184255.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	7.74	Cum	**584.64**	4525.11	452.51		
		Coarse Aggregate	15.48	Cum	**944.26**	14617.14	1461.71		
		Total					**1914.23**		
AOC FOR FALL (Ch.2.960 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.	67.720	Cum	**2492.58**	168797.52			
TOTAL (In Rs.)						**168797.52**			
AOC FOR CULVERT + FALL (Ch.-3.140 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.	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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	24.48	Cum	**6914.20**	169267.91	10.10	10.53	21.05
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.	57.52	Sqm	**578.60**	33283.85			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	10.53	Cum	**1075.00**	**11316.43**			
		Coarse Aggregates (60 Km lead)	21.05	Cum	**1398.00**	**29433.26**			
		Cement (30 km lead)	10.10	MT	**742.00**	**7493.08**			
		TOTAL (In Rs.)				**252565.20**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	10.53	Cum	**584.64**	6154.46	615.45		
		Coarse Aggregate	21.05	Cum	**944.26**	19880.29	1988.03		
		Total					**2603.47**		
		AOC FOR FALL (Ch.3.750 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.	65.280	Cum	**2492.58**	162715.62			
		TOTAL (In Rs.)				**162715.62**			
		AOC FOR FALL (Ch.4.220 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.	126.400	Cum	**2492.58**	315062.11			
		TOTAL (In Rs.)				**315062.11**			
		AOC FOR FALL (Ch.4.500 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.	123.600	Cum	**2492.58**	308082.89			
		TOTAL (In Rs.)				**308082.89**			
		AOC FOR FALL (Ch.4.880 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.	126.000	Cum	**2492.58**	314065.08			
		TOTAL (In Rs.)				**314065.08**			
		AOC FOR CULVERT + FALL (Ch.-5.170 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.	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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	12.48	Cum	**6914.20**	86264.32	5.15	5.36	10.73
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.	32.91	Sqm	**578.60**	19039.18			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	5.36	Cum	**1075.00**	**5767.22**			
		Coarse Aggregates (60 Km lead)	10.73	Cum	**1398.00**	**15000.13**			
		Cement (30 km lead)	5.15	MT	**742.00**	**3818.71**			
		TOTAL (In Rs.)				**131660.22**			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.36	Cum	**584.64**	3136.51	313.65		
		Coarse Aggregate	10.73	Cum	**944.26**	10131.63	1013.16		
		Total					**1326.81**		
		AOC FOR FALL (Ch.5.450 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.	103.500	Cum	**2492.58**	257982.03			
		TOTAL (In Rs.)				**257982.03**			
		AOC FOR CULVERT + FALL (Ch.-5.665 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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	12.32	Cum	**6914.20**	85210.60	5.08	5.30	10.60
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.	32.30	Sqm	**578.60**	18686.47			
4		**Carriage of materials(As per Bihar SOR 2025)**							
		Coarse Sand (30 Km lead)	5.30	Cum	**1075.00**	**5696.77**			
		Coarse Aggregates (60 Km lead)	10.60	Cum	**1398.00**	**14816.90**			
		Cement (30 km lead)	5.08	MT	**742.00**	**3772.07**			
		TOTAL (In Rs.)				**129953.46**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.30	Cum	**584.64**	3098.19	309.82		
		Coarse Aggregate	10.60	Cum	**944.26**	10007.87	1000.79		
		Total					**1310.61**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF REPAIRED STRUCTURES

QUANTITIES OF REPAIRING WORK FOR SUPERPASSAGE AT Ch. 0.115 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.**						
		Cleaning	1				160.00	Sqm
		TOTAL					**160.00**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.500 Km)						
1	5.1.3	**New Structure is proposed at this location.**						
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 walls	4	3.00	0.6	3	*21.60*	*Cum*
		Slab	1	5.00	4.5	0.5	*11.25*	*Cum*
		Abutment	2	4.00	5.5	3	*132.00*	*Cum*
		TOTAL					**164.85**	**Cum**
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.68 Km)						
1		**No repair work is required as the structure is in good condition.**						
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.500 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				**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.**						
		Wing walls	4	10.00	1.00	0.45	*18.00*	*Cum*
		TOTAL					**18.00**	**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.**						
		Wing walls	8	10.00		0.45	36.00	Sqm
			8		1.00	0.45	3.60	Sqm
		TOTAL					**39.60**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.180 Km)						
1		**No repair work is required as the structure is in good condition.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.960 Km)								
1		**New Fall is proposed at this location.**						
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.**						
		Side walls	2	13.00	0.46	2	*23.92*	*Cum*
		Wing Wall	4	3.00	1.5	2	*36.00*	*Cum*
		Floor	1	13.00	1	0.6	*7.80*	*Cum*
		TOTAL					**67.72**	**Cum**
QUANTITIES OF REPAIRING WORK FOR CULVERT + FALL (Ch.-3.140 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				**150.00**	**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.**						
		Wing walls	4	12.50	1.00	0.45	*22.50*	*Cum*
		Parapet	2	3.96	0.50	0.5	*1.98*	*Cum*
		TOTAL					***24.48***	***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.**						
		Wing walls	8	12.50		0.45	45.00	Sqm
			8		1.00	0.45	3.60	Sqm
		Parapet	4	3.96		0.5	*7.92*	Sqm
			4		0.50	0.5	*1.00*	Sqm
		TOTAL					**57.52**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.750 Km)								
1		**New Fall is proposed at this location.**						
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.**						
		Side walls	2	12.00	0.46	2	*22.08*	*Cum*
		Wing Wall	4	3.00	1.5	2	*36.00*	*Cum*
		Floor	1	12.00	1	0.6	*7.20*	*Cum*
		TOTAL					**65.28**	**Cum**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.220 Km)								
1		**New Fall is proposed at this location.**						
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.**						
		Side walls	2	13.00	0.55	2	*28.60*	*Cum*
		Wing Wall	4	5.00	1.5	3	*90.00*	*Cum*
		Floor	1	13.00	1	0.6	*7.80*	*Cum*
		TOTAL					**126.40**	**Cum**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.500 Km)								
1		**New Fall is proposed at this location.**						
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.**						
		Side walls	2	12.00	0.55	2	*26.40*	*Cum*
		Wing Wall	4	5.00	1.5	3	*90.00*	*Cum*
		Floor	1	12.00	1	0.6	*7.20*	*Cum*
		TOTAL					**123.60**	**Cum**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.880 Km)								
1	**5.1.3**	**New Fall is proposed at this location.**						
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.**						
		Side walls	2	16.00	0.55	1.5	*26.40*	*Cum*
		Wing Wall	4	5.00	1.5	3	*90.00*	*Cum*
		Floor	1	16.00	1	0.6	*9.60*	*Cum*
		TOTAL					**126.00**	**Cum**
QUANTITIES OF REPAIRING WORK FOR CULVERT + FALL (Ch.-5.170 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				**150.00**	**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.**						
		Wing walls	4	6.00	1.00	0.45	*10.80*	*Cum*
		Parapet	2	3.35	0.50	0.5	*1.68*	*Cum*
		TOTAL					***12.48***	***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.**						
		Wing walls	8	6.00		0.45	21.60	Sqm
			8		1.00	0.45	3.60	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Parapet	4	3.35		0.5	*6.71*	Sqm
			4		0.50	0.5	*1.00*	Sqm
		TOTAL					**32.91**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL Ch.-5.450 Km)								
1	**5.1.3**	**New Fall is proposed at this location.**						
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.**						
		Side walls	2	10.00	0.55	1.5	*16.50*	*Cum*
		Wing Wall	4	4.50	1.5	3	*81.00*	*Cum*
		Floor	1	10.00	1	0.6	*6.00*	*Cum*
		TOTAL					**103.50**	**Cum**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.665 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	**5.3.5**	**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 walls	4	6.00	1.00	0.45	*10.80*	*Cum*
		Parapet	2	3.05	0.50	0.5	*1.52*	*Cum*
		TOTAL					***12.32***	***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.**						
		Wing walls	8	6.00		0.45	21.60	Sqm
			8		1.00	0.45	3.60	Sqm
		Parapet	4	3.05		0.5	*6.10*	Sqm
			4		0.50	0.5	*1.00*	Sqm
		TOTAL					**32.30**	**Sqm**

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	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.	60.00	Cum	**1044.90**	62694.00			
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.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials(As per Bihar SOR 2025)**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (60 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 6 no., Total Seigniorage charges					**45471.57**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	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.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	#REF!	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost 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	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

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)	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(As per Bihar SOR 2025)**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (60 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 (60 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 26 nos. outlet, Total Seigniorage charges					**₹ 28,604.50**			

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	
		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	SI-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	455.0	₹ 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	SI-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	SI-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	SI-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				**₹ 609.92**	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	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**

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	
	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**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**
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**
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	0.5	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.5	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**
	5.6.2	Labour Charges for Laying, fitting and fixing 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 .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m 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	1.50	nos	569.00	853.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled Mazdoor	7.00	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	**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	**1200 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	0.057	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**
22	**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	417.0	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**
23	**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**
24	**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

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**

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 2025 & PL 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 Charges for Laying, fitting and fixing 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 .	**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

Nabinagar Division – Kuthari Sub Dy.
(Total Cost – Rs. 5.05 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND
ABSTRACT OF COST (KUTHARI SUB DY.)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	Kulharia Sub Dy.	1	Job	13324074.68	0.00	₹ 1,33,24,074.68	AOC Earthwork Kulhariya Sub Dy.	21
	Barki Parhi Minor	1	Job	4172396.38	0.00	₹ 41,72,396.38	AOC Earthwork Barki Parhi minor	22
	Sattar Minor	1	Job	890369.58	0.00	₹ 8,90,369.58	AOC Earthwork Sattar minor	23
	Mohar Karma Minor	1	Job	2856669.45	0.00	₹ 28,56,669.45	AOC Earthwork Mohar Karma minor	24
2	Head Regulator							
	Barki Parhi Minor	1	No.	349839.56	2793.18	₹ 3,52,632.74	Pipe HR AOC Barki Parhi Minor	25
	Sattar Minor	1	No.	323105.71	2517.39	₹ 3,25,623.11	Pipe HR AOC Sattar Minor	26
	Mohar Karma Minor	1	No.	355749.12	2685.49	₹ 3,58,434.61	Pipe HR AOC Mohar Karma Minor	27
3	Falls							
	Kulharia Sub Dy.							
	0.457 m Height at Ch. 1.900 Km	1.00	No.	1079452.24	9642.46	₹ 10,89,094.70	Fall (AOC) Kulhariya Sub Dy.	37
	0.610 m Height at Ch. 10.750 Km	1.00	No.	773683.88	6395.97	₹ 7,80,079.85		38
	0.305 m Height at Ch. 11.760 Km	1.00	No.	533693.10	4338.63	₹ 5,38,031.73		39
	0.610 m Height at Ch. 12.000 Km	1.00	No.	694161.02	4944.80	₹ 6,99,105.82		40
	Barki Parhi Minor							
	0.914 m Height at Ch. 0.945 Km	1.00	No.	514644.11	4148.80	₹ 5,18,792.91	Fall (AOC) Barki Parhi minor	41
	Sattar Minor							
	0.305 m Height at Ch. 0.000 Km	1.00	No.	361055.32	2825.75	₹ 3,63,881.07	Fall (AOC) Sattar minor	42
	1.220 m Height at Ch. 1.305 Km	1.00	No.	414496.18	3142.44	₹ 4,17,638.62		43
4	Brick Section							
		1.00	No.	6994168.45	18584.63	₹ 70,12,753.08	Brick Sec !I14	72
5	*Repair of Structures*							
	Kulharia Sub Dy.	1.00	No.	1391917.38	12058.96	₹ 14,03,976.34	Abstract (Repair St.) Kulhariya Sub Dy.	73
	Barki Parhi Minor	1.00	No.	232556.95	2316.01	₹ 2,34,872.95	Abstract (Repair St.) Barki Parhi minor	74
	Sattar Minor	1.00	No.	47875.89	400.70	₹ 48,276.59	Abstract (Repair St.) Sattar minor	75
	Mohar Karma Minor	1.00	No.	268581.08	2802.06	₹ 2,71,383.14	Abstract (Repair St.) Mohar Karma minor	76
	Approach Road	12.00	No.	521018.55	7578.59	₹ 63,43,165.74	Approach Road AOC	111
6	Outlets							
	Kulharia Sub Dy.	55.00	Nos.	127744.47	1100.17	₹ 70,86,455.24	Outlet-AOC	114
	Barki Parhi Minor	4.00	Nos.	127744.47	1100.17	₹ 5,15,378.56		
	Sattar Minor	2.00	Nos.	127744.47	1100.17	₹ 2,57,689.28		
	Mohar Karma Minor	4.00	Nos.	127744.47	1100.17	₹ 5,15,378.56		
7	Kilometer Stone	24	No.	3853.40	0.00	₹ 92,481.60	Rates '!F61	131
	TOTAL (In Rs.)					**₹ 5,04,68,636.32**		
	TOTAL (In Lacs)					**504.69**		

	Carriage of Materials -Abstract		
1	Steel & Cement	M.T.	**742.00**
2	RCC Hume Pipe	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	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				
KULHARIA SUB DY. OFFTAKING FROM 80.007 KM OF RMC				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.000 - 1.150	1150	6.010	6911.500	Sqm
1.150 -2.500	1350	5.610	7573.500	Sqm
2.500 - 3.475	975	5.350	5216.250	Sqm
3.475 - 6.100	2625	5.000	13125.000	Sqm
6.100 - 7.650	1550	4.490	6959.500	Sqm
7.650 - 9.225	1575	4.020	6331.500	Sqm
9.25 - 10.000	775	3.240	2511.000	Sqm
10.000 - 11.275	1275	2.830	3608.250	Sqm
11.275 - 11.700	425	2.270	964.750	Sqm
11.700 - 12.100	400	1.980	792.000	Sqm
12.100 - 12.300	200	1.480	296.000	Sqm
12.300 - 12.550	250	1.300	325.000	Sqm
	TOTAL		**54614.25**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.000 - 1.150	1150	6.01	0.15	1036.73	Cum
1.150 -2.500	1350	5.61	0.15	1136.03	Cum
2.500 - 3.475	975	5.35	0.15	782.44	Cum
3.475 - 6.100	2625	5.00	0.15	1968.75	Cum
6.100 - 7.650	1550	4.49	0.15	1043.93	Cum
7.650 - 9.225	1575	4.02	0.15	949.73	Cum
9.25 - 10.000	775	3.24	0.15	376.65	Cum
10.000 - 11.275	1275	2.83	0.15	541.24	Cum
11.275 - 11.700	425	2.27	0.15	144.71	Cum
11.700 - 12.100	400	1.98	0.15	118.80	Cum
12.100 - 12.300	200	1.48	0.15	44.40	Cum
12.300 - 12.550	250	1.30	0.15	48.75	Cum
	TOTAL			**8192.14**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
BARKI PARHI MINOR				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.000 - 2.100	2100	1.690	3549.000	Sqm
2.100 -2.500	400	1.370	548.000	Sqm
2.500- 2.770	270	1.250	337.500	Sqm
	TOTAL		**4434.50**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.000 - 2.100	2100	1.69	0.15	532.35	Cum
2.100 -2.500	400	1.37	0.15	82.20	Cum
2.500- 2.770	270	1.25	0.15	50.63	Cum
	TOTAL			**665.18**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
SATTAR MINOR				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.000 - 0.400	400	1.350	540.000	Sqm
0.400 -1.100	700	1.150	805.000	Sqm
	TOTAL		**1345.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.000 - 0.400	400	1.35	0.15	81.00	Cum
0.400 -1.100	700	1.15	0.15	120.75	Cum
	TOTAL			**201.75**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
MOHAR KARMA MINOR				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.000 - 0.800	800	1.790	1432.000	Sqm
0.800 -1.450	650	1.480	962.000	Sqm
1.450 - 2.065	615	1.250	768.750	Sqm
	TOTAL		**3162.75**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.000 - 0.800	800	1.79	0.15	214.80	Cum
0.800 -1.450	650	1.48	0.15	144.30	Cum
1.450 - 2.065	615	1.25	0.15	115.31	Cum
	TOTAL			**474.41**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

KULHARIA SUB DY - KM 0.000 TO KM 18.600

		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	2.992	1.496	149.600	4.357	2.179	217.850
200	100	1.799	2.396	239.550	7.651	6.004	600.400
300	100	6.439	4.119	411.900	5.223	6.437	643.700
400	100	3.497	4.968	496.800	4.451	4.837	483.700
500	100	3.855	3.676	367.600	3.196	3.824	382.350
600	100	3.483	3.669	366.900	6.915	5.056	505.550
700	100	8.097	5.790	579.000	0.426	3.671	367.050
800	100	3.624	5.861	586.050	7.342	3.884	388.400
900	100	6.172	4.898	489.800	5.513	6.428	642.750
1000	100	3.363	4.768	476.750	4.193	4.853	485.300
1100	100	2.097	2.730	273.000	3.144	3.669	366.850
1200	100	1.249	1.673	167.300	5.268	4.206	420.600
1300	100	1.047	1.148	114.800	10.403	7.836	783.550
1400	100	0.960	1.004	100.350	7.519	8.961	896.100
1500	100	2.300	1.630	163.000	5.622	6.571	657.050
1600	100	2.313	2.307	230.650	5.223	5.423	542.250
1700	100	1.946	2.130	212.950	6.338	5.781	578.050
1800	100	1.751	1.849	184.850	4.491	5.415	541.450
1900	100	5.983	3.867	386.700	2.370	3.431	343.050
2000	100	4.310	5.147	514.650	3.062	2.716	271.600
2100	100	3.879	4.095	409.450	4.287	3.675	367.450
2200	100	3.054	3.467	346.650	2.792	3.540	353.950
2300	100	3.066	3.060	306.000	4.781	3.787	378.650
2400	100	2.530	2.798	279.800	4.509	4.645	464.500
2500	100	2.208	2.369	236.900	3.588	4.049	404.850
2600	100	2.664	2.436	243.600	3.835	3.712	371.150
2700	100	1.243	1.954	195.350	4.104	3.970	396.950
2800	100	3.309	2.276	227.600	1.191	2.648	264.750
2900	100	1.934	2.622	262.150	1.473	1.332	133.200
3000	100	3.167	2.551	255.050	1.125	1.299	129.900
3100	100	2.198	2.683	268.250	1.285	1.205	120.500
3200	100	2.101	2.150	214.950	1.377	1.331	133.100
3300	100	2.565	2.333	233.300	1.877	1.627	162.700
3400	100	2.465	2.515	251.500	1.232	1.555	155.450
3500	100	4.247	3.356	335.600	1.981	1.607	160.650
3600	100	5.951	5.099	509.900	0.981	1.481	148.100
3700	100	3.902	4.927	492.650	1.399	1.190	119.000
3800	100	3.813	3.858	385.750	4.813	3.106	310.600
3900	100	2.797	3.305	330.500	5.084	4.949	494.850
4000	100	2.373	2.585	258.500	4.147	4.616	461.550
4100	100	2.444	2.409	240.850	6.165	5.156	515.600
4200	100	2.530	2.487	248.700	4.063	5.114	511.400
4300	100	2.786	2.658	265.800	6.245	5.154	515.400
4400	100	2.411	2.599	259.850	6.390	6.318	631.750
4500	100	2.269	2.340	234.000	5.402	5.896	589.600
4600	100	2.477	2.373	237.300	2.680	4.041	404.100

		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
4700	100	2.185	2.331	233.100	5.136	3.908	390.800
4800	100	4.123	3.154	315.400	4.724	4.930	493.000
4900	100	2.396	3.260	325.950	3.343	4.034	403.350
5000	100	2.354	2.375	237.500	5.888	4.616	461.550
5100	100	2.262	2.308	230.800	5.122	5.505	550.500
5200	100	3.367	2.815	281.450	2.207	3.665	366.450
5300	100	3.464	3.416	341.550	1.298	1.753	175.250
5400	100	3.960	3.712	371.200	2.106	1.702	170.200
5500	100	4.044	4.002	400.200	1.982	2.044	204.400
5600	100	4.061	4.053	405.250	2.070	2.026	202.600
5700	100	4.419	4.240	424.000	1.854	1.962	196.200
5800	100	3.669	4.044	404.400	3.467	2.661	266.050
5900	100	2.659	3.164	316.400	0.956	2.212	221.150
6000	100	1.890	2.275	227.450	1.243	1.100	109.950
6100	100	0.692	1.291	129.100	2.607	1.925	192.500
6200	100	0.643	0.668	66.750	2.988	2.798	279.750
6300	100	0.445	0.544	54.400	3.360	3.174	317.400
6400	100	0.580	0.513	51.250	3.280	3.320	332.000
6500	100	0.089	0.335	33.450	4.880	4.080	408.000
6600	100	0.044	0.067	6.650	5.228	5.054	505.400
6700	100	4.172	2.108	210.800	1.086	3.157	315.700
6800	100	3.480	3.826	382.600	1.502	1.294	129.400
6900	100	2.922	3.201	320.100	1.512	1.507	150.700
7000	100	2.328	2.625	262.500	1.318	1.415	141.500
7100	100	1.255	1.792	179.150	1.967	1.643	164.250
7200	100	0.206	0.731	73.050	4.169	3.068	306.800
7300	100	0.024	0.115	11.500	6.182	5.176	517.550
7400	100	3.095	1.560	155.950	3.289	4.736	473.550
7500	100	2.496	2.796	279.550	2.303	2.796	279.600
7600	100	1.004	1.750	175.000	2.718	2.511	251.050
7700	100	0.651	0.828	82.750	3.120	2.919	291.900
7800	100	21.598	11.125	1112.450	6.039	4.580	457.950
7900	100	5.297	13.448	1344.750	1.824	3.932	393.150
8000	100	1.633	3.465	346.500	2.496	2.160	216.000
8100	100	0.434	1.034	103.350	3.905	3.201	320.050
8200	100	1.087	0.761	76.050	2.494	3.200	319.950
8300	100	0.778	0.933	93.250	3.064	2.779	277.900
8400	100	0.239	0.509	50.850	4.011	3.538	353.750
8500	100	3.740	1.990	198.950	3.699	3.855	385.500
8600	100	2.575	3.158	315.750	1.661	2.680	268.000
8700	100	2.104	2.340	233.950	2.559	2.110	211.000
8800	100	1.503	1.804	180.350	3.345	2.952	295.200
8900	100	1.194	1.349	134.850	2.471	2.908	290.800
9000	100	1.409	1.302	130.150	5.752	4.112	411.150
9100	100	1.165	1.287	128.700	4.417	5.085	508.450
9200	100	0.691	0.928	92.800	6.611	5.514	551.400
9300	100	3.914	2.303	230.250	3.722	5.167	516.650
9400	100	3.312	3.613	361.300	3.861	3.792	379.150
9500	100	2.355	2.834	283.350	3.089	3.475	347.500

		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
9600	100	1.742	2.049	204.850	3.757	3.423	342.300
9700	100	1.520	1.631	163.100	3.851	3.804	380.400
9800	100	0.544	1.032	103.200	7.206	5.529	552.850
9900	100	0.466	0.505	50.500	8.874	8.040	804.000
10000	100	6.500	3.483	348.300	3.030	5.952	595.200
10100	100	3.411	4.956	495.550	2.648	2.839	283.900
10200	100	2.544	2.978	297.750	3.339	2.994	299.350
10300	100	2.326	2.435	243.500	1.916	2.628	262.750
10400	100	2.130	2.228	222.800	1.056	1.486	148.600
10500	100	1.791	1.961	196.050	1.072	1.064	106.400
10600	100	0.919	1.355	135.500	1.742	1.407	140.700
10700	100	0.702	0.811	81.050	1.260	1.501	150.100
10800	100	2.302	1.502	150.200	1.297	1.279	127.850
10900	100	1.561	1.932	193.150	2.871	2.084	208.400
11000	100	1.671	1.616	161.600	3.616	3.244	324.350
11100	100	1.704	1.688	168.750	4.718	4.167	416.700
11200	100	1.793	1.749	174.850	3.751	4.235	423.450
11300	100	0.919	1.356	135.600	4.442	4.097	409.650
11400	100	1.978	1.449	144.850	2.505	3.474	347.350
11500	100	0.923	1.451	145.050	2.476	2.491	249.050
11600	100	0.653	0.788	78.800	3.771	3.124	312.350
11700	100	0.986	0.820	81.950	2.490	3.131	313.050
11800	100	0.723	0.855	85.450	3.623	3.057	305.650
11900	100	1.537	1.130	113.000	2.093	2.858	285.800
12000	100	2.064	1.801	180.050	2.412	2.253	225.250
12100	100	0.775	1.420	141.950	1.757	2.085	208.450
12200	100	0.744	0.760	75.950	1.299	1.528	152.800
12300	100	0.419	0.582	58.150	1.784	1.542	154.150
12400	100	0.068	0.244	24.350	2.808	2.296	229.600
12500	100	0.455	0.262	26.150	2.897	2.853	285.250
12513	13	0.427	0.441	5.733	2.541	2.719	35.347
Total				**31136.683**			**43670.397**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**31136.683**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**43670.397**
NET QUANTITY OF EARTHWORK IN FILLING							**12533.71**

BARKI PARHI MR. (0.000 TO 2.760 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.079	0.040	3.950	5.246	2.623	262.300
200	100	0.526	0.303	30.250	2.918	4.082	408.200
300	100	0.362	0.444	44.400	3.727	3.323	332.250
400	100	0.254	0.308	30.800	4.445	4.086	408.600
500	100	0.180	0.217	21.700	2.276	3.361	336.050
600	100	0.086	0.133	13.300	3.477	2.877	287.650
700	100	0.200	0.143	14.300	2.026	2.752	275.150
800	100	0.104	0.152	15.200	2.776	2.401	240.100
900	100	0.000	0.052	5.200	4.920	3.848	384.800
1000	100	0.558	0.279	27.900	1.947	3.434	343.350
1100	100	0.643	0.601	60.050	0.797	1.372	137.200

		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
1200	100	0.054	0.349	34.850	3.896	2.347	234.650
1300	100	0.646	0.350	35.000	3.059	3.478	347.750
1400	100	0.427	0.537	53.650	3.078	3.069	306.850
1500	100	0.064	0.246	24.550	2.711	2.895	289.450
1600	100	0.000	0.032	3.200	4.436	3.574	357.350
1700	100	0.000	0.000	0.000	9.071	6.754	675.350
1800	100	1.422	0.711	71.100	1.924	5.498	549.750
1900	100	0.756	1.089	108.900	1.661	1.793	179.250
2000	100	0.397	0.577	57.650	2.098	1.880	187.950
2100	100	1.803	1.100	110.000	2.011	2.055	205.450
2200	100	0.254	1.029	102.850	2.650	2.331	233.050
2300	100	0.081	0.168	16.750	3.875	3.263	326.250
2400	100	0.281	0.181	18.100	3.906	3.891	389.050
2500	100	0.520	0.401	40.050	2.065	2.986	298.550
2600	100	0.388	0.454	45.400	2.339	2.202	220.200
2700	100	0.092	0.240	24.000	5.060	3.700	369.950
2760	60	0.000	0.046	2.760	5.085	5.073	304.350
Total				**1015.860**			**8890.850**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1015.860**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**8890.850**
NET QUANTITY OF EARTHWORK IN FILLING							**7874.99**

SATTAR MR. (0.000 TO 1.123 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.021	0.011	1.050	1.891	0.946	94.550
200	100	1.500	0.761	76.050	0.954	1.423	142.250
300	100	0.282	0.891	89.100	1.078	1.016	101.600
400	100	0.224	0.253	25.300	2.458	1.768	176.800
500	100	0.236	0.230	23.000	3.124	2.791	279.100
600	100	1.891	1.064	106.350	1.207	2.166	216.550
700	100	0.912	1.402	140.150	0.819	1.013	101.300
800	100	0.416	0.664	66.400	1.242	1.031	103.050
900	100	0.272	0.344	34.400	2.065	1.654	165.350
1000	100	0.257	0.265	26.450	3.088	2.577	257.650
1100	100	0.182	0.220	21.950	3.746	3.417	341.700
1123	23	0.155	0.169	3.876	4.327	4.037	92.840
Total				**614.076**			**2072.740**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**614.076**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**2072.740**
NET QUANTITY OF EARTHWORK IN FILLING							**1458.66**

MOHAR KARMA MR. (0.000 TO 2.042 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.516	0.258	25.800	2.416	1.208	120.800
200	100	0.186	0.351	35.100	3.161	2.789	278.850
300	100	0.000	0.093	9.300	7.208	5.185	518.450
400	100	2.609	1.305	130.450	1.508	4.358	435.800
500	100	1.125	1.867	186.700	1.318	1.413	141.300
600	100	1.482	1.304	130.350	0.437	0.878	87.750

		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
700	100	0.583	1.033	103.250	1.288	0.863	86.250
800	100	0.124	0.354	35.350	1.622	1.455	145.500
900	100	0.000	0.062	6.200	3.232	2.427	242.700
1000	100	0.000	0.000	0.000	4.991	4.112	411.150
1100	100	1.079	0.540	53.950	1.905	3.448	344.800
1200	100	0.437	0.758	75.800	1.864	1.885	188.450
1300	100	0.216	0.327	32.650	2.422	2.143	214.300
1400	100	0.121	0.169	16.850	3.076	2.749	274.900
1500	100	0.263	0.192	19.200	2.813	2.945	294.450
1600	100	0.151	0.207	20.700	3.289	3.051	305.100
1700	100	0.131	0.141	14.100	2.104	2.697	269.650
1800	100	0.503	0.317	31.700	5.277	3.691	369.050
1900	100	0.248	0.376	37.550	6.436	5.857	585.650
2000	100	0.000	0.124	12.400	7.222	6.829	682.900
2042	42	0.089	0.045	1.869	3.653	5.438	228.375
Total				**979.269**			**6226.175**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**979.269**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**6226.175**
NET QUANTITY OF EARTHWORK IN FILLING							**5246.91**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK KULHARIYA SUB 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	*54614.25*	*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	31136.683	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	12454.6732	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	12533.714	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	3760.11	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3133.43	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	5640.17	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	8192.14	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	12533.71	Cum

DETAILS OF QUANTITIES FOR EARTH WORK BARKI PARHI 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.			
	Separate sheet attached	1	***4434.50***	***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	1015.860	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	406.344	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	7874.990	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	2362.50	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1968.75	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3543.75	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	665.18	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	8890.850	Cum

DETAILS OF QUANTITIES FOR EARTH WORK SATTAR 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.			
	Separate sheet attached	1	***1345.00***	***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	614.076	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	245.6302	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	1458.664	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	437.60	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	364.67	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	656.40	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	201.75	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	2072.74	Cum

DETAILS OF QUANTITIES FOR EARTH WORK MOHAR KARMA 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.			
	Separate sheet attached	1	***3162.75***	***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	979.269	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	391.7076	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	5246.906	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	1574.07	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1311.73	Cum
c.	Lead Beyond 1.5 km but upto 2 km (25% of net filling)	1	2361.11	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	474.41	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	6226.18	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR KULHARIA SUB 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.	54614.25	Sqm	**11.80**	644687.9027
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	31136.68	Cum	**156.50**	4872890.89
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	12454.67	Cum	**17.22**	214438.5117
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.	12533.71	Cum	**165.12**	2069516.23
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)	3760.11	Cum	**174.89**	657606.37
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	3133.43	Cum	**217.92**	682836.74
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	5640.17	Cum	**319.14**	1800004.27
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.				
			8192.14	Cum	**196.10**	1606478.16
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.	12533.71	Cum	**61.88**	775615.61
TOTAL COST OF EARTHWORK (in Rs.)						**13324074.68**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**133.241**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR BARKI PARHI 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.	4434.50	Sqm	**11.80**	52346.56714
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	1015.86	Cum	**156.50**	158982.09
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	406.34	Cum	**17.22**	6996.233559
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.	7874.99	Cum	**165.12**	1300286.54
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)	2362.50	Cum	**174.89**	413177.10
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	1968.75	Cum	**217.92**	429029.46
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3543.75	Cum	**319.14**	1130950.94
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.				
			665.18	Cum	**196.10**	130440.82
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.	8890.85	Cum	**61.88**	550186.64
TOTAL COST OF EARTHWORK (in Rs.)						**4172396.38**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**41.724**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR SATTAR 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.	1345.00	Sqm	**11.80**	15876.90445
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	614.08	Cum	**156.50**	96102.81575
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	245.63	Cum	**17.22**	4229.141438
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.	1458.66	Cum	**165.12**	240848.71
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)	437.60	Cum	**174.89**	76531.72
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	364.67	Cum	**217.92**	79468.01
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	656.40	Cum	**319.14**	209483.11
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.				
			201.75	Cum	**196.10**	39563.18
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.	2072.74	Cum	**61.88**	128265.98
TOTAL COST OF EARTHWORK (in Rs.)						**890369.58**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**8.904**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR MOHAR KARMA 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.	3162.75	Sqm	**11.80**	37334.33425
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	979.27	Cum	**156.50**	153255.5985
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	391.71	Cum	**17.22**	6744.231136
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.	5246.91	Cum	**165.12**	866347.92
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)	1574.07	Cum	**174.89**	275289.42
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	1311.73	Cum	**217.92**	285851.44
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	2361.11	Cum	**319.14**	753523.91
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.				
			474.41	Cum	**196.10**	93032.29
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.	6226.18	Cum	**61.88**	385290.31
TOTAL COST OF EARTHWORK (in Rs.)						**2856669.45**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**28.567**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF HR OF BARKI PARHI MR OFFTAKING FROM RD- 0+295 KM (R.),KULHARIA SUB- 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)**
1	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.	30.212	Cum	**195.20**	5897.48			
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.	11.12	Cum	**6381.70**	70964.60	3.60	5.00	10.01
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.	14.628	Cum	**6914.20**	101139.95	6.03	6.29	12.58
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	94.862	Sqm	**578.60**	54887.37			
5	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.	0.29	MT	**73574.90**	21121.28			
6	M-181	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12278.01			
7	M-151	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	5.6.2.2	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	5.2.1	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)	1.09	Cum	**154.80**	169.00			
10	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	6.84	Cum	**149.30**	1020.80			
11		**Carriage of materias**							
		Coarse Sand (30 Km lead)	11.294	Cum	**1075.00**	12141.04			
		Coarse Aggregates	22.588	Cum	**1398.00**	31577.99			
		Cement (30 km lead)	9.637	MT	**742.00**	7150.56			
		Steel (30 km lead)	0.364	MT	**742.00**	269.93			
		Hume Pipe (30 Km Lead)	7.500	Rm	**919.00**	6892.50			
TOTAL (In Rs.)						**349839.56**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	11.29	Cum	**584.64**	6602.92	660.29		
		Coarse Aggregate	22.59	Cum	**944.26**	21328.92	2132.89		
		Total					**2793.18**		

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 HR OF SARTAR MINOR OFFTAKING FROM RD- 3+480 KM (R.),KULHARIA SUB- DY									
1	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.	29.778	Cum	**195.20**	5812.61			
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.	10.29	Cum	**6381.70**	65647.63	3.33	4.63	9.26
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.	12.906	Cum	**6914.20**	89237.67	5.32	5.55	11.10
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	87.682	Sqm	**578.60**	50732.91			
5	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.	0.25	MT	**73574.90**	18635.70			
6	M-181	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.09	MT	**160035.11**	14616.10			
7	M-151	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	5.6.2.2	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	5.2.1	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)	1.09	Cum	**154.80**	168.16			
10	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	6.83	Cum	**149.30**	1019.72			
11		**Carriage of materias**							
		Coarse Sand (30 Km lead)	10.179	Cum	**1075.00**	10942.27			
		Coarse Aggregates	20.358	Cum	**1398.00**	28460.07			
		Cement (30 km lead)	8.657	MT	**742.00**	6423.38			
		Steel (30 km lead)	0.253	MT	**742.00**	187.94			
		Hume Pipe (30 Km Lead)	7.500	Rm	**919.00**	6892.50			
TOTAL (In Rs.)						**323105.71**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	10.18	Cum	**584.64**	5950.96	595.10		
		Coarse Aggregate	20.36	Cum	**944.26**	19222.97	1922.30		
		Total					**2517.39**		

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 HR OF MOHAR KARMA MINOR OFFTAKING FROM RD- 9+220 KM (R.),KULHARIA SUB- DY									
1	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.	55.626	Cum	**195.20**	10858.19			
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.	10.52	Cum	**6381.70**	67167.39	3.41	4.74	9.47
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.	14.238	Cum	**6914.20**	98443.31	5.87	6.12	12.24
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	100.842	Sqm	**578.60**	58347.15			
5	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.	0.28	MT	**73574.90**	20558.13			
6	M-181	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.11	MT	**160035.11**	17367.68			
7	M-151	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	5.6.2.2	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	5.2.1	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)	0.95	Cum	**154.80**	147.13			
10	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	16.81	Cum	**149.30**	2509.76			
11		**Carriage of materias**							
		Coarse Sand (30 Km lead)	10.859	Cum	**1075.00**	11672.91			
		Coarse Aggregates	21.717	Cum	**1398.00**	30360.43			
		Cement (30 km lead)	9.283	MT	**742.00**	6888.14			
		Steel (30 km lead)	0.279	MT	**742.00**	207.33			
		Hume Pipe (30 Km Lead)	7.500	Rm	**919.00**	6892.50			
TOTAL (In Rs.)						**355749.12**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	10.86	Cum	**584.64**	6348.33	634.83		
		Coarse Aggregate	21.72	Cum	**944.26**	20506.54	2050.65		
		Total					**2685.49**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF PIPE HR OF BARKI PARHI MR OFFTAKING FROM RD- 0+295 KM (R.),KULHARIA SUB- DY

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.						
	U/S Toe Wall Base	*1*	*0.60*	*0.85*	*1.66*	*0.85*	*Cum*
	D/S Toe Wall Base	*1*	*0.77*	*0.85*	*1.20*	*0.78*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.37*	*0.60*	*1.16*	*0.95*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.64*	*1*	*1.20*	*1.53*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*	*1*	*1.20*	*1.07*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.10*	*1.75*	*1.20*	*8.80*	*Cum*
	PCC Below Hume Pipe	*1*	*7.85*	*1.37*	*1.51*	*16.24*	*Cum*
	TOTAL					**30.21**	**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.						
	U/S Toe Wall Base	*1*	*0.60*	*0.85*	*0.30*	*0.15*	*Cum*
	U/S Toe Wall Stem	*1*	*0.60*	*0.45*	*1.36*	*0.37*	*Cum*
	D/S Toe Wall Base	*1*	*0.77*	*0.85*	*0.30*	*0.20*	*Cum*
	D/S Toe Wall Stem	*1*	*0.77*	*0.45*	*1.36*	*0.47*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.37*	*0.60*	*0.39*	*0.32*	*Cum*
	Floor Apron (D/S Portion)	*1*	*1.85*	*0.68*	*0.39*	*0.48*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.64*	*1.00*	*0.30*	*0.38*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*	*1.00*	*0.30*	*0.27*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.10*	*1.75*	*0.30*	*2.20*	*Cum*
	PCC Below Hume Pipe	*1*	*7.85*	*1.37*	*0.30*	*3.23*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.85*	*0.52*	*0.24*	*1.91*	*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					**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.						
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.64*	*0.60*	*1.36*	*1.04*	*Cum*
		2	*0.64*	*0.45*	*0.55*	*0.31*	*Cum*
		2	*0.64*	*0.30*	*0.50*	*0.19*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*	*0.60*	*1.36*	*0.73*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.45	0.45	0.40	0.16	Cum
		2	0.45	0.30	0.50	0.13	Cum
	Average of Section A-A & Section C-C	2	2.10	1.35	1.36	7.67	Cum
		2	2.10	1.11	0.40	1.86	Cum
		2	2.10	0.71	0.50	1.49	Cum
	Gate Abutment	2	0.70	0.60	1.05	0.88	Cum
	Deduct gate Groove	2	0.20	0.10	1.05	-0.04	Cum
	Parapet wall for earth filling Protection	2	1.14	0.30	0.30	0.21	Cum
	TOTAL					**14.63**	**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	0.60		0.30	0.36	Sqm
		2		0.85	0.30	0.51	Sqm
	U/S Toe Wall Stem	2	0.60		1.36	1.63	Sqm
		2		0.45	1.36	1.22	Sqm
	D/S Toe Wall Base	2	0.77		0.30	0.46	Sqm
		2		0.85	0.30	0.51	Sqm
	D/S Toe Wall Stem	2	0.77		1.36	2.08	Sqm
		2		0.45	1.36	1.22	Sqm
	Floor Apron (U/S Portion)	2	1.37		0.39	1.05	Sqm
		2		0.60	0.39	0.46	Sqm
	Floor Apron (D/S Portion)	2	1.85		0.39	1.42	Sqm
		2		0.68	0.39	0.52	Sqm
	U/S Transitions Floor (Left & Right)						
	Section X-X	4	0.64		1.36	3.45	Sqm
		4		0.60	1.36	3.26	Sqm
		4	0.64		0.40	1.02	Sqm
		4		0.45	0.40	0.72	Sqm
		4	0.64		0.50	1.27	Sqm
		4		0.30	0.50	0.60	Sqm
	D/S Transitions Floor (Left & Right)						
	Section D-D	4	0.45		1.36	2.42	Sqm
		4		0.60	1.36	3.26	Sqm
		4	0.45		0.40	0.71	Sqm
		4		0.45	0.40	0.72	Sqm
		4	0.45		0.50	0.89	Sqm
		4		0.30	0.50	0.60	Sqm
	Average of Section A-A & Section C-C	4	2.10		1.36	11.40	Sqm
		4		1.35	1.36	7.31	Sqm
		4	2.10		0.40	3.36	Sqm
		4		1.11	0.40	1.77	Sqm
		4	2.10		0.50	4.20	Sqm
		4		0.71	0.50	1.42	Sqm
	Gate Abutment	4	0.70		1.05	2.94	Sqm
		4		0.60	1.05	2.52	Sqm
	Parapet wall for earth filling Protection	4	1.14		0.30	1.37	Sqm
		4		0.30	0.30	0.36	Sqm
	PCC Below Hume Pipe	2	7.85		0.30	4.71	Sqm
		2		1.37	0.30	0.82	Sqm
	PCC Below Hume Pipe in (Curve Portion)	4	7.85		0.24	7.38	Sqm
		4		0.52	0.24	0.49	Sqm
	Collar Joint	6	1.37		1.44	11.84	Sqm
		6		0.30	1.44	2.59	Sqm
	TOTAL					**94.86**	**Sqm**

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		
	0.25 % Skin Reinforcement for Transition walls	*14.63*	*0.25%*	*0.04*	*7850*	*287.07*	*Kg*
	TOTAL Weight of steel (in kg)					287.07	Kg
	TOTAL Weight of Steel (in Tonne)					**0.29**	**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*		*0.70*	*13.38*	*Kg*
		2	*9.56*		*1.00*	*19.12*	*Kg*
	TOTAL (In Kg)					**76.72**	**Kg**
	TOTAL					**0.08**	**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	10.625	1.37	0.075	*1.09*	**Cum**
	TOTAL					**1.09**	**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	0.60		0.43	0.259	*Cum*
	D/S Toe Wall Base	1	0.77		0.36	0.276	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.64*		0.18	0.228	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*		0.18	0.160	
	Average of Section A-A & Section C-C	*2*	*2.10*		0.36	1.503	*Cum*
	Above Hume Pipe	*1*	*1.14*		3.87	4.412	*Cum*
	TOTAL					**6.84**	**Cum**
DETAILS OF QUANTITIES OF PIPE HR OF SATTAR MINOR OFFTAKING FROM RD- 3+480 KM (R.),KULHARIA SUB- 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*	*0.60*	*0.85*	*1.50*	*0.77*	*Cum*
	D/S Toe Wall Base	*1*	*0.56*	*0.85*	*1.04*	*0.50*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.52*	*0.60*	*1.42*	*1.30*	*Cum*
	U/S Transitions Floor (Left & Right)						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section X-X	*2*	*0.55*	*1*	*1.20*	*1.33*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.43*	*1*	*1.20*	*1.04*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.01*	*1.7*	*1.20*	*8.20*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.37*	*1.62*	*16.65*	*Cum*
	TOTAL					**29.78**	**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*	*0.60*	*0.85*	*0.30*	*0.15*	*Cum*
	U/S Toe Wall Stem	*1*	*0.60*	*0.45*	*1.20*	*0.32*	*Cum*
	D/S Toe Wall Base	*1*	*0.56*	*0.85*	*0.30*	*0.14*	*Cum*
	D/S Toe Wall Stem	*1*	*0.56*	*0.45*	*1.20*	*0.30*	*Cum*
	Floor Apron (U/S Portion)	*1*	*1.52*	*0.60*	*0.39*	*0.35*	*Cum*
	Floor Apron (D/S Portion)	*1*	*1.55*	*0.58*	*0.39*	*0.35*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.55*	*1.00*	*0.30*	*0.33*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.43*	*1.00*	*0.30*	*0.26*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.01*	*1.70*	*0.30*	*2.05*	*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					**10.29**	**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*	*0.55*	*0.60*	*1.20*	*0.80*	*Cum*
		2	*0.55*	*0.45*	*0.55*	*0.27*	*Cum*
		2	*0.55*	*0.30*	*0.50*	*0.17*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.43*	*0.60*	*1.20*	*0.63*	*Cum*
		2	*0.43*	*0.45*	*0.40*	*0.16*	*Cum*
		2	*0.43*	*0.30*	*0.50*	*0.13*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.01*	*1.35*	*1.20*	*6.50*	*Cum*
		2	*2.01*	*1.11*	*0.40*	*1.78*	*Cum*
		2	*2.01*	*0.71*	*0.50*	*1.43*	*Cum*
	Gate Abutment	*2*	*0.70*	*0.60*	*1.05*	*0.88*	*Cum*
	Deduct gate Groove	*2*	*0.20*	*0.10*	*1.05*	*-0.04*	*Cum*
	Parapet wall for earth filling Protection	*2*	*1.14*	*0.30*	*0.30*	*0.21*	*Cum*
	TOTAL					**12.91**	**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*	*0.60*		*0.30*	*0.36*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	U/S Toe Wall Stem	*2*	*0.60*		*1.20*	*1.44*	*Sqm*
		2		*0.45*	*1.20*	*1.08*	*Sqm*
	D/S Toe Wall Base	*2*	*0.56*		*0.30*	*0.33*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	D/S Toe Wall Stem	*2*	*0.56*		*1.20*	*1.34*	*Sqm*
		2		*0.45*	*1.20*	*1.08*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*1.52*		*0.39*	*1.17*	*Sqm*
		2		*0.60*	*0.39*	*0.46*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*1.55*		*0.39*	*1.19*	*Sqm*
		2		*0.58*	*0.39*	*0.45*	*Sqm*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*4*	*0.55*		*1.20*	*2.66*	*Sqm*
		4		*0.60*	*1.20*	*2.88*	*Sqm*
		4	*0.55*		*0.40*	*0.89*	*Sqm*
		4		*0.45*	*0.40*	*0.72*	*Sqm*
		4	*0.55*		*0.50*	*1.11*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*4*	*0.43*		*1.20*	*2.09*	*Sqm*
		4		*0.60*	*1.20*	*2.88*	*Sqm*
		4	*0.43*		*0.40*	*0.69*	*Sqm*
		4		*0.45*	*0.40*	*0.72*	*Sqm*
		4	*0.43*		*0.50*	*0.87*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.01*		*1.20*	*9.66*	*Sqm*
		4		*1.35*	*1.20*	*6.47*	*Sqm*
		4	*2.01*		*0.40*	*3.22*	*Sqm*
		4		*1.11*	*0.40*	*1.77*	*Sqm*
		4	*2.01*		*0.50*	*4.02*	*Sqm*
		4		*0.71*	*0.50*	*1.42*	*Sqm*
	Gate Abutment	*4*	*0.70*		*1.05*	*2.94*	*Sqm*
		4		*0.60*	*1.05*	*2.52*	*Sqm*
	Parapet wall for earth filling Protection	*4*	*1.14*		*0.30*	*1.37*	*Sqm*
		4		*0.30*	*0.30*	*0.36*	*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*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**87.68**	**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	*12.91*	*0.25%*	*0.03*	*7850*	*253.29*	*Kg*
	TOTAL Weight of steel (in kg)					253.29	Kg
	TOTAL Weight of Steel (in Tonne)					**0.25**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.04*	*4.00*	*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*		*1.42*	*27.15*	*Kg*
		2	*9.56*		*1.00*	*19.12*	*Kg*
	TOTAL (In Kg)					**91.33**	**Kg**
	TOTAL					**0.09**	**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	10.572	1.37	0.075	*1.09*	**Cum**
	TOTAL					**1.09**	**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	0.60	0.38		0.229	*Cum*
	D/S Toe Wall Base	1	0.56	0.30		0.166	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.55*	0.18		0.198	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.43*	0.18		0.155	
	Average of Section A-A & Section C-C	*2*	*2.01*	0.36		1.439	*Cum*
	Above Hume Pipe	*1*	*1.14*	4.07		4.642	*Cum*
	TOTAL					**6.83**	**Cum**
DETAILS OF QUANTITIES OF PIPE HR OF MOHAR KARMA MINOR OFFTAKING FROM RD- 9+220 KM (R.),KULHARIA SUB- 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*	*0.81*	*0.85*	*1.20*	*0.82*	*Cum*
	D/S Toe Wall Base	*1*	*0.75*	*0.85*	*2.09*	*1.33*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor Apron (U/S Portion)	*1*	*0.35*	*0.60*	*1.42*	*0.30*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.70*	*0.99*	*3.19*	*4.41*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*	*1.00*	*2.10*	*1.89*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.13*	*1.79*	*2.10*	*16.00*	*Cum*
	Well Side Walls	*1*	*1.10*	*1.10*	*2.37*	*2.87*	
	PCC Below Hume Pipe	*1*	*7.70*	*1.37*	*2.66*	*28.01*	*Cum*
	TOTAL					**55.63**	**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*	*0.81*	*0.85*	*0.30*	*0.21*	*Cum*
	U/S Toe Wall Stem	*1*	*0.81*	*0.45*	*0.90*	*0.33*	*Cum*
	D/S Toe Wall Base	*1*	*0.75*	*0.85*	*0.30*	*0.19*	*Cum*
	D/S Toe Wall Stem	*1*	*0.75*	*0.45*	*0.90*	*0.30*	*Cum*
	Floor Apron (U/S Portion)	*1*	*0.35*	*0.60*	*0.30*	*0.06*	*Cum*
	Floor Apron (D/S Portion)	*1*	*1.55*	*0.67*	*0.30*	*0.31*	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.70*	*0.99*	*0.30*	*0.41*	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*	*1.00*	*0.30*	*0.27*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.13*	*1.79*	*0.30*	*2.29*	*Cum*
	PCC Below Hume Pipe	*1*	*7.70*	*1.37*	*0.30*	*3.16*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.70*	*0.51*	*0.24*	*1.84*	*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					**10.52**	**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.						
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.70*	*0.59*	*0.90*	*0.74*	*Cum*
		2	*0.70*	*0.45*	*0.61*	*0.38*	*Cum*
		2	*0.70*	*0.30*	*0.50*	*0.21*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*	*0.59*	*0.90*	*0.48*	*Cum*
		2	*0.45*	*0.45*	*0.40*	*0.16*	*Cum*
		2	*0.45*	*0.30*	*0.50*	*0.14*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.13*	*1.39*	*0.90*	*5.33*	*Cum*
		2	*2.13*	*1.16*	*0.40*	*1.98*	*Cum*
		2	*2.13*	*0.71*	*0.50*	*1.52*	*Cum*
	Gate Abutment	*2*	*0.70*	*0.60*	*2.17*	*1.82*	*Cum*
	Deduct gate Groove	*2*	*0.20*	*0.10*	*2.17*	*-0.09*	*Cum*
	Well Side Walls	*3*	*1.10*	*0.25*	*1.57*	*1.29*	*Cum*
		1	*1.10*	*0.25*	*0.50*	*0.14*	*Cum*
	Well Base	*1*	*0.60*	*0.60*	*0.10*	*0.04*	*Cum*
	Parapet wall for earth filling Protection	*1*	*1.14*	*0.30*	*0.30*	*0.10*	*Cum*
	TOTAL					**14.24**	**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*	*0.81*		*0.30*	*0.48*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	U/S Toe Wall Stem	*2*	*0.81*		*0.90*	*1.45*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Toe Wall Base	*2*	*0.75*		*0.30*	*0.45*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	D/S Toe Wall Stem	*2*	*0.75*		*0.90*	*1.35*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*0.35*		*0.30*	*0.21*	*Sqm*
		2		*0.60*	*0.30*	*0.36*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*1.55*		*0.30*	*0.93*	*Sqm*
		2		*0.67*	*0.30*	*0.40*	*Sqm*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*4*	*0.70*		*0.90*	*2.50*	*Sqm*
		4		*0.59*	*0.90*	*2.13*	*Sqm*
		4	*0.70*		*0.40*	*1.11*	*Sqm*
		4		*0.45*	*0.40*	*0.71*	*Sqm*
		4	*0.70*		*0.50*	*1.39*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*4*	*0.45*		*0.90*	*1.62*	*Sqm*
		4		*0.59*	*0.90*	*2.13*	*Sqm*
		4	*0.45*		*0.40*	*0.72*	*Sqm*
		4		*0.45*	*0.40*	*0.71*	*Sqm*
		4	*0.45*		*0.50*	*0.90*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.13*		*0.90*	*7.67*	*Sqm*
		4		*1.39*	*0.90*	*5.00*	*Sqm*
		4	*2.13*		*0.40*	*3.41*	*Sqm*
		4		*1.16*	*0.40*	*1.86*	*Sqm*
		4	*2.13*		*0.50*	*4.26*	*Sqm*
		4		*0.71*	*0.50*	*1.43*	*Sqm*
	Gate Abutment	*4*	*0.70*		*2.17*	*6.08*	*Sqm*
		4		*0.60*	*2.17*	*5.21*	*Sqm*
	Well Side Walls	*6*	*1.1*		*1.57*	*10.34*	*Sqm*
		6		*0.25*	*1.57*	*2.35*	*Sqm*
		2	*1.1*		*0.5*	*1.10*	*Sqm*
		2		*0.25*	*0.50*	*0.25*	*Sqm*
	Parapet wall for earth filling Protection	*2*	*1.14*		*0.30*	*0.68*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.30*	*0.30*	*0.18*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.70*		*0.30*	*4.62*	*Sqm*
		2		*1.37*	*0.30*	*0.82*	*Sqm*
	PCC Below Hume Pipe in (Curve Portion)	*4*	*7.70*		*0.24*	*7.24*	*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					**100.84**	**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	*14.24*	*0.25%*	*0.04*	*7850*	*279.42*	*Kg*
	TOTAL Weight of steel (in kg)					279.42	Kg
	TOTAL Weight of Steel (in Tonne)					**0.28**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.77*	*6.82*	*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*		*2.17*	*41.53*	*Kg*
		2	*9.56*		*1.00*	*19.12*	*Kg*
	TOTAL (In Kg)					**108.52**	**Kg**
	TOTAL					**0.11**	**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	9.25	1.37	0.075	*0.95*	**Cum**
	TOTAL					**0.95**	**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	0.81	0.43		0.344	*Cum*
	D/S Toe Wall Base	1	0.75	0.26		0.196	*Cum*
	U/S Transitions Floor (Left & Right)						
	Section X-X	*2*	*0.70*	0.40		0.556	*Cum*
	D/S Transitions Floor (Left & Right)						
	Section D-D	*2*	*0.45*	0.59		0.528	
	Average of Section A-A & Section C-C	*2*	*2.13*	1.01		4.317	*Cum*
	Above Hume Pipe	*1*	*1.14*	9.53		10.869	*Cum*
	TOTAL					**16.81**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KULHARIA SUB DY								
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.900 KM								
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.	113.046	Cum	**195.20**	22066.61			
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.	17.30	Cum	**6381.70**	110393.15	5.60	7.78	15.57
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.	69.71	Cum	**6914.20**	481973.01	28.75	29.97	59.95
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.	1.20	Cum	**8151.40**	9759.43	0.68	0.47	0.95
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.	1.11	MT	**73574.90**	81904.17			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	220.07	Sqm	**578.60**	127330.56			
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.	16.64	Sqm	**2532.61**	42137.57			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.70	Cum	**694.61**	1875.45			
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.	2.70	Cum	**1237.00**	3339.90			
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.	2.70	Cum	**1377.70**	3719.79			
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.	2.70	Cum	**516.50**	1394.55			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.15	Sqm	**63.20**	830.79			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	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	2.91	Cum	**149.30**	435.02			
15	**Carriage of materias**							
	Coarse Sand	38.226	Cum	**1075.00**	41092.44			
	Coarse Aggregates	76.463	Cum	**1398.00**	106895.30			
	Cement (30 km lead)	35.038	MT	**742.00**	25998.17			
	Steel (30 km lead)	1.113	MT	**742.00**	826.00			
	Boulder (60 Km lead)	2.70	Cum	**1159.00**	3129.30			
	Brick (15 km lead)	998.00	No.	**3.18**	3173.64			
	TOTAL (In Rs.)				**1079452.24**			
	TOTAL (In Rs.)				**1079452.24**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	38.23	Cum	**584.64**	22348.17	2234.82		
	Coarse Aggregate	76.46	Cum	**944.26**	72200.97	7220.10		
	Boulders	2.70	Cum	**694.61**	1875.45	187.54		
	Total					9642.46		
	For 1 no. fall, Total Seigniorage charges					**9642.46**		

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 10.750								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 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.	78.405	Cum	**195.20**	15304.68			
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.	10.50	Cum	**6381.70**	66993.35	3.40	4.72	9.45
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.	48.05	Cum	**6914.20**	332194.64	19.82	20.66	41.32
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.	0.79	Cum	**8151.40**	6407.98	0.45	0.31	0.62
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.	1.15	MT	**73574.90**	84609.62			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	172.48	Sqm	**578.60**	99794.20			
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.	12.97	Sqm	**2532.61**	32842.89			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.60	Cum	**694.61**	416.77			
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.	0.60	Cum	**1237.00**	742.20			
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.	0.60	Cum	**1377.70**	826.62			
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.	0.60	Cum	**516.50**	309.90			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.64	Sqm	**63.20**	735.80			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	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	1.93	Cum	**149.30**	288.09			
15	**Carriage of materias**							
	Coarse Sand	25.690	Cum	**1075.00**	27616.78			
	Coarse Aggregates	51.388	Cum	**1398.00**	71840.32			
	Cement (30 km lead)	23.666	MT	**742.00**	17559.93			
	Steel (30 km lead)	1.150	MT	**742.00**	853.28			
	Boulder (60 Km lead)	0.60	Cum	**1159.00**	695.40			
	Brick (15 km lead)	778.00	No.	**3.18**	2474.04			
	TOTAL (In Rs.)				**773683.88**			
	TOTAL (In Rs.)				**773683.88**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.69	Cum	**584.64**	15019.42	1501.94		
	Coarse Aggregate	51.39	Cum	**944.26**	48523.56	4852.36		
	Boulders	0.60	Cum	**694.61**	416.77	41.68		
	Total					6395.97		
	For 1 no. fall, Total Seigniorage charges					**6395.97**		

SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 11.760								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 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.	48.149	Cum	**195.20**	9398.74			
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.	8.05	Cum	**6381.70**	51403.69	2.61	3.62	7.25
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.	31.66	Cum	**6914.20**	218912.88	13.06	13.61	27.23
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.	0.64	Cum	**8151.40**	5241.39	0.36	0.25	0.51
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.	0.76	MT	**73574.90**	55973.39			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	132.39	Sqm	**578.60**	76599.85			
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.	8.47	Sqm	**2532.61**	21456.27			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	**694.61**	125.03			
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.	0.18	Cum	**1237.00**	222.66			
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.	0.18	Cum	**1377.70**	247.99			
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.	0.18	Cum	**516.50**	92.97			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.61	Sqm	**63.20**	670.56			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	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	1.15	Cum	**149.30**	171.87			
15	**Carriage of materias**							
	Coarse Sand	17.490	Cum	**1075.00**	18801.57			
	Coarse Aggregates	34.986	Cum	**1398.00**	48910.57			
	Cement (30 km lead)	16.035	MT	**742.00**	11897.72			
	Steel (30 km lead)	0.761	MT	**742.00**	564.49			
	Boulder (60 Km lead)	0.18	Cum	**1159.00**	208.62			
	Brick (15 km lead)	508.00	No.	**3.18**	1615.44			
	TOTAL (In Rs.)				**533693.10**			
	TOTAL (In Rs.)				**533693.10**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.49	Cum	**584.64**	10225.26	1022.53		
	Coarse Aggregate	34.99	Cum	**944.26**	33035.98	3303.60		
	Boulders	0.18	Cum	**694.61**	125.03	12.50		
	Total					4338.63		
	For 1 no. fall, Total Seigniorage charges					**4338.63**		

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 12.000								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 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.	63.119	Cum	**195.20**	12320.81			
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.	8.32	Cum	**6381.70**	53081.81	2.69	3.74	7.49
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.	37.08	Cum	**6914.20**	256392.18	15.30	15.95	31.89
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.	0.65	Cum	**8151.40**	5278.81	0.37	0.25	0.51
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.	0.89	MT	**73574.90**	65373.60			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	143.78	Sqm	**578.60**	83190.89			
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.	8.47	Sqm	**2532.61**	21456.27			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	**694.61**	125.03			
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.	0.18	Cum	**1237.00**	222.66			
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.	0.18	Cum	**1377.70**	247.99			
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.	0.18	Cum	**516.50**	92.97			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.70	Sqm	**63.20**	676.36			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	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	1.85	Cum	**149.30**	275.76			
15	**Carriage of materias**							
	Coarse Sand	19.941	Cum	**1075.00**	21436.39			
	Coarse Aggregates	39.888	Cum	**1398.00**	55763.61			
	Cement (30 km lead)	18.358	MT	**742.00**	13621.99			
	Steel (30 km lead)	0.889	MT	**742.00**	659.29			
	Boulder (60 Km lead)	0.18	Cum	**1159.00**	208.62			
	Brick (15 km lead)	508.00	No.	**3.18**	1615.44			
	TOTAL (In Rs.)				**694161.02**			
	TOTAL (In Rs.)				**694161.02**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.94	Cum	**584.64**	11658.21	1165.82		
	Coarse Aggregate	39.89	Cum	**944.26**	37664.77	3766.48		
	Boulders	0.18	Cum	**694.61**	125.03	12.50		
	Total					4944.80		
	For 1 no. fall, Total Seigniorage charges					**4944.80**		

ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR BARKI PARHI MINOR								
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 0.945 KM								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 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.	68.912	Cum	**195.20**	13451.53			
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.	6.54	Cum	**6381.70**	41766.95	2.12	2.95	5.89
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.	31.54	Cum	**6914.20**	218096.96	13.01	13.56	27.13
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.	0.61	Cum	**8151.40**	4993.18	0.35	0.24	0.48
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.	0.76	MT	**73574.90**	55716.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	130.48	Sqm	**578.60**	75497.12			
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.	5.62	Sqm	**2532.61**	14223.14			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.09	Cum	**694.61**	62.51			
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**	111.33			
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.	0.09	Cum	**1377.70**	123.99			
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**	46.49			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.33	Sqm	**63.20**	652.93			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	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	4.43	Cum	**149.30**	661.91			
15	**Carriage of materias**							
	Coarse Sand	16.748	Cum	**1075.00**	18003.77			
	Coarse Aggregates	33.502	Cum	**1398.00**	46835.11			
	Cement (30 km lead)	15.479	MT	**742.00**	11485.76			
	Steel (30 km lead)	0.757	MT	**742.00**	561.90			
	Boulder (60 Km lead)	0.09	Cum	**1159.00**	104.31			
	Brick (15 km lead)	337.00	No.	**3.18**	1071.66			
	TOTAL (In Rs.)				**514644.11**			
	TOTAL (In Rs.)				**514644.11**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	16.75	Cum	**584.64**	9791.37	979.14		
	Coarse Aggregate	33.50	Cum	**944.26**	31634.14	3163.41		
	Boulders	0.09	Cum	**694.61**	62.51	6.25		
	Total					4148.80		
	For 1 no. fall, Total Seigniorage charges					**4148.80**		
	For 1 no. fall, Total Seigniorage charges					**4148.80**		

ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR SATTAR MINOR								
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 0.000								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 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.	36.249	Cum	**195.20**	7075.89			
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.	5.16	Cum	**6381.70**	32960.26	1.67	2.32	4.65
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.	20.74	Cum	**6914.20**	143412.99	8.56	8.92	17.84
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.	0.46	Cum	**8151.40**	3778.17	0.26	0.18	0.37
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.	0.50	MT	**73574.90**	36742.20			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	100.43	Sqm	**578.60**	58108.14			
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.	5.40	Sqm	**2532.61**	13676.09			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.00	Cum	**694.61**	0.00			
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.	0.00	Cum	**1237.00**	0.00			
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.	0.00	Cum	**1377.70**	0.00			
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.	0.00	Cum	**516.50**	0.00			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.28	Sqm	**63.20**	523.30			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	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	1.25	Cum	**149.30**	186.39			
15	**Carriage of materias**							
	Coarse Sand	11.424	Cum	**1075.00**	12280.70			
	Coarse Aggregates	22.852	Cum	**1398.00**	31947.72			
	Cement (30 km lead)	10.492	MT	**742.00**	7785.21			
	Steel (30 km lead)	0.499	MT	**742.00**	370.54			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	324.00	No.	**3.18**	1030.32			
	TOTAL (In Rs.)				**361055.32**			
	TOTAL (In Rs.)				**361055.32**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	11.42	Cum	**584.64**	6678.87	667.89		
	Coarse Aggregate	22.85	Cum	**944.26**	21578.65	2157.87		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2825.75		
	For 1 no. fall, Total Seigniorage charges					**2825.75**		

SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 1.305 KM								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 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.	58.615	Cum	**195.20**	11441.74			
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.	4.24	Cum	**6381.70**	27068.54	1.37	1.91	3.82
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.	24.59	Cum	**6914.20**	170003.60	10.14	10.57	21.15
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.	0.46	Cum	**8151.40**	3737.21	0.26	0.18	0.36
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.	0.59	MT	**73574.90**	43397.06			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	119.89	Sqm	**578.60**	69366.28			
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.	6.75	Sqm	**2532.61**	17095.12			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.16	Cum	**694.61**	109.40			
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.	0.16	Cum	**1237.00**	194.83			
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.	0.21	Cum	**1377.70**	289.32			
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.	0.21	Cum	**516.50**	108.47			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.77	Sqm	**63.20**	490.87			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	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	2.38	Cum	**149.30**	356.01			
15	**Carriage of materias**							
	Coarse Sand	12.660	Cum	**1075.00**	13609.70			
	Coarse Aggregates	25.325	Cum	**1398.00**	35404.30			
	Cement (30 km lead)	11.777	MT	**742.00**	8738.25			
	Steel (30 km lead)	0.590	MT	**742.00**	437.66			
	Boulder (60 Km lead)	0.16	Cum	**1159.00**	182.54			
	Brick (15 km lead)	405.00	No.	**3.18**	1287.90			
	TOTAL (In Rs.)				**414496.18**			
	TOTAL (In Rs.)				**414496.18**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	12.66	Cum	**584.64**	7401.65	740.17		
	Coarse Aggregate	25.32	Cum	**944.26**	23913.35	2391.33		
	Boulders	0.16	Cum	**694.61**	109.40	10.94		
	Total					3142.44		
	For 1 no. fall, Total Seigniorage charges					**3142.44**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KULHARIA SUB DY.

SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.900 KM

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.						
		1	113.05			**113.05**	**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*	*0.542*	*3.60*	*0.15*	*0.29*	*Cum*
		1	*0.783*	*3.60*	*0.15*	*0.42*	*Cum*
		1	*4.818*	*3.60*	*0.15*	*2.60*	*Cum*
		1	*0.282*	*3.60*	*0.15*	*0.15*	*Cum*
		1	*0.696*	*3.60*	*0.15*	*0.38*	*Cum*
		1	*0.782*	*3.60*	*0.15*	*0.42*	*Cum*
		1	*0.542*	*3.60*	*0.15*	*0.29*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.70*	*1.69*	*0.15*	*0.86*	*Cum*
	Section 2-2	*2*	*1.85*	*1.41*	*0.15*	*0.78*	*Cum*
	Section 3-3	*2*	*2.10*	*1.29*	*0.15*	*0.81*	*Cum*
	Section 5-5	*2*	*4.25*	*1.84*	*0.15*	*2.34*	*Cum*
	Section 6-6	*2*	*3.11*	*1.29*	*0.15*	*1.20*	*Cum*
	Toe Wall D/S Portion	*1*	*11.10*	*0.75*	*0.30*	*2.50*	*Cum*
	Toe Wall D/S Portion	*1*	*10.80*	*0.45*	*0.60*	*2.92*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.60*	*0.15*	*0.54*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	TOTAL					**17.30**	**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*	*1.48*	*0.45*	*0.45*	*0.60*	*Cum*
		2	*1.48*	*0.92*	*1.56*	*4.23*	*Cum*
		2	*1.48*	*1.54*	*0.50*	*2.27*	*Cum*
	Section 2-2	*2*	*1.85*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.85*	*0.78*	*1.10*	*3.17*	*Cum*
		2	*1.85*	*1.26*	*0.50*	*2.33*	*Cum*
	Section 3-3	*2*	*2.34*	*0.45*	*0.45*	*0.95*	*Cum*
		2	*2.34*	*0.72*	*0.90*	*3.03*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.34*	*1.14*	*0.50*	*2.66*	*Cum*
	Section 5-5	*2*	*4.21*	*0.45*	*0.45*	*1.70*	*Cum*
		2	*4.21*	*0.92*	*1.56*	*12.02*	*Cum*
		2	*4.21*	*1.54*	*0.50*	*6.46*	*Cum*
	Section 6-6	*2*	*3.03*	*0.45*	*0.45*	*1.23*	*Cum*
		2	*3.03*	*0.72*	*0.90*	*3.93*	*Cum*
		2	*3.03*	*1.14*	*0.50*	*3.45*	*Cum*
	Floor	*1*	*0.63*	*3.60*	*0.70*	*1.58*	*Cum*
		1	*5.25*	*3.60*	*0.50*	*9.45*	*Cum*
		1	*0.50*	*3.60*	*0.20*	*0.36*	*Cum*
		1	*0.20*	*3.60*	*0.40*	*0.29*	*Cum*
		1	*2.05*	*3.60*	*0.50*	*3.69*	*Cum*
		1	*0.63*	*3.60*	*0.70*	*1.58*	*Cum*
	Crest	*1*	*1.15*	*3.60*	*0.96*	*3.99*	*Cum*
	TOTAL					**69.71**	**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*	*3.60*	*0.15*	*0.54*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*14.61*	*0.45*	*0.05*	*0.33*	*Sqm*
	On Abutment Top (Right Side)	*1*	*14.61*	*0.45*	*0.05*	*0.33*	*Sqm*
	TOTAL					**1.20**	**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 @0.2% of M-20	**70.90**	**0.20%**	**0.14**	**7850**	**1113.21**	**Kg**
	Total Weight in Metric Tonne					**1.11**	**MT**
6	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						
	Section 1-1	*4*	*1.48*		*0.45*	*2.66*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.48*		*1.56*	*9.21*	*Sqm*
		4		*0.92*	*1.56*	*5.71*	*Sqm*
		4	*1.48*		*0.50*	*2.96*	*Sqm*
		4		*1.54*	*0.50*	*3.07*	*Sqm*
	Section 2-2	*4*	*1.85*		*0.45*	*3.33*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.85*		*1.10*	*8.14*	*Sqm*
		4		*0.78*	*1.10*	*3.43*	*Sqm*
		4	*1.85*		*0.50*	*3.70*	*Sqm*
		4		*1.26*	*0.50*	*2.52*	*Sqm*
	Section 3-3	*4*	*2.34*		*0.45*	*4.21*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*2.34*		*0.90*	*8.41*	*Sqm*
		4		*0.72*	*0.90*	*2.59*	*Sqm*
		4	*2.34*		*0.50*	*4.67*	*Sqm*
		4		*1.14*	*0.50*	*2.28*	*Sqm*
	Section 5-5	*4*	*4.21*		*0.45*	*7.57*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.21*		*1.56*	*26.20*	*Sqm*
		4		*0.92*	*1.56*	*5.71*	*Sqm*
		4	*4.21*		*0.50*	*8.42*	*Sqm*
		4		*1.54*	*0.50*	*3.07*	*Sqm*
	Section 6-6	*4*	*3.03*		*0.45*	*5.45*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.03*		*0.90*	*10.91*	*Sqm*
		4		*0.72*	*0.90*	*2.59*	*Sqm*
		4	*3.03*		*0.50*	*6.06*	*Sqm*
		4		*1.14*	*0.50*	*2.28*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.60*	*0.70*	*5.04*	*Sqm*
		2	*5.25*		*0.50*	*5.25*	*Sqm*
		2		*3.60*	*0.50*	*3.60*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*3.60*	*0.20*	*1.44*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*3.60*	*0.40*	*2.88*	*Sqm*
		2	*2.05*		*0.50*	*2.05*	*Sqm*
		2		*3.60*	*0.50*	*3.60*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.60*	*0.70*	*5.04*	*Sqm*
	Crest	*2*	*1.152*		*0.962*	*2.22*	*Sqm*
		2		*3.6*	*0.962*	*6.93*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.10*		*0.30*	*6.66*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*10.80*		*0.60*	*12.96*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.15*	*1.80*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**220.07**	**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*	*3.00*	*2.77*		*16.64*	*Sqm*
	TOTAL					**16.64**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.00*	*3.00*	*0.30*	**2.70**	**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*	*3.00*	*0.15*	**2.70**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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*	*14.61*	*0.45*		*6.57*	*Sqm*
	On Abutment Top (Right Side)	*1*	*14.61*	*0.45*		*6.57*	*Sqm*
	TOTAL					**13.15**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. **(RCD 14.9)**						
		1	2			**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						
		1		2.91		2.91	**Cum**
	TOTAL					**2.91**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 10.750						
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.						
		1		78.41		**78.41**	**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*	*1.60*	*0.15*	*0.13*	*Cum*
		1	*0.78*	*1.60*	*0.15*	*0.19*	*Cum*
		1	*4.38*	*1.60*	*0.15*	*1.05*	*Cum*
		1	*0.28*	*1.60*	*0.15*	*0.07*	*Cum*
		1	*0.64*	*1.60*	*0.15*	*0.15*	*Cum*
		1	*0.78*	*1.60*	*0.15*	*0.19*	*Cum*
		1	*0.54*	*1.60*	*0.15*	*0.13*	*Cum*
	PCC Below Abutment						
	Section 1-1	*1*	*2.32*	*1.57*	*0.15*	*0.55*	*Cum*
	Section 2-2	*1*	*2.00*	*1.20*	*0.15*	*0.36*	*Cum*
	Section 3-3	*1*	*0.96*	*1.08*	*0.15*	*0.16*	*Cum*
	Section 5-5	*2*	*4.10*	*1.72*	*0.15*	*2.11*	*Cum*
	Section 6-6	*1*	*2.69*	*1.08*	*0.15*	*0.43*	*Cum*
	Toe Wall D/S Portion	*1*	*8.05*	*0.75*	*0.30*	*1.81*	*Cum*
	Toe Wall D/S Portion	*1*	*7.75*	*0.45*	*0.60*	*2.09*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.15*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	TOTAL					**10.50**	**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.						
	Abutment						
	Section 1-1	*2*	*2.21*	*0.45*	*0.45*	*0.89*	*Cum*
		2	*2.21*	*0.86*	*1.36*	*5.15*	*Cum*
		2	*2.21*	*1.42*	*0.50*	*3.12*	*Cum*
	Section 2-2	*2*	*2.00*	*0.45*	*0.45*	*0.81*	*Cum*
		2	*2.00*	*0.68*	*0.75*	*2.03*	*Cum*
		2	*2.00*	*1.05*	*0.50*	*2.10*	*Cum*
	Section 3-3	*2*	*1.19*	*0.45*	*0.45*	*0.48*	*Cum*
		2	*1.19*	*0.62*	*0.55*	*0.80*	*Cum*
		2	*1.19*	*0.93*	*0.50*	*1.10*	*Cum*
	Section 5-5	*2*	*4.06*	*0.45*	*0.45*	*1.64*	*Cum*
		2	*4.06*	*0.86*	*1.36*	*9.46*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*4.06*	*1.42*	*0.50*	*5.74*	*Cum*
	Section 6-6	*2*	*2.61*	*0.45*	*0.45*	*1.06*	*Cum*
		2	*2.61*	*0.62*	*0.55*	*1.77*	*Cum*
		2	*2.61*	*0.93*	*0.50*	*2.43*	*Cum*
	Floor	*1*	*0.63*	*1.60*	*0.70*	*0.70*	*Cum*
		1	*5.00*	*1.60*	*0.50*	*4.00*	*Cum*
		1	*0.50*	*1.60*	*0.20*	*0.16*	*Cum*
		1	*0.20*	*1.60*	*0.40*	*0.13*	*Cum*
		1	*1.80*	*1.60*	*0.50*	*1.44*	*Cum*
		1	*0.63*	*1.60*	*0.70*	*0.70*	*Cum*
	Crest	*1*	*0.93*	*1.60*	*1.57*	*2.34*	*Cum*
	TOTAL					**48.05**	**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 Crest	*1*	*0.85*	*1.60*	*0.15*	*0.20*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.94*	*0.45*	*0.05*	*0.29*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.94*	*0.45*	*0.05*	*0.29*	*Sqm*
	TOTAL					**0.79**	**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 @0.3% of M-20	**48.83**	**0.30%**	**0.15**	**7850**	**1149.98**	**Kg**
	Total Weight in Metric Tonne					**1.15**	**MT**
6	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						
	Section 1-1	*4*	*2.21*		*0.45*	*3.97*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.21*		*1.36*	*12.00*	*Sqm*
		4		*0.86*	*1.36*	*4.67*	*Sqm*
		4	*2.21*		*0.50*	*4.41*	*Sqm*
		4		*1.42*	*0.50*	*2.83*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.45*	*3.60*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.00*		*0.75*	*6.00*	*Sqm*
		4		*0.68*	*0.75*	*2.03*	*Sqm*
		4	*2.00*		*0.50*	*4.00*	*Sqm*
		4		*1.05*	*0.50*	*2.10*	*Sqm*
	Section 3-3	*4*	*1.19*		*0.45*	*2.13*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.19*		*0.55*	*2.61*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*1.19*		*0.50*	*2.37*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Section 5-5	*4*	*4.06*		*0.45*	*7.30*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.06*		*1.36*	*22.06*	*Sqm*
		4		*0.86*	*1.36*	*4.67*	*Sqm*
		4	*4.06*		*0.50*	*8.11*	*Sqm*
		4		*1.42*	*0.50*	*2.83*	*Sqm*
	Section 6-6	*4*	*2.61*		*0.45*	*4.70*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.61*		*0.55*	*5.74*	*Sqm*
		4		*0.62*	*0.55*	*1.35*	*Sqm*
		4	*2.61*		*0.50*	*5.22*	*Sqm*
		4		*0.93*	*0.50*	*1.86*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.60*	*0.70*	*2.24*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*1.60*	*0.50*	*1.60*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*1.60*	*0.20*	*0.64*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.60*	*0.40*	*1.28*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*1.60*	*0.50*	*1.60*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.60*	*0.70*	*2.24*	*Sqm*
	Crest	*2*	*0.93*		*1.57*	*2.92*	*Sqm*
		2		*1.60*	*1.57*	*5.02*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.05*		*0.30*	*4.83*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.75*		*0.60*	*9.30*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**172.48**	**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*	*2.00*	*3.24*		*12.97*	*Sqm*
	TOTAL					**12.97**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.00*	*0.30*	**0.60**	**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*	*1.00*	*0.15*	**0.60**	**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*	*12.94*	*0.45*		*5.82*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*12.94*	*0.45*		*5.82*	*Sqm*
	TOTAL					**11.64**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)						
		1	2			**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						
		1		1.93		1.93	Cum
	TOTAL					**1.93**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 11.760						
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.						
		1	48.15			**48.15**	**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*	*1.00*	*0.15*	*0.08*	*Cum*
		1	*0.78*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*3.88*	*1.00*	*0.15*	*0.58*	*Cum*
		1	*0.28*	*1.00*	*0.15*	*0.04*	*Cum*
		1	*1.14*	*1.00*	*0.15*	*0.17*	*Cum*
		1	*0.78*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*0.54*	*1.00*	*0.15*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*1*	*1.73*	*1.32*	*0.15*	*0.34*	*Cum*
	Section 2-2	*1*	*1.85*	*1.13*	*0.15*	*0.31*	*Cum*
	Section 3-3	*1*	*1.50*	*1.01*	*0.15*	*0.23*	*Cum*
	Section 5-5	*2*	*3.61*	*1.47*	*0.15*	*1.59*	*Cum*
	Section 6-6	*1*	*2.33*	*1.01*	*0.15*	*0.35*	*Cum*
	Toe Wall D/S Portion	*1*	*6.68*	*0.75*	*0.30*	*1.50*	*Cum*
	Toe Wall D/S Portion	*1*	*6.38*	*0.45*	*0.60*	*1.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**8.05**	**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*	*1.69*	*0.45*	*0.45*	*0.68*	*Cum*
		2	*1.69*	*0.73*	*0.95*	*2.34*	*Cum*
		2	*1.69*	*1.17*	*0.50*	*1.97*	*Cum*
	Section 2-2	*2*	*1.85*	*0.45*	*0.45*	*0.75*	*Cum*
		2	*1.85*	*0.64*	*0.64*	*1.52*	*Cum*
		2	*1.85*	*0.98*	*0.50*	*1.82*	*Cum*
	Section 3-3	*2*	*1.72*	*0.45*	*0.45*	*0.70*	*Cum*
		2	*1.72*	*0.58*	*0.44*	*0.88*	*Cum*
		2	*1.72*	*0.86*	*0.50*	*1.48*	*Cum*
	Section 5-5	*2*	*3.56*	*0.45*	*0.45*	*1.44*	*Cum*
		2	*3.56*	*0.73*	*0.95*	*4.94*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.56*	*1.17*	*0.50*	*4.16*	*Cum*
	Section 6-6	*2*	*2.26*	*0.45*	*0.45*	*0.91*	*Cum*
		2	*2.26*	*0.58*	*0.44*	*1.16*	*Cum*
		2	*2.26*	*0.86*	*0.50*	*1.95*	*Cum*
	Floor	*1*	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
		1	*4.50*	*1.00*	*0.50*	*2.25*	*Cum*
		1	*0.50*	*1.00*	*0.20*	*0.10*	*Cum*
		1	*0.20*	*1.00*	*0.40*	*0.08*	*Cum*
		1	*2.30*	*1.00*	*0.50*	*1.15*	*Cum*
		1	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
	Crest	*1*	*0.84*	*1.00*	*0.59*	*0.50*	*Cum*
	TOTAL					**31.66**	**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*	*0.75*	*1.00*	*0.15*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.79*	*0.45*	*0.05*	*0.27*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.79*	*0.45*	*0.05*	*0.27*	*Sqm*
	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	**32.30**	**0.30%**	**0.10**	**7850**	**760.77**	**Kg**
	Total Weight in Metric Tonne					**0.76**	**MT**
6	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						
	Section 1-1	*4*	*1.69*		*0.45*	*3.04*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.69*		*0.95*	*6.39*	*Sqm*
		4		*0.73*	*0.95*	*2.77*	*Sqm*
		4	*1.69*		*0.50*	*3.38*	*Sqm*
		4		*1.17*	*0.50*	*2.33*	*Sqm*
	Section 2-2	*4*	*1.85*		*0.45*	*3.33*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.85*		*0.64*	*4.74*	*Sqm*
		4		*0.64*	*0.64*	*1.64*	*Sqm*
		4	*1.85*		*0.50*	*3.70*	*Sqm*
		4		*0.98*	*0.50*	*1.97*	*Sqm*
	Section 3-3	*4*	*1.72*		*0.45*	*3.09*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.72*		*0.44*	*3.02*	*Sqm*
		4		*0.58*	*0.44*	*1.02*	*Sqm*
		4	*1.72*		*0.50*	*3.44*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.86*	*0.50*	*1.73*	*Sqm*
	Section 5-5	*4*	*3.56*		*0.45*	*6.41*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.56*		*0.95*	*13.46*	*Sqm*
		4		*0.73*	*0.95*	*2.77*	*Sqm*
		4	*3.56*		*0.50*	*7.12*	*Sqm*
		4		*1.17*	*0.50*	*2.33*	*Sqm*
	Section 6-6	*4*	*2.26*		*0.45*	*4.06*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.26*		*0.44*	*3.97*	*Sqm*
		4		*0.58*	*0.44*	*1.02*	*Sqm*
		4	*2.26*		*0.50*	*4.52*	*Sqm*
		4		*0.86*	*0.50*	*1.73*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
		2	*4.50*		*0.50*	*4.50*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*1.00*	*0.20*	*0.40*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.00*	*0.40*	*0.80*	*Sqm*
		2	*2.30*		*0.50*	*2.30*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
	Crest	*2*	*0.84*		*0.59*	*1.00*	*Sqm*
		2		*1.00*	*0.59*	*1.19*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.68*		*0.30*	*4.01*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.38*		*0.60*	*7.66*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**132.39**	**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*	*1.50*	*2.82*		*8.47*	*Sqm*
	TOTAL					**8.47**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.40*	*0.30*	**0.18**	**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*	*0.40*	*0.15*	**0.18**	**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*	*11.79*	*0.45*		*5.31*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*11.79*	*0.45*		*5.31*	*Sqm*
	TOTAL					**10.61**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)						
		1	2			**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						
		1		1.15		1.15	Cum
	TOTAL					**1.15**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 12.000						
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.						
		1		63.12		**63.12**	**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*	*1.00*	*0.15*	*0.08*	*Cum*
		1	*0.78*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*4.38*	*1.00*	*0.15*	*0.66*	*Cum*
		1	*0.28*	*1.00*	*0.15*	*0.04*	*Cum*
		1	*0.49*	*1.00*	*0.15*	*0.07*	*Cum*
		1	*0.78*	*1.00*	*0.15*	*0.12*	*Cum*
		1	*0.54*	*1.00*	*0.15*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*1*	*2.22*	*1.50*	*0.15*	*0.50*	*Cum*
	Section 2-2	*1*	*2.00*	*1.13*	*0.15*	*0.34*	*Cum*
	Section 3-3	*1*	*0.99*	*1.01*	*0.15*	*0.15*	*Cum*
	Section 5-5	*2*	*3.57*	*1.65*	*0.15*	*1.77*	*Cum*
	Section 6-6	*1*	*2.33*	*1.01*	*0.15*	*0.35*	*Cum*
	Toe Wall D/S Portion	*1*	*6.68*	*0.75*	*0.30*	*1.50*	*Cum*
	Toe Wall D/S Portion	*1*	*6.38*	*0.45*	*0.60*	*1.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**8.32**	**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*	*2.10*	*0.45*	*0.45*	*0.85*	*Cum*
		2	*2.10*	*0.83*	*1.25*	*4.34*	*Cum*
		2	*2.10*	*1.35*	*0.50*	*2.84*	*Cum*
	Section 2-2	*2*	*2.00*	*0.45*	*0.45*	*0.81*	*Cum*
		2	*2.00*	*0.64*	*0.64*	*1.64*	*Cum*
		2	*2.00*	*0.98*	*0.50*	*1.97*	*Cum*
	Section 3-3	*2*	*1.22*	*0.45*	*0.45*	*0.49*	*Cum*
		2	*1.22*	*0.58*	*0.44*	*0.62*	*Cum*
		2	*1.22*	*0.86*	*0.50*	*1.05*	*Cum*
	Section 5-5	*2*	*3.52*	*0.45*	*0.45*	*1.43*	*Cum*
		2	*3.52*	*0.83*	*1.25*	*7.27*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*3.52*	*1.35*	*0.50*	*4.76*	*Cum*
	Section 6-6	*2*	*2.26*	*0.45*	*0.45*	*0.91*	*Cum*
		2	*2.26*	*0.58*	*0.44*	*1.16*	*Cum*
		2	*2.26*	*0.86*	*0.50*	*1.95*	*Cum*
	Floor	*1*	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
		1	*5.00*	*1.00*	*0.50*	*2.50*	*Cum*
		1	*0.50*	*1.00*	*0.20*	*0.10*	*Cum*
		1	*0.20*	*1.00*	*0.40*	*0.08*	*Cum*
		1	*1.80*	*1.00*	*0.50*	*0.90*	*Cum*
		1	*0.63*	*1.00*	*0.70*	*0.44*	*Cum*
	Crest	*1*	*0.89*	*1.00*	*0.59*	*0.53*	*Cum*
	TOTAL					**37.08**	**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*	*1.00*	*0.15*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.89*	*0.45*	*0.05*	*0.27*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.89*	*0.45*	*0.05*	*0.27*	*Sqm*
	TOTAL					**0.65**	**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**	**0.30%**	**0.11**	**7850**	**888.53**	**Kg**
	Total Weight in Metric Tonne					**0.89**	**MT**
6	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						
	Section 1-1	*4*	*2.10*		*0.45*	*3.79*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.10*		*1.25*	*10.52*	*Sqm*
		4		*0.83*	*1.25*	*4.13*	*Sqm*
		4	*2.10*		*0.50*	*4.21*	*Sqm*
		4		*1.35*	*0.50*	*2.70*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.45*	*3.60*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.00*		*0.64*	*5.12*	*Sqm*
		4		*0.64*	*0.64*	*1.64*	*Sqm*
		4	*2.00*		*0.50*	*4.00*	*Sqm*
		4		*0.98*	*0.50*	*1.97*	*Sqm*
	Section 3-3	*4*	*1.22*		*0.45*	*2.19*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.22*		*0.44*	*2.14*	*Sqm*
		4		*0.58*	*0.44*	*1.02*	*Sqm*
		4	*1.22*		*0.50*	*2.44*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.86*	*0.50*	*1.73*	*Sqm*
	Section 5-5	*4*	*3.52*		*0.45*	*6.34*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.52*		*1.25*	*17.62*	*Sqm*
		4		*0.83*	*1.25*	*4.13*	*Sqm*
		4	*3.52*		*0.50*	*7.05*	*Sqm*
		4		*1.35*	*0.50*	*2.70*	*Sqm*
	Section 6-6	*4*	*2.26*		*0.45*	*4.06*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.26*		*0.44*	*3.97*	*Sqm*
		4		*0.58*	*0.44*	*1.02*	*Sqm*
		4	*2.26*		*0.50*	*4.52*	*Sqm*
		4		*0.86*	*0.50*	*1.73*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*1.00*	*0.20*	*0.40*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*1.00*	*0.40*	*0.80*	*Sqm*
		2	*1.80*		*0.50*	*1.80*	*Sqm*
		2		*1.00*	*0.50*	*1.00*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.00*	*0.70*	*1.40*	*Sqm*
	Crest	*2*	*0.89*		*0.59*	*1.06*	*Sqm*
		2		*1.00*	*0.59*	*1.19*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.68*		*0.30*	*4.01*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.38*		*0.60*	*7.66*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**143.78**	**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*	*2.82*		*8.47*	*Sqm*
	TOTAL					**8.47**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.40*	*0.30*	**0.18**	**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*	*0.40*	*0.15*	**0.18**	**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*	*11.89*	*0.45*		*5.35*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*11.89*	*0.45*		*5.35*	*Sqm*
	TOTAL					**10.70**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)						
		1	2			**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						
		1		1.85		1.85	Cum
	TOTAL					**1.85**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BARKI PARHI MR.						
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 0.945 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.						
		1		68.91		**68.91**	**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*	*0.80*	*0.15*	*0.07*	*Cum*
		1	*0.78*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*4.88*	*0.80*	*0.15*	*0.59*	*Cum*
		1	*0.28*	*0.80*	*0.15*	*0.03*	*Cum*
		1	*1.14*	*0.80*	*0.15*	*0.14*	*Cum*
		1	*0.78*	*0.80*	*0.15*	*0.09*	*Cum*
		1	*0.54*	*0.80*	*0.15*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*1*	*1.23*	*1.66*	*0.15*	*0.31*	*Cum*
	Section 2-2	*1*	*3.00*	*1.11*	*0.15*	*0.50*	*Cum*
	Section 3-3	*1*	*1.71*	*0.99*	*0.15*	*0.25*	*Cum*
	Section 5-5	*2*	*2.21*	*1.81*	*0.15*	*1.20*	*Cum*
	Section 6-6	*1*	*1.41*	*0.99*	*0.15*	*0.21*	*Cum*
	Toe Wall D/S Portion	*1*	*4.60*	*0.75*	*0.30*	*1.04*	*Cum*
	Toe Wall D/S Portion	*1*	*4.30*	*0.45*	*0.60*	*1.16*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**6.54**	**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*	*1.01*	*0.45*	*0.45*	*0.41*	*Cum*
		2	*1.01*	*0.90*	*1.51*	*2.76*	*Cum*
		2	*1.01*	*1.51*	*0.50*	*1.52*	*Cum*
	Section 2-2	*2*	*3.00*	*0.45*	*0.45*	*1.22*	*Cum*
		2	*3.00*	*0.63*	*0.60*	*2.27*	*Cum*
		2	*3.00*	*0.96*	*0.50*	*2.88*	*Cum*
	Section 3-3	*2*	*1.93*	*0.45*	*0.45*	*0.78*	*Cum*
		2	*1.93*	*0.57*	*0.40*	*0.88*	*Cum*
		2	*1.93*	*0.84*	*0.50*	*1.62*	*Cum*
	Section 5-5	*2*	*2.16*	*0.45*	*0.45*	*0.88*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.16*	*0.90*	*1.51*	*5.92*	*Cum*
		2	*2.16*	*1.51*	*0.50*	*3.26*	*Cum*
	Section 6-6	*2*	*1.33*	*0.45*	*0.45*	*0.54*	*Cum*
		2	*1.33*	*0.57*	*0.40*	*0.61*	*Cum*
		2	*1.33*	*0.84*	*0.50*	*1.12*	*Cum*
	Floor	*1*	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
		1	*5.50*	*0.80*	*0.50*	*2.20*	*Cum*
		1	*0.50*	*0.80*	*0.20*	*0.08*	*Cum*
		1	*0.20*	*0.80*	*0.40*	*0.06*	*Cum*
		1	*2.30*	*0.80*	*0.50*	*0.92*	*Cum*
		1	*0.63*	*0.80*	*0.70*	*0.35*	*Cum*
	Crest	*1*	*0.99*	*0.80*	*1.17*	*0.92*	*Cum*
	TOTAL					**31.54**	**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*	*0.80*	*0.15*	*0.10*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.48*	*0.45*	*0.05*	*0.26*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.48*	*0.45*	*0.05*	*0.26*	*Sqm*
	TOTAL					**0.61**	**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.	Quanti ty	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**32.16**	**0.30%**	**0.10**	**7850**	**757.27**	**Kg**
	Total Weight in Metric Tonne					**0.76**	**MT**
6	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						
	Section 1-1	*4*	*1.01*		*0.45*	*1.82*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.01*		*1.51*	*6.11*	*Sqm*
		4		*0.90*	*1.51*	*5.47*	*Sqm*
		4	*1.01*		*0.50*	*2.02*	*Sqm*
		4		*1.51*	*0.50*	*3.02*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.45*	*5.40*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.63*	*0.60*	*1.51*	*Sqm*
		4	*3.00*		*0.50*	*6.00*	*Sqm*
		4		*0.96*	*0.50*	*1.92*	*Sqm*
	Section 3-3	*4*	*1.93*		*0.45*	*3.47*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.93*		*0.40*	*3.09*	*Sqm*
		4		*0.57*	*0.40*	*0.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*1.93*		*0.50*	*3.86*	*Sqm*
		4		*0.84*	*0.50*	*1.68*	*Sqm*
	Section 5-5	*4*	*2.16*		*0.45*	*3.89*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.16*		*1.51*	*13.10*	*Sqm*
		4		*0.90*	*1.51*	*5.47*	*Sqm*
		4	*2.16*		*0.50*	*4.33*	*Sqm*
		4		*1.51*	*0.50*	*3.02*	*Sqm*
	Section 6-6	*4*	*1.33*		*0.45*	*2.39*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.33*		*0.40*	*2.13*	*Sqm*
		4		*0.57*	*0.40*	*0.91*	*Sqm*
		4	*1.33*		*0.50*	*2.66*	*Sqm*
		4		*0.84*	*0.50*	*1.68*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
		2	*5.50*		*0.50*	*5.50*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.80*	*0.20*	*0.32*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.80*	*0.40*	*0.64*	*Sqm*
		2	*2.30*		*0.50*	*2.30*	*Sqm*
		2		*0.80*	*0.50*	*0.80*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.80*	*0.70*	*1.12*	*Sqm*
	Crest	*2*	*0.99*		*1.17*	*2.30*	*Sqm*
		2		*0.80*	*1.17*	*1.87*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.60*		*0.30*	*2.76*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.30*		*0.60*	*5.16*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**130.48**	**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*	*1.50*	*1.87*		*5.62*	*Sqm*
	TOTAL					**5.62**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.20*	*0.30*	**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	*1.50*	*0.20*	*0.15*	**0.09**	**Cum**
10	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
	On Abutment Top (Left Side)	*1*	*11.48*	*0.45*		*5.17*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.48*	*0.45*		*5.17*	*Sqm*
	TOTAL					**10.33**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)						
		1	2			**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						
		1		4.43		4.43	Cum
	TOTAL					**4.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SATTAR MR.						
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 0.000						
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.						
		1		36.25		**36.25**	**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*	*0.55*	*0.15*	*0.04*	*Cum*
		1	*0.78*	*0.55*	*0.15*	*0.06*	*Cum*
		1	*4.08*	*0.55*	*0.15*	*0.34*	*Cum*
		1	*0.28*	*0.55*	*0.15*	*0.02*	*Cum*
		1	*0.94*	*0.55*	*0.15*	*0.08*	*Cum*
		1	*0.78*	*0.55*	*0.15*	*0.06*	*Cum*
		1	*0.54*	*0.55*	*0.15*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*1*	*0.91*	*1.27*	*0.15*	*0.17*	*Cum*
	Section 2-2	*1*	*2.50*	*1.09*	*0.15*	*0.41*	*Cum*
	Section 3-3	*1*	*1.70*	*0.97*	*0.15*	*0.25*	*Cum*
	Section 5-5	*2*	*2.20*	*1.42*	*0.15*	*0.94*	*Cum*
	Section 6-6	*1*	*1.35*	*0.97*	*0.15*	*0.19*	*Cum*
	Toe Wall D/S Portion	*1*	*3.68*	*0.75*	*0.30*	*0.83*	*Cum*
	Toe Wall D/S Portion	*1*	*3.38*	*0.45*	*0.60*	*0.91*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**5.16**	**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*	*0.69*	*0.45*	*0.45*	*0.28*	*Cum*
		2	*0.69*	*0.71*	*0.87*	*0.84*	*Cum*
		2	*0.69*	*1.12*	*0.50*	*0.77*	*Cum*
	Section 2-2	*2*	*2.50*	*0.45*	*0.45*	*1.01*	*Cum*
		2	*2.50*	*0.62*	*0.56*	*1.73*	*Cum*
		2	*2.50*	*0.94*	*0.50*	*2.34*	*Cum*
	Section 3-3	*2*	*1.92*	*0.45*	*0.45*	*0.78*	*Cum*
		2	*1.92*	*0.56*	*0.36*	*0.77*	*Cum*
		2	*1.92*	*0.82*	*0.50*	*1.57*	*Cum*
	Section 5-5	*2*	*2.16*	*0.45*	*0.45*	*0.87*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.16*	*0.71*	*0.87*	*2.65*	*Cum*
		2	*2.16*	*1.12*	*0.50*	*2.42*	*Cum*
	Section 6-6	*2*	*1.27*	*0.45*	*0.45*	*0.51*	*Cum*
		2	*1.27*	*0.56*	*0.36*	*0.51*	*Cum*
		2	*1.27*	*0.82*	*0.50*	*1.04*	*Cum*
	Floor	*1*	*0.63*	*0.55*	*0.70*	*0.24*	*Cum*
		1	*4.51*	*0.55*	*0.50*	*1.24*	*Cum*
		1	*0.50*	*0.55*	*0.20*	*0.05*	*Cum*
		1	*0.20*	*0.55*	*0.40*	*0.04*	*Cum*
		1	*2.29*	*0.55*	*0.50*	*0.63*	*Cum*
		1	*0.63*	*0.55*	*0.70*	*0.24*	*Cum*
	Crest	*1*	*0.68*	*0.55*	*0.55*	*0.21*	*Cum*
	TOTAL					**20.74**	**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*	*0.60*	*0.55*	*0.15*	*0.05*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.20*	*0.45*	*0.05*	*0.21*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.20*	*0.45*	*0.05*	*0.21*	*Sqm*
	TOTAL					**0.46**	**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.	Quanti ty	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**21.21**	**0.30%**	**0.06**	**7850**	**499.38**	**Kg**
	Total Weight in Metric Tonne					**0.50**	**MT**
6	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						
	Section 1-1	*4*	*0.69*		*0.45*	*1.23*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.69*		*0.87*	*2.37*	*Sqm*
		4		*0.71*	*0.87*	*2.45*	*Sqm*
		4	*0.69*		*0.50*	*1.37*	*Sqm*
		4		*1.12*	*0.50*	*2.24*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.45*	*4.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.50*		*0.56*	*5.60*	*Sqm*
		4		*0.62*	*0.56*	*1.38*	*Sqm*
		4	*2.50*		*0.50*	*5.00*	*Sqm*
		4		*0.94*	*0.50*	*1.87*	*Sqm*
	Section 3-3	*4*	*1.92*		*0.45*	*3.46*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.92*		*0.36*	*2.76*	*Sqm*
		4		*0.56*	*0.36*	*0.80*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*1.92*		*0.50*	*3.84*	*Sqm*
		4		*0.82*	*0.50*	*1.63*	*Sqm*
	Section 5-5	*4*	*2.16*		*0.45*	*3.89*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.16*		*0.87*	*7.47*	*Sqm*
		4		*0.71*	*0.87*	*2.45*	*Sqm*
		4	*2.16*		*0.50*	*4.32*	*Sqm*
		4		*1.12*	*0.50*	*2.24*	*Sqm*
	Section 6-6	*4*	*1.27*		*0.45*	*2.29*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.27*		*0.36*	*1.83*	*Sqm*
		4		*0.56*	*0.36*	*0.80*	*Sqm*
		4	*1.27*		*0.50*	*2.54*	*Sqm*
		4		*0.82*	*0.50*	*1.63*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.55*	*0.70*	*0.77*	*Sqm*
		2	*4.51*		*0.50*	*4.51*	*Sqm*
		2		*0.55*	*0.50*	*0.55*	*Sqm*
		2	*0.50*		*0.20*	*0.20*	*Sqm*
		2		*0.55*	*0.20*	*0.22*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.55*	*0.40*	*0.44*	*Sqm*
		2	*2.29*		*0.50*	*2.29*	*Sqm*
		2		*0.55*	*0.50*	*0.55*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.55*	*0.70*	*0.77*	*Sqm*
	Crest	*2*	*0.68*		*0.55*	*0.75*	*Sqm*
		2		*0.55*	*0.55*	*0.61*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.68*		*0.30*	*2.21*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.38*		*0.60*	*4.06*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**100.43**	**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*	*1.50*	*1.80*		*5.40*	*Sqm*
	TOTAL					**5.40**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.00*	*0.30*	**0.00**	**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*	*0.00*	*0.15*	**0.00**	**Cum**
10	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
	On Abutment Top (Left Side)	*1*	*9.20*	*0.45*		*4.14*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.20*	*0.45*		*4.14*	*Sqm*
	TOTAL					**8.28**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)						
		1	2			**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						
		1	1.25			1.25	Cum
	TOTAL					**1.25**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 1.305 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.						
		1		58.62		**58.62**	**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*	*0.55*	*0.15*	*0.04*	*Cum*
		1	*0.62*	*0.55*	*0.15*	*0.05*	*Cum*
		1	*5.99*	*0.55*	*0.15*	*0.49*	*Cum*
		1	*0.50*	*0.55*	*0.15*	*0.04*	*Cum*
		1	*1.30*	*0.55*	*0.15*	*0.11*	*Cum*
		1	*1.12*	*0.55*	*0.15*	*0.09*	*Cum*
		1	*0.54*	*0.55*	*0.15*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*1*	*0.90*	*1.78*	*0.15*	*0.24*	*Cum*
	Section 2-2	*1*	*2.50*	*1.05*	*0.15*	*0.39*	*Cum*
	Section 3-3	*1*	*3.32*	*0.93*	*0.15*	*0.46*	*Cum*
	Section 5-5	*2*	*0.65*	*1.93*	*0.15*	*0.38*	*Cum*
	Section 6-6	*1*	*1.08*	*0.93*	*0.15*	*0.15*	*Cum*
	Toe Wall D/S Portion	*1*	*2.05*	*0.75*	*0.30*	*0.46*	*Cum*
	Toe Wall D/S Portion	*1*	*1.75*	*0.45*	*0.60*	*0.47*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.15*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.60*	*0.54*	*Cum*
	TOTAL					**4.24**	**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*	*0.67*	*0.45*	*0.45*	*0.27*	*Cum*
		2	*0.67*	*0.97*	*1.72*	*2.23*	*Cum*
		2	*0.67*	*1.63*	*0.65*	*1.42*	*Cum*
	Section 2-2	*2*	*2.50*	*0.45*	*0.45*	*1.01*	*Cum*
		2	*2.50*	*0.60*	*0.50*	*1.50*	*Cum*
		2	*2.50*	*0.90*	*0.65*	*2.93*	*Cum*
	Section 3-3	*2*	*4.09*	*0.45*	*0.45*	*1.65*	*Cum*
		2	*4.09*	*0.54*	*0.30*	*1.32*	*Cum*
		2	*4.09*	*0.78*	*0.50*	*3.19*	*Cum*
	Section 5-5	*2*	*0.60*	*0.45*	*0.45*	*0.24*	*Cum*
		2	*0.60*	*0.97*	*1.72*	*2.01*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.60*	*1.63*	*0.65*	*1.28*	*Cum*
	Section 6-6	*2*	*0.54*	*0.45*	*0.45*	*0.22*	*Cum*
		2	*0.54*	*0.54*	*0.30*	*0.17*	*Cum*
		2	*0.54*	*0.78*	*0.50*	*0.42*	*Cum*
	Floor	*1*	*0.63*	*0.55*	*0.70*	*0.24*	*Cum*
		1	*6.50*	*0.55*	*0.65*	*2.32*	*Cum*
		1	*0.42*	*0.55*	*0.35*	*0.08*	*Cum*
		1	*0.20*	*0.55*	*0.40*	*0.04*	*Cum*
		1	*2.80*	*0.55*	*0.50*	*0.77*	*Cum*
		1	*0.70*	*0.55*	*1.00*	*0.39*	*Cum*
	Crest	*1*	*1.08*	*0.55*	*1.45*	*0.87*	*Cum*
	TOTAL					**24.59**	**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*	*0.55*	*0.15*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.63*	*0.45*	*0.05*	*0.19*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.63*	*0.45*	*0.05*	*0.19*	*Sqm*
	TOTAL					**0.46**	**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 @0.3% of M-20	**25.05**	**0.30%**	**0.08**	**7850**	**589.84**	**Kg**
	Total Weight in Metric Tonne					**0.59**	**MT**
6	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						
	Section 1-1	*4*	*0.67*		*0.45*	*1.21*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.67*		*1.72*	*4.62*	*Sqm*
		4		*0.97*	*1.72*	*6.65*	*Sqm*
		4	*0.67*		*0.65*	*1.75*	*Sqm*
		4		*1.63*	*0.65*	*4.24*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.45*	*4.50*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.50*		*0.50*	*5.00*	*Sqm*
		4		*0.60*	*0.50*	*1.20*	*Sqm*
		4	*2.50*		*0.65*	*6.50*	*Sqm*
		4		*0.90*	*0.65*	*2.34*	*Sqm*
	Section 3-3	*4*	*4.09*		*0.45*	*7.35*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*4.09*		*0.30*	*4.90*	*Sqm*
		4		*0.54*	*0.30*	*0.65*	*Sqm*
		4	*4.09*		*0.50*	*8.17*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.78*	*0.50*	*1.56*	*Sqm*
	Section 5-5	*4*	*0.60*		*0.45*	*1.09*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.60*		*1.72*	*4.15*	*Sqm*
		4		*0.97*	*1.72*	*6.65*	*Sqm*
		4	*0.60*		*0.65*	*1.57*	*Sqm*
		4		*1.63*	*0.65*	*4.24*	*Sqm*
	Section 6-6	*4*	*0.54*		*0.45*	*0.97*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.54*		*0.30*	*0.65*	*Sqm*
		4		*0.54*	*0.30*	*0.65*	*Sqm*
		4	*0.54*		*0.50*	*1.08*	*Sqm*
		4		*0.78*	*0.50*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*0.55*	*0.70*	*0.77*	*Sqm*
		2	*6.50*		*0.65*	*8.45*	*Sqm*
		2		*0.55*	*0.65*	*0.72*	*Sqm*
		2	*0.42*		*0.35*	*0.30*	*Sqm*
		2		*0.55*	*0.35*	*0.39*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*0.55*	*0.40*	*0.44*	*Sqm*
		2	*2.80*		*0.50*	*2.80*	*Sqm*
		2		*0.55*	*0.50*	*0.55*	*Sqm*
		2	*0.70*		*1.00*	*1.40*	*Sqm*
		2		*0.55*	*1.00*	*1.10*	*Sqm*
	Crest	*2*	*1.08*		*1.45*	*3.15*	*Sqm*
		2		*0.55*	*1.45*	*1.60*	*Sqm*
	Toe Wall D/S Portion	*2*	*2.05*		*0.30*	*1.23*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*1.75*		*0.60*	*2.10*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**119.89**	**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*	*2.25*		*6.75*	*Sqm*
	TOTAL					**6.75**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.35*	*0.30*	**0.16**	**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*	*0.35*	*0.15*	**0.21**	**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*	*8.63*	*0.45*		*3.88*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*8.63*	*0.45*		*3.88*	*Sqm*
	TOTAL					**7.77**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)						
		1	2			**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						
		1		2.38		2.38	Cum
	TOTAL					**2.38**	**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	Kulharia Sub Dy	12300-12550	250.000	0.540	135.000	Cum	**5021.30**	₹ 6,77,875.50	15.55	43.20
2	Barki Parhi Minor	2469-2800	331.000	0.530	175.430	Cum	**5021.30**	₹ 8,80,886.66	20.21	56.14
3	Sattar Minor	400-1100	700.000	0.510	357.000	Cum	**5021.30**	₹ 17,92,604.10	41.13	114.24
4	Mohar Karma Minor	1450-2065	615.000	0.530	325.950	Cum	**5021.30**	₹ 16,36,692.74	37.55	104.30
	Total				***993.38***			***₹ 49,88,058.99***	***114.44***	***317.88***
5	**Carriage of materias**									
	Coarse Sand (30 Km lead)				317.882	Cum	**1075.00**	₹ 3,41,722.72		
	Cement (30 km lead)				114.437	MT	**742.00**	₹ 84,912.53		
	Brick (15 km lead)				496690.00	No.	**3.18**	₹ 15,79,474.20		
	Carriage of materials Total (In Rs.)							**₹ 20,06,109.45**		
	SUB TOTAL (In Rs.)							**₹ 69,94,168.45**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	317.88	Cum		**584.64**	185846.30	18584.63			
	Total						**₹ 18,584.63**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KULHARIA SUB DY			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL+CR	0.310	₹ 17,145.41
2	FALL	0.920	₹ 2,226.87
3	BRIDGE	1.115	₹ 1,51,338.00
4	FALL	1.380	₹ 2,69,449.42
5	BRIDGE+FALL	1.750	₹ 72,344.28
6	BRIDGE	2.195	₹ 56,658.00
7	BRIDGE	2.700	₹ 65,628.66
8	BRIDGE+FALL	3.050	₹ 22,291.43
9	HR+ FALL SATTAR MR	3.480	₹ 13,380.91
10	BRIDGE	4.790	₹ 78,036.07
11	BRIDGE+FALL	5.810	₹ 1,67,938.55
12	FALL	6.605	₹ 56,713.58
13	FALL	7.340	₹ 11,309.79
14	FALL	7.800	₹ 2,71,707.67
15	BRIDGE+FALL	8.510	₹ 11,584.92
16	HR+FALL MOHAR KARMA MR	9.240	₹ 27,475.39
17	BRIDGE+FALL	9.970	₹ 53,958.01
18	CD WORK	10.445	₹ 2,360.88
19	BRIDGE+FALL	11.360	₹ 10,868.21
20	PIPE CULVERT	12.035	₹ 29,501.33
21	FALL	12.440	₹ 0.00
Total In Rs.			**₹ 13,91,917.38**
Total In Lakhs.			**₹ 13.92**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF BARKI PARHI MR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	PIPE CULVERT	0.630	₹ 33,180.97
2	FALL	0.945	₹ 3,520.10
3	FALL	1.280	₹ 2,083.74
4	BRIDGE	1.470	₹ 67,437.57
5	PIPE CULVERT	1.710	₹ 1,775.35
6	FALL	1.768	₹ 36,872.48
7	CULVERT/FALL	2.073	₹ 3,520.10
8	CULVERT/FALL	2.469	₹ 35,010.89
9	FALL	2.774	₹ 49,155.74
Total In Rs.			**₹ 2,32,556.95**
Total In Lakhs.			**₹ 2.33**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SARTAR MR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	NEW FALL	0.000	₹ 0.00
2	FALL	0.150	₹ 47,875.89
3	NEW FALL	1.220	₹ 0.00
Total In Rs.			**₹ 47,875.89**
Total In Lakhs.			**₹ 0.48**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF MOHAR KARMA MR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	NEW FALL	0.000	₹ 0.00
2	FALL	0.400	₹ 0.00
3	FALL	1.100	₹ 1,57,235.15
4	BRIDGE	1.640	₹ 1,11,345.94
Total In Rs.			**₹ 2,68,581.08**
Total In Lakhs.			**₹ 2.69**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		12.000	₹ 62,52,222.60
Total In Rs.			₹ 62,52,222.60
Total In Lakhs.			₹ 62.52

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES - KULHARIYA SUB DY.									
AOC FOR HR FOR BARKI PARHI MR/FALL (Ch.-0.310 Km)									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 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**	₹ 1,180.44			
2	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	6.41	Cum	**2492.58**	₹ 15,964.97			
3		Carriage of materias							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**17145.41**			
		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.-0.920 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.	120.000	Sqm	**11.80**	₹ 1,416.53			
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.	12.600	Sqm	**63.20**	₹ 796.32	0.019		
3		Carriage of materias							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.019	MT	**742.00**	14.02			
		TOTAL (In Rs.)				**2226.87**			
		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.-1.115 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.	50.000	Sqm	**11.80**	₹ 590.22			
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.	10.350	Cum	**6381.70**	66050.60	3.35	4.66	9.32
3	**5.3.18**	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.	43.200	Sqm	**578.60**	₹ 24,995.52			
4	**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.	3.88	Cum	**8151.40**	₹ 31,637.62	2.20	1.51	3.07
4		Carriage of materias							
		Coarse Sand (30 Km lead)	6.171	Cum	**1075.00**	6634.03			
		Coarse Aggregates	12.381	Cum	**1398.00**	17308.90			
		Cement (30 km lead)	5.554	MT	**742.00**	4121.12			
		TOTAL (In Rs.)				**151338.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.17	Cum	**584.64**	3607.92	360.79		
		Coarse Aggregate	12.38	Cum	**944.26**	11691.06	1169.11		
		Total					**1529.90**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (Ch.-1.380 Km)									
1	**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.	27.720	Cum	**6381.70**	176900.72	8.98	12.47	24.95
2	**5.3.18**	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.	63.580	Sqm	**578.60**	₹ 36,787.39			
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.	12.600	Sqm	**63.20**	₹ 796.32	0.019		
4		Carriage of materias							
		Coarse Sand (30 Km lead)	12.474	Cum	**1075.00**	13409.55			
		Coarse Aggregates	24.948	Cum	**1398.00**	34877.30			
		Cement (30 km lead)	9.000	MT	**742.00**	6678.13			
TOTAL (In Rs.)						**269449.42**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	12.47	Cum	**584.64**	7292.80	729.28		
		Coarse Aggregate	24.95	Cum	**944.26**	23557.40	2355.74		
		Total					**3085.02**		
AOC FOR HR FOR BRIDGE/FALL(Ch.-1.750 Km)									
1	**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.	6.525	Cum	**6381.70**	41640.59	2.11	2.94	5.87
2	**5.3.18**	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.	30.710	Sqm	**578.60**	₹ 17,768.81			
3		Carriage of materias							
		Coarse Sand (30 Km lead)	2.936	Cum	**1075.00**	3156.47			
		Coarse Aggregates	5.873	Cum	**1398.00**	8209.76			
		Cement (30 km lead)	2.114	MT	**742.00**	1568.66			
TOTAL (In Rs.)						**72344.28**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.94	Cum	**584.64**	1716.65	171.66		
		Coarse Aggregate	5.87	Cum	**944.26**	5545.17	554.52		
		Total					**726.18**		
AOC FOR HR FOR BRIDGE(Ch.-2.195 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**	₹ 1,416.53			
2	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.950	Cum	**6914.20**	₹ 6,571.26	0.39	0.41	0.82
3	**5.3.18**	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.	5.808	Sqm	**578.60**	₹ 3,360.51			
4	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved qualtiy 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.	39.150	Sqm	**340.20**	₹ 13,318.74	40.59	0.57	
5		Carriage of materias							
		Coarse Sand (30 Km lead)	0.409	Cum	**1075.00**	439.32			
		Coarse Aggregates	0.817	Cum	**1398.00**	1142.65			
		Cement (30 km lead)	40.982	MT	**742.00**	30409.00			
TOTAL (In Rs.)						**56658.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.41	Cum	**584.64**	238.93	23.89		
		Coarse Aggregate	0.82	Cum	**944.26**	771.79	77.18		
		Total					**101.07**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR BRIDGE (Ch.-2.700 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.	125.000	Sqm	**11.80**	₹ 1,475.55			
2	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	6.76	Cum	**2492.58**	₹ 16,852.83			
3	**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.	2.39	Cum	**8151.40**	₹ 19,477.77	1.35	0.93	1.89
4	**5.3.18**	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.	40.056	Sqm	**578.60**	₹ 23,176.40			
5		Carriage of materias							
		Coarse Sand (30 Km lead)	0.932	Cum	**1075.00**	1001.80			
		Coarse Aggregates	1.888	Cum	**1398.00**	2639.01			
		Cement (30 km lead)	1.355	MT	**742.00**	1005.30			
		TOTAL (In Rs.)				**65628.66**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.93	Cum	**584.64**	544.83	54.48		
		Coarse Aggregate	1.89	Cum	**944.26**	1782.48	178.25		
		Total					**232.73**		
AOC FOR HR FOR BRIDGE/FALL (Ch.-3.050 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.	150.000	Sqm	**11.80**	₹ 1,770.66			
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.	1.350	Cum	**6381.70**	₹ 8,615.30	0.44	0.61	1.22
3	**5.3.18**	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.	7.080	Sqm	**578.60**	₹ 4,096.49			
4	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved qualtiy 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.	15.088	Sqm	**340.20**	₹ 5,132.80			
5		Carriage of materias							
		Coarse Sand (30 Km lead)	0.608	Cum	**1075.00**	653.06			
		Coarse Aggregates	1.215	Cum	**1398.00**	1698.57			
		Cement (30 km lead)	0.437	MT	**742.00**	324.55			
		TOTAL (In Rs.)				**22291.43**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.61	Cum	**584.64**	355.17	35.52		
		Coarse Aggregate	1.22	Cum	**944.26**	1147.28	114.73		
		Total					**150.24**		
AOC FOR HR+ FALL SATTAR MR (Ch.-3.480 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**	₹ 1,416.53			
2	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	4.80	Cum	**2492.58**	₹ 11,964.38			
3		Carriage of materias							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**13380.91**			
		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 CULVERT (Ch.-4.790 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.	50.000	Sqm	**11.80**	₹ 590.22			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (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.	7.155	Cum	**6381.70**	45661.06	2.32	3.22	6.44
3	**5.3.18**	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.	30.420	Sqm	**578.60**	₹ 17,601.01			
4		Carriage of materias							
		Coarse Sand (30 Km lead)	3.220	Cum	**1075.00**	3461.23			
		Coarse Aggregates	6.440	Cum	**1398.00**	9002.42			
		Cement (30 km lead)	2.318	MT	**742.00**	1720.12			
		TOTAL (In Rs.)				**78036.07**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.22	Cum	**584.64**	1882.39	188.24		
		Coarse Aggregate	6.44	Cum	**944.26**	6080.56	608.06		
		Total					**796.30**		
		AOC FOR BRIDGE/FALL (Ch.-5.810 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**	₹ 1,770.66			
2	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	4.73	Cum	**2492.58**	₹ 11,777.44			
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.	11.250	Cum	**6914.20**	₹ 77,784.75	4.64	4.84	9.68
4	**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.	2.025	Cum	**6381.70**	₹ 12,922.94	0.66	0.91	1.82
5	**5.3.18**	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.	64.310	Sqm	**578.60**	₹ 37,209.77			
6	**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.	4.500	Sqm	**63.20**	₹ 284.40	0.007		
7		Carriage of materias							
		Coarse Sand (30 Km lead)	5.749	Cum	**1075.00**	6179.91			
		Coarse Aggregates	11.498	Cum	**1398.00**	16073.51			
		Cement (30 km lead)	5.303	MT	**742.00**	3935.18			
		TOTAL (In Rs.)				**167938.55**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.75	Cum	**584.64**	3360.95	336.09		
		Coarse Aggregate	11.50	Cum	**944.26**	10856.63	1085.66		
		Total					**1421.76**		
		AOC FOR FALL (Ch.-6.605 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.	120.000	Sqm	**11.80**	₹ 1,416.53			
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.	4.938	Cum	**6381.70**	₹ 31,511.30	1.60	2.22	4.44
3	**5.3.18**	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.	23.592	Sqm	**578.60**	₹ 13,650.05			
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.	5.400	Sqm	**63.20**	₹ 341.28	0.008		
5		Carriage of materias							
		Coarse Sand (30 Km lead)	2.222	Cum	**1075.00**	2388.64			
		Coarse Aggregates	4.444	Cum	**1398.00**	6212.69			
		Cement (30 km lead)	1.608	MT	**742.00**	1193.09			
		TOTAL (In Rs.)				**56713.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.22	Cum	**584.64**	1299.07	129.91		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregate	4.44	Cum	**944.26**	4196.28	419.63		
		Total					**549.53**		
		AOC FOR FALL (Ch.-7.340 Km)							
1	**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.	1.200	Cum	**6381.70**	₹ 7,658.04	0.39	0.54	1.08
2	**5.3.18**	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.	2.200	Sqm	**578.60**	₹ 1,272.92			
3		Carriage of materias							
		Coarse Sand (30 Km lead)	0.540	Cum	**1075.00**	580.50			
		Coarse Aggregates	1.080	Cum	**1398.00**	1509.84			
		Cement (30 km lead)	0.389	MT	**742.00**	288.49			
		TOTAL (In Rs.)				**11309.79**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.54	Cum	**584.64**	315.71	31.57		
		Coarse Aggregate	1.08	Cum	**944.26**	1019.80	101.98		
		Total					**133.55**		
		AOC FOR FALL (Ch.-7.800 Km)							
1	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	5.26	Cum	**2492.58**	₹ 13,105.49			
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.	25.237	Cum	**6914.20**	₹ 1,74,496.71	10.41	10.85	21.70
3	**5.3.18**	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.	59.406	Sqm	**578.60**	₹ 34,372.45			
4		Carriage of materias							
		Coarse Sand (30 Km lead)	10.852	Cum	**1075.00**	11666.01			
		Coarse Aggregates	21.704	Cum	**1398.00**	30342.47			
		Cement (30 km lead)	10.410	MT	**742.00**	7724.55			
		TOTAL (In Rs.)				**271707.67**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	10.85	Cum	**584.64**	6344.57	634.46		
		Coarse Aggregate	21.70	Cum	**944.26**	20494.41	2049.44		
		Total					**2683.90**		
		AOC FOR BRIDGE/FALL (Ch.-8.510 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.	130.000	Sqm	**11.80**	₹ 1,534.57			
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.	0.900	Cum	**6381.70**	₹ 5,743.53	0.29	0.41	0.81
3	**5.3.18**	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.	4.360	Sqm	**578.60**	₹ 2,522.70			
4		Carriage of materias							
		Coarse Sand (30 Km lead)	0.405	Cum	**1075.00**	435.38			
		Coarse Aggregates	0.810	Cum	**1398.00**	1132.38			
		Cement (30 km lead)	0.292	MT	**742.00**	216.37			
		TOTAL (In Rs.)				**11584.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.41	Cum	**584.64**	236.78	23.68		
		Coarse Aggregate	0.81	Cum	**944.26**	764.85	76.49		
		Total					**100.16**		
		AOC FOR HR+FALL MOHAR KARMA MR (Ch.-9.240 Km)							
1		**HR of Mohar Karma Minor is completley Damaged need to re constructed.**							
2	**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**	₹ 1,770.66			
3	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	10.31	Cum	**2492.58**	₹ 25,704.73			
4		Carriage of materias							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**27475.39**			
		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 BRIDGE/FALL (Ch.-9.970 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**	₹ 1,534.57			
2	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	1.43	Cum	**2492.58**	₹ 3,555.58			
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.	4.675	Cum	**6381.70**	₹ 29,835.72	1.51	2.10	4.21
4	**5.3.18**	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.	16.876	Sqm	**578.60**	₹ 9,764.22			
5		Carriage of materias							
		Coarse Sand (30 Km lead)	2.104	Cum	**1075.00**	2261.63			
		Coarse Aggregates	4.208	Cum	**1398.00**	5882.34			
		Cement (30 km lead)	1.515	MT	**742.00**	1123.96			
		TOTAL (In Rs.)				**53958.01**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.10	Cum	**584.64**	1229.99	123.00		
		Coarse Aggregate	4.21	Cum	**944.26**	3973.14	397.31		
		Total					**520.31**		
		AOC FOR CD WORK (Ch.-10.445 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**	₹ 2,360.88			
		TOTAL (In Rs.)				**2360.88**			
		AOC FOR BRIDGE/FALL (Ch.-11.360 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**	₹ 1,416.53			
2	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved qualtiy 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.	8.400	Sqm	**340.20**	₹ 2,857.68	8.71	0.12	
3		Carriage of materias							
		Coarse Sand (30 Km lead)	0.123	Cum	**1075.00**	131.84			
		Coarse Aggregates	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	8.709	MT	**742.00**	6462.17			
		TOTAL (In Rs.)				**10868.21**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.12	Cum	**584.64**	71.70	7.17		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**7.17**		
		AOC FOR PIPE CULVERT(Ch.-12.035 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**	₹ 1,652.61			
2	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved qualtiy 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.	24.750	Sqm	**340.20**	₹ 8,419.95	25.66	0.36	
3		Carriage of materias							
		Coarse Sand (30 Km lead)	0.361	Cum	**1075.00**	388.45			
		Coarse Aggregates	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	25.661	MT	**742.00**	19040.31			
		TOTAL (In Rs.)				**29501.33**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.36	Cum	**584.64**	211.26	21.13		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**21.13**		
		AOC FOR FALL (Ch.-12.440 Km)							
1		**Structure is in good condition and does not requir any repair works.**							0.00

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR BARKI PARHI MR STRUCTURES OFFTAKING FROM RD 0.295 OF KULHARIA SUB DY AOC FOR PIPE CULVERT (0.630 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**	₹ 1,416.53			
2	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	1.24	Cum	**2492.58**	₹ 3,090.80			
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.	2.100	Cum	**6381.70**	₹ 13,401.57	0.68	0.95	1.89
4	**5.3.18**	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.	19.200	Sqm	**578.60**	₹ 11,109.12			
5		Carriage of materias							
		Coarse Sand (30 Km lead)	0.945	Cum	**1075.00**	1015.88			
		Coarse Aggregates	1.890	Cum	**1398.00**	2642.22			
		Cement (30 km lead)	0.680	MT	**742.00**	504.86			
TOTAL (In Rs.)						**33180.97**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.95	Cum	**584.64**	552.48	55.25		
		Coarse Aggregate	1.89	Cum	**944.26**	1784.65	178.47		
		Total					**233.71**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (0.945 Km)									
1	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	0.22	Cum	**2492.58**	₹ 551.26			
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.	0.274	Cum	**6381.70**	₹ 1,746.03	0.09	0.12	0.25
3	**5.3.18**	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.	1.176	Sqm	**578.60**	₹ 680.43			
4		Carriage of materias							
		Coarse Sand (30 Km lead)	0.123	Cum	**1075.00**	132.35			
		Coarse Aggregates	0.246	Cum	**1398.00**	344.24			
		Cement (30 km lead)	0.089	MT	**742.00**	65.78			
TOTAL (In Rs.)						**3520.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.12	Cum	**584.64**	71.98	7.20		
		Coarse Aggregate	0.25	Cum	**944.26**	232.51	23.25		
		Total					**30.45**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (1.280 Km)									
1	**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.	32.400	Sqm	**63.20**	₹ 2,047.68	0.049		
2		Carriage of materias							
		Coarse Sand (30 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.049	MT	**742.00**	36.06			
TOTAL (In Rs.)						**2083.74**			
		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 MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR BRIDGE (1.470 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.	25.000	Sqm	**11.80**	₹ 295.11			
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.	4.338	Cum	**6381.70**	27683.81	1.41	1.95	3.90
3	**5.3.18**	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.	19.152	Sqm	**578.60**	₹ 11,081.35			
4	**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.	1.99	Cum	**8151.40**	₹ 16,207.02	1.13	0.78	1.57
4		Carriage of materias							
		Coarse Sand (30 Km lead)	2.728	Cum	**1075.00**	2932.08			
		Coarse Aggregates	5.475	Cum	**1398.00**	7653.93			
		Cement (30 km lead)	2.533	MT	**742.00**	1879.37			
		TOTAL (In Rs.)				**67437.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.73	Cum	**584.64**	1594.62	159.46		
		Coarse Aggregate	5.47	Cum	**944.26**	5169.75	516.97		
		Total					**676.44**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR PIPE CULVERT (1.710 Km)									
1	**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.	0.150	Cum	**6381.70**	₹ 957.26	0.05	0.07	0.14
2	**5.3.18**	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.	0.900	Sqm	**578.60**	₹ 520.74			
3		Carriage of materias							
		Coarse Sand (30 Km lead)	0.068	Cum	**1075.00**	72.56			
		Coarse Aggregates	0.135	Cum	**1398.00**	188.73			
		Cement (30 km lead)	0.049	MT	**742.00**	36.06			
TOTAL (In Rs.)						**1775.35**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.07	Cum	**584.64**	39.46	3.95		
		Coarse Aggregate	0.14	Cum	**944.26**	127.48	12.75		
		Total					**16.69**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (1.760 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.	60.000	Sqm	**11.80**	₹ 708.26			
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.	3.740	Cum	**6381.70**	23868.20	1.21	1.68	3.37
3	**5.3.18**	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.	5.748	Sqm	**578.60**	₹ 3,325.79			
4	**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.	0.15	Cum	**8151.40**	₹ 1,256.33	0.09	0.06	0.12
4		Carriage of materias							
		Coarse Sand (30 Km lead)	1.743	Cum	**1075.00**	1873.89			
		Coarse Aggregates	3.488	Cum	**1398.00**	4876.01			
		Cement (30 km lead)	1.299	MT	**742.00**	963.99			
		TOTAL (In Rs.)				**36872.48**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.74	Cum	**584.64**	1019.12	101.91		
		Coarse Aggregate	3.49	Cum	**944.26**	3293.44	329.34		
		Total					**431.26**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CULVERT/FALL (2.073 Km)									
1	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	0.22	Cum	**2492.58**	₹ 551.26			
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.	0.274	Cum	**6381.70**	₹ 1,746.03	0.09	0.12	0.25
3	**5.3.18**	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.	1.176	Sqm	**578.60**	₹ 680.43			
4		Carriage of materias							
		Coarse Sand (30 Km lead)	0.123	Cum	**1075.00**	132.35			
		Coarse Aggregates	0.246	Cum	**1398.00**	344.24			
		Cement (30 km lead)	0.089	MT	**742.00**	65.78			
TOTAL (In Rs.)						**3520.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.12	Cum	**584.64**	71.98	7.20		
		Coarse Aggregate	0.25	Cum	**944.26**	232.51	23.25		
		Total					**30.45**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CULVERT/FALL (2.469Km)									
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.	50.000	Sqm	**11.80**	₹ 590.22			
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.	3.569	Cum	**6381.70**	22775.33	1.16	1.61	3.21
3	**5.3.18**	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.	5.748	Sqm	**578.60**	₹ 3,325.79			
4	**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.	0.12	Cum	**8151.40**	₹ 1,005.07	0.07	0.05	0.10
4		Carriage of materias							
		Coarse Sand (30 Km lead)	1.654	Cum	**1075.00**	1778.12			
		Coarse Aggregates	3.309	Cum	**1398.00**	4626.50			
		Cement (30 km lead)	1.226	MT	**742.00**	909.85			
		TOTAL (In Rs.)				**35010.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.65	Cum	**584.64**	967.04	96.70		
		Coarse Aggregate	3.31	Cum	**944.26**	3124.91	312.49		
		Total					**409.19**		
1		**Structure is in good condition and does not requir any repair works.**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (2.774Km)									
1	**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.	2.250	Cum	**6381.70**	14358.83	0.73	1.01	2.03
2	**5.3.18**	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.	9.900	Sqm	**578.60**	₹ 5,728.14			
3	**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.	2.44	Cum	**8151.40**	₹ 19,869.04	1.38	0.95	1.93
4		Carriage of materias							
		Coarse Sand (30 Km lead)	1.963	Cum	**1075.00**	2110.36			
		Coarse Aggregates	3.951	Cum	**1398.00**	5522.97			
		Cement (30 km lead)	2.111	MT	**742.00**	1566.41			
TOTAL (In Rs.)						**49155.74**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.96	Cum	**584.64**	1147.72	114.77		
		Coarse Aggregate	3.95	Cum	**944.26**	3730.42	373.04		
		Total					**487.81**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR SARTAR MR STRUCTURES OFFTAKING FROM RD 3.480 OF KULHARIA SUB DY AOC FOR FALL (0.000 Km)									
1		**New Fall is proposed at this location.**							

AOC FOR FALL (0.150 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.	180.000	Sqm	**11.80**	₹ 2,124.79			
1	**5.8.9**	Dismantling RCC work including, stacking serviceable material in stack within 15m leads and disposal of unserviceable material with all leads as per building specification & direction of E/I.	2.14	Cum	**2492.58**	₹ 5,333.36			
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.	3.600	Cum	**6381.70**	₹ 22,976.99	1.17	1.62	3.24
3	**5.3.18**	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.	17.807	Sqm	**578.60**	₹ 10,303.36			
4		Carriage of materias							
		Coarse Sand (30 Km lead)	1.620	Cum	**1075.00**	1741.72			
		Coarse Aggregates	3.240	Cum	**1398.00**	4530.09			
		Cement (30 km lead)	1.167	MT	**742.00**	865.58			
TOTAL (In Rs.)						**47875.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.62	Cum	**584.64**	947.24	94.72		
		Coarse Aggregate	3.24	Cum	**944.26**	3059.78	305.98		
		Total					**400.70**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (0.600 Km)									
1		**New Fall is proposed at this location.**							

AOC FOR MOHAR KARMA MR STRUCTURES OFFTAKING FROM RD 9.220 OF KULHARIA SUB DY AOC FOR FALL (0.000 Km)									
1		**New Fall is proposed at this location.**							

AOC FOR FALL (0.400 Km)									
1		**New Fall is proposed at this location.**							

AOC FOR FALL (1.100 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**	₹ 2,124.79			
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.	15.840	Cum	**6381.70**	₹ 1,01,086.13	5.13	7.13	14.26
3	**5.3.18**	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.	37.180	Sqm	**578.60**	₹ 21,512.35			
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.	17.280	Sqm	**63.20**	₹ 1,092.10	0.026		
5		Carriage of materias							
		Coarse Sand (30 Km lead)	7.128	Cum	**1075.00**	7662.60			
		Coarse Aggregates	14.256	Cum	**1398.00**	19929.89			
		Cement (30 km lead)	5.158	MT	**742.00**	3827.30			
		TOTAL (In Rs.)				**157235.15**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	7.13	Cum	**584.64**	4167.31	416.73		
		Coarse Aggregate	14.26	Cum	**944.26**	13461.37	1346.14		
		Total					**1762.87**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR BRIDGE (1.640 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**	₹ 2,360.88			
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.	9.338	Cum	**6381.70**	₹ 59,589.12	3.03	4.20	8.40
3	**5.3.18**	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.	53.380	Sqm	**578.60**	₹ 30,885.67			
4		Carriage of materias							
		Coarse Sand (30 Km lead)	4.202	Cum	**1075.00**	4517.02			
		Coarse Aggregates	8.404	Cum	**1398.00**	11748.44			
		Cement (30 km lead)	3.025	MT	**742.00**	2244.81			
TOTAL (In Rs.)						**111345.94**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.20	Cum	**584.64**	2456.58	245.66		
		Coarse Aggregate	8.40	Cum	**944.26**	7935.32	793.53		
		Total					**1039.19**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES								
QUANTITIES OF REPAIRING WORK FOR HR FOR BARKI PARHI MR/FALL (Ch.-0.310 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				100.00	Sqm
		TOTAL					100.00	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.						
		Groove Arrangement	1	3.00	0.61	1.5	*2.75*	*Cum*
			2	2.00	0.61	1.5	*3.66*	*Cum*
		TOTAL					***6.41***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.920 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				120.00	Sqm
		TOTAL					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.						
		Wing wall	2	14.00		0.45	*12.60*	*Sqm*
		TOTAL					12.60	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.115 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				50.00	Sqm
		TOTAL					50.00	Sqm
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.						
		Parapet wall	2	11.50	0.50	0.9	*10.35*	*Cum*
		TOTAL					10.35	***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.						
		Parapet wall	4	11.50		0.9	*41.40*	Sqm
			4		0.50	0.9	*1.80*	Sqm
		TOTAL					43.20	Sqm
4	5.3.5	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						
		wearing coat	1	11.50	4.50	0.075	*3.88*	*Cum*
		TOTAL					3.88	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-1.380 Km)								
1	**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.**						
		Wing Wall	2	14.00	0.45	2.2	*27.72*	*Cum*
		TOTAL					**27.72**	***Cum***
2	**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	2	14.00		2.2	*61.60*	Sqm
			2		0.45	2.2	*1.98*	Sqm
		TOTAL					**63.58**	**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.**						
		Wing Wall	2	14.00		0.45	*12.60*	*Sqm*
		TOTAL					**12.60**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL(Ch.-1.750 Km)								
1	**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.**						
		Parapet wall	2	5.00	0.45	0.45	*2.03*	*Cum*
		Wing wall	2	10.00	0.45	0.5	*4.50*	*Cum*
		TOTAL					**6.53**	***Cum***
2	**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.**						
		Parapet wall	4	5.00		0.45	*9.00*	Sqm
			4		0.45	0.45	*0.81*	Sqm
		Wing wall	4	10.00		0.5	*20.00*	Sqm
			4		0.45	0.5	*0.90*	Sqm
		TOTAL					**30.71**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL(Ch.-2.195 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**
		TOTAL					**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.**						
		Parapet wall	2	1.20	0.45	0.88	*0.95*	*Cum*
		TOTAL					**0.95**	**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.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Parapet wall	4	1.20		0.88	*4.22*	Sqm
			4		0.45	0.88	*1.58*	Sqm
		TOTAL					**5.81**	**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.**						
		Parapet wall	2	12.01		1.63	*39.15*	*sqm*
		TOTAL					**39.15**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.700 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				**125.00**	**Sqm**
		TOTAL					**125.00**	**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.**						
		Hand Rail	8	2.00	2.00	0.2	*6.40*	*Cum*
		Post	6	0.28	0.25	0.86	*0.36*	*Cum*
		TOTAL					***6.76***	***Cum***
3	**5.3.5**	**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.**						
		Quantitiy for 12m Railing						
		Hand Rail (4Nos)	*4*	*12.00*	*0.18*	*0.20*	*1.68*	*Cum*
		Post	*12*	*0.28*	*0.25*	*0.86*	*0.71*	*Cum*
		Total Quantity for 12m Railing with 6 nos. through post(one side)					***2.39***	***Cum***
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.**						
		Hand Rail	12	12.00		0.20	*28.80*	Sqm
			12		0.18	0.20	*0.42*	Sqm
		Post	24	0.28		0.86	*5.68*	Sqm
			24		0.25	0.86	*5.16*	Sqm
		TOTAL					**40.06**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL(Ch.-3.050 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				**150.00**	**Sqm**
		TOTAL					**150.00**	**Sqm**
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.**						
		Parapet wall	2	2.50	0.45	0.6	*1.35*	*Cum*
		TOTAL					**1.35**	**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.**						
		Parapet wall	4	2.50		0.60	*6.00*	Sqm
			4		0.45	0.60	*1.08*	Sqm
		TOTAL					**7.08**	**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.**						
		Parapet wall	2	4.57		1.65	*15.09*	*sqm*
		TOTAL					**15.09**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR HR+ FALL SATTAR MR (Ch.-3.480 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**
		TOTAL					**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.**						
		HR GATE TOP	2	1.50	1.00	0.4	*1.20*	*Cum*
		Wing wall	2	4.00	1.00	0.45	*3.60*	*Cum*
		TOTAL					**4.80**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.790 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				**50.00**	**Sqm**
		TOTAL					**50.00**	**Sqm**
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.**						
		Parapet wall	2	7.95	0.50	0.9	*7.16*	*Cum*
		TOTAL					**7.16**	***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.**						
		Parapet wall	4	7.95		0.9	*28.62*	Sqm
			4		0.50	0.9	*1.80*	Sqm
		TOTAL					**30.42**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-5.810 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**	**Sqm**
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	3.50	0.45	1.5	*4.73*	*Cum*
		TOTAL					**4.73**	**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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing 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	5.00	0.45	2.5	*11.25*	*Cum*
		TOTAL					**11.25**	**Cum**
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.**						
		Parapet	2	5.00	0.45	0.45	*2.03*	*Cum*
		TOTAL					**2.03**	***Cum***
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.**						
		Wing wall	4	5.00		2.5	*50.00*	Sqm
			4		0.45	2.5	*4.50*	Sqm
		Parapet	4	5.00		0.45	*9.00*	Sqm
			4		0.45	0.45	*0.81*	Sqm
		TOTAL					**64.31**	**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.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Parapet top	2	5.00		0.45	*4.50*	*Sqm*
		TOTAL					**4.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-6.605 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				**120.00**	**Sqm**
		TOTAL					**120.00**	**Sqm**
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.**						
		Wing wall	2	6.00	0.45	0.91	*4.94*	*Cum*
		TOTAL					**4.94**	***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.**						
		Wing wall	4	6.00		0.91	*21.95*	Sqm
			4		0.45	0.91	*1.65*	Sqm
		TOTAL					**23.59**	**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	2	6.00		0.45	*5.40*	*Sqm*
		TOTAL					**5.40**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.340 Km)								
1	**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	1	4.00	1.50	0.2	*1.20*	*Cum*
		TOTAL					**1.20**	***Cum***
2	**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	2	4.00		0.20	*1.60*	Sqm
			2		1.50	0.20	*0.60*	Sqm
		TOTAL					**2.20**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.800 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.**						
		Wing Wall	1	5.00	0.46	2.3	*5.26*	*Cum*
		TOTAL					**5.26**	**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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing 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	4	6.00	0.46	2.3	*25.24*	*Cum*
		TOTAL					**25.24**	**Cum**
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.**						
		Wing wall	4	6.00		2.3	*55.20*	Sqm
			4		0.46	2.3	*4.21*	Sqm
		TOTAL					**59.41**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/ FALL (Ch.-8.510 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				**130.00**	**Sqm**
		TOTAL					**130.00**	**Sqm**
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.**						
		Wing wall	2	5.00	0.45	0.20	*0.90*	*Cum*
		TOTAL					**0.90**	***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.**						
		Wing wall	4	5.00		0.20	*4.00*	Sqm
			4		0.45	0.20	*0.36*	Sqm
		TOTAL					**4.36**	**Sqm**
HR+FALL MOHAR KARMA MR (Ch.-9.240 Km)								
1		**HR of Mohar Karma Minor is completley Damaged need to re constructed.**						
2	**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**	**Sqm**
3	**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	1.00	0.25	0.45	*0.11*	*Cum*
		Floor	1	5.00	3.40	0.6	*10.20*	*Cum*
		TOTAL					**10.31**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-9.970 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**
		TOTAL					**130.00**	**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.**						
		Parapet wall	2	2.60	0.46	0.6	*1.43*	*Cum*
		TOTAL					**1.43**	**Cum**
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.**						
		Parapet wall	2	3.50	0.46	0.6	*1.93*	*Cum*
		Wing wall	2	2.00	0.46	1.5	*2.74*	*Cum*
		TOTAL					**4.68**	**Cum**
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.**						
		Parapet wall	4	3.50		0.6	*8.40*	Sqm
			4		0.46	0.6	*1.10*	Sqm
		Wing wall	2	2.00		1.50	*6.00*	Sqm
			2		0.46	1.50	*1.37*	Sqm
		TOTAL					**16.88**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-10.445 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**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-11.360 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**
		TOTAL					**120.00**	**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		1.2	*8.40*	*sqm*
		TOTAL					**8.40**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT(Ch.-12.035 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**
		TOTAL					**140.00**	**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		1.65	*24.75*	*sqm*
		TOTAL					**24.75**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-12.440 Km)								
1		**Structure is in good condition and does not requir any repair works.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BARKI PARHI MR STRUCTURES OFFTAKING FROM RD 0.295 KM OF KULHARIA SUB DY								
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (0.630 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as**						
			1				**120.00**	**Sqm**
		TOTAL					**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.**						
		Parapet wall	2	3.10	0.50	0.4	*1.24*	*Cum*
		TOTAL					**1.24**	**Cum**
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.**						
		Parapet wall	2	3.50	0.50	0.6	*2.10*	*Cum*
		TOTAL					**2.10**	**Cum**
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.**						
		Parapet wall	8	3.50		0.6	*16.80*	Sqm
			8		0.50	0.6	*2.40*	Sqm
		TOTAL					**19.20**	**Sqm**

QUANTITIES OF REPAIRING WORK FOR FALL (0.945 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.**						
		Crest	1	0.97	0.76	0.3	*0.22*	*Cum*
		TOTAL					**0.22**	**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.**						
		Crest	1	1.20	0.76	0.3	*0.27*	*Cum*
		TOTAL					**0.27**	**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.**						
		Crest	2	1.20		0.30	*0.72*	Sqm
			2		0.76	0.30	*0.46*	Sqm
		TOTAL					**1.18**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (1.280 Km)								
1	**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	15.00		0.54	*32.40*	*Sqm*
		Abutment	2	10.00		1.5	*30.00*	*Sqm*
		TOTAL					**32.40**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (1.470 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				**25.00**	**Sqm**
		TOTAL					**25.00**	**Sqm**
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.**						
		Parapet wall	2	4.82	0.50	0.9	*4.34*	*Cum*
		TOTAL					**4.34**	***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.**						
		Parapet wall	4	4.82		0.9	*17.35*	Sqm
			4		0.50	0.9	*1.80*	Sqm
		TOTAL					**19.15**	**Sqm**
4	**5.3.5**	**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.**						
		wearing coat	1	4.82	5.50	0.075	*1.99*	*Cum*
		TOTAL					**1.99**	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (1.710 Km)								
1	**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.**						
		Parapet	1	1.00	0.50	0.3	*0.15*	*Cum*
		TOTAL					**0.15**	**Cum**
2	**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.**						
		Parapet	2	1.00		0.30	*0.60*	Sqm
			2		0.50	0.30	*0.30*	Sqm
		TOTAL					**0.90**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (1.760 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				**60.00**	**Sqm**
		TOTAL					**60.00**	**Sqm**
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.**						
		Cistern Floor	1	3.00	1.37	0.5	*2.06*	*Cum*
		Crest	1	1.03	1.37	1.2	*1.69*	*Cum*
		TOTAL					**3.74**	***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	1.03		1.2	*2.46*	Sqm
			2		1.37	1.2	*3.29*	Sqm
		TOTAL					**5.75**	**Sqm**
4	**5.3.5**	**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**						
		Crest Top	1	0.75	1.37	0.15	*0.15*	*Cum*
		TOTAL					**0.15**	***Cum***

QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (2.073 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.**						
		Crest	1	0.97	0.76	0.3	*0.22*	*Cum*
		TOTAL					**0.22**	**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.**						
		Crest	1	1.20	0.76	0.3	*0.27*	*Cum*
		TOTAL					**0.27**	**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.**						
		Crest	2	1.20		0.30	*0.72*	Sqm
			2		0.76	0.30	*0.46*	Sqm
		TOTAL					**1.18**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (2.469Km)								
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				**50.00**	**Sqm**
		TOTAL					**50.00**	**Sqm**
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.**						
		Cistern Floor	1	2.75	1.37	0.5	*1.88*	*Cum*
		Crest	1	1.03	1.37	1.2	*1.69*	*Cum*
		TOTAL					**3.57**	***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	1.03		1.2	*2.46*	Sqm
			2		1.37	1.2	*3.29*	Sqm
		TOTAL					**5.75**	**Sqm**
4	**5.3.5**	**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.**						
		Crest Top	1	0.60	1.37	0.15	*0.12*	*Cum*
		TOTAL					**0.12**	***Cum***

QUANTITIES OF REPAIRING WORK FOR FALL (2.774Km)								
1	**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.**						
		Parapet	1	5.00	0.50	0.9	*2.25*	*Cum*
		TOTAL					**2.25**	**Cum**
2	**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.**						
		Parapet	2	5.00		0.90	*9.00*	Sqm
			2		0.50	0.90	*0.90*	Sqm
		TOTAL					**9.90**	**Sqm**
4	**5.3.5**	**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.**						
		wearing coat	1	5.00	6.50	0.075	*2.44*	*Cum*
		TOTAL					**2.44**	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR SARTAR MR STRUCTURES OFFTAKING FROM RD 3.480 OF KULHARIA SUB DY								
QUANTITIES OF REPAIRING WORK FOR FALL (0.000 Km)								
1		**New Fall is proposed in this location.**						
QUANTITIES OF REPAIRING WORK FOR FALL (0.150 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				**180.00**	**Sqm**
		TOTAL					**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.**						
		Wing wall	1	2.60	0.46	1.8	*2.14*	*Cum*
		TOTAL					**2.14**	**Cum**
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.**						
		Wing wall	1	3.50	0.46	2.25	*3.60*	*Cum*
		TOTAL					**3.60**	**Cum**
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.**						
		Wing wall	2	3.50		2.25	*15.75*	Sqm
			2		0.46	2.25	*2.06*	Sqm
		TOTAL					**17.81**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (0.600 Km)								
1		**New Fall is proposed in this location.**						
QUANTITIES OF REPAIRING WORK FOR MOHAR KARMA MR STRUCTURES OFFTAKING FROM RD 9.220 OF KULHARIA SUB DY								
QUANTITIES OF REPAIRING WORK FOR FALL (0.000 Km)								
1		**New Fall is proposed in this location.**						
QUANTITIES OF REPAIRING WORK FOR FALL (0.400 Km)								
1		**The structure is in good condition and does not require any repair work.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (1.100 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**	**Sqm**
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.**						
		Wing Wall	2	8.00	0.45	2.2	*15.84*	*Cum*
		TOTAL					**15.84**	***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.**						
		Wing Wall	2	8.00		2.2	*35.20*	Sqm
			2		0.45	2.2	*1.98*	Sqm
		TOTAL					**37.18**	**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	2	8.00		0.45	*7.20*	*Sqm*
		Abutment	2	4.20		1.2	*10.08*	*Sqm*
		TOTAL					**17.28**	***Sqm***

QUANTITIES OF REPAIRING WORK FOR BRIDGE (1.640Km)								
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**	**Sqm**
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.**						
		Parapet	2	3.50	0.45	0.45	*1.42*	*Cum*
		Wing wall	2	4.00	0.45	2.2	*7.92*	*Cum*
		TOTAL					**9.34**	***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.**						
		Parapet	8	3.50		0.45	*12.60*	Sqm
			8		0.45	0.45	*1.62*	Sqm
		Wing Wall	4	4.00		2.2	*35.20*	Sqm
			4		0.45	2.2	*3.96*	Sqm
		TOTAL					**53.38**	**Sqm**

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	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.	60.00	Cum	**1044.90**	62694.00			
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.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materias**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 12 no., Total Seigniorage charges					**90943.14**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, 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 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	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.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	#REF!	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost 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	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

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.	2755.8335
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.	8267.50
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 materias**								
		Coarse Sand	7.76	Cum	**1075.00**	8337.83				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	9574.84				
		Cement (150 km lead)	3.70	MT	**742.00**	2748.60				
		Boulders (100 km lead)	8.60	Cum	**1159.00**	9969.69				
		Steel (150 Km lead)	0.11	M.T.	**742.00**	81.56				
		Hume Pipe (150 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 55 nos. outlet, Total Seigniorage charges					**60509.52**			

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 & direction of E/I.						
	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 2025 & PL MARCH
		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	SI-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	SI-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					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	SI-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	SI-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					

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	
	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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	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**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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

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 ***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)**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	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**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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**
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**	Providing 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 .					
	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	**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	
		Sand	0.045	cum	584.64	26.31	
		Jute	7.5	Kg	20.89	156.68	
		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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					Say, Rs	**₹ 1,713.33**	
	5.6.2.5	**1200 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	0.057	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	
		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	**5.2.1**	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.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Local Sand	0.7	cum	145.87	102.11	
		Total				102.11	
		Labour					
		Skilled labour	0.167	nos.	536.00	89.51	
		Unskilled Mazdoor	1.5	nos	424.00	636.00	
		Unskilled Mazdoor for watering and ramming	1	nos	424.00	424.00	
						1149.51	
						1251.62	
		Add Overhead charge & C.P @ 15 %				₹ 187.74	
						₹ 1,439.36	
					Say, Rs	**₹ 154.80**	**Per M^3**
25	**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
26	**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**
27	**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**	Providing 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 .	**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