TENDER DOCUMENT FOR

Earthwork, Repair & Construction of Distribution Network (09 Nos. Minors) of Right Main Canal, Jharkhand and its Structures under North Koel Reservoir Project, Jharkhand and Bihar

Estimated Cost (Rs. 11.72 Crores)

TENDER NO: WAP/INFRA./NK/DIST/JH/2025

VOLUME IV: PRICE SCHEDULE

Issued to M/s



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.

PRICE SCHEDULE

			WAPCOS LI	MITED							
		Qu	oting Sheet fo	r the Bidder							
NIT No:	NIT No: WAP/INFRA./NK/DIST/JH/2025										
Name of Work:	ame of Work: Earthwork, Repair & Construction of Distribution Network (09 Nos. Minors) of Right Main Canal, Jharkhand and its Structures under North Koel Reservoir Project, Jharkhand and Bihar										
Name of the Firm:					_						
	BOQ Amount(in Rs)	Above or Below or At par	% in Figures	% In Words	Amount Above or Below or At par	Total Cost					
l	II	I	IV	V	VI= (II*IV)	VII= (II+VI)					
PERCENTAGE RATE	11,71,82,078/-										
Total Amount											
					Total in figure						
Total in words					-						

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.

NC	ORTH KOEL RESERVOIR PRO	JECT , JHARKHAN	ID MINORS
	ABSTRACT	OF COST	
S no.	NAME OF MINOR	TOTAL (In Rs.)	TOTAL (In Lacs)
1	Adhwara Minor	₹ 26,564,225.90	265.64
2	Parta Minor	₹ 17,826,285.55	178.26
3	Salempur Minor	₹ 5,284,323.31	52.84
4	Sonpurwa Minor	₹ 6,355,218.22	63.55
5	Devorikala Minor	₹ 7,885,282.71	78.85
6	Budhua Minor	₹ 15,594,242.24	155.94
7	Bishrampur Minor	₹ 9,676,443.95	96.76
8	Sonbarsha Minor	₹ 16,801,695.95	168.02
9	Pokhrahi Minor	₹ 11,194,360.52	111.94
	TOTAL (In Lacs)		1171.82

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST (ADHWARA MINOR)

S. No.	Items	Qty.	Unit	Total Estimated Amount (Rs.)
1	Earthwork	Detail as per BOQ	Cum	8344419.77
2	Head Regulator	Detail as per BOQ	No.	3964613.43
3	Cross Drainage Works			
	Ch. 0.500 Km	Detail as per BOQ	No.	1690399.19
	Ch. 1.150 Km	Detail as per BOQ	No.	4031930.90
	Ch. 1.550 Km	Detail as per BOQ	No.	3378040.03
	Ch. 2.100 Km	Detail as per BOQ	No.	2670642.19
4	Outlets	19	No.	1857442.80
5	Kilometer Stone	07	No.	9612.93
6	Remodelling of Structures			
	Culvert at 0.680 Km	Detail as per BOQ	No.	25287.24
	Culvert at 1.865 Km	Detail as per BOQ	No.	7097.54
	Culvert at 2.400 Km	Detail as per BOQ	No.	125936.41
	Culvert at 2.970 Km	Detail as per BOQ	No.	3685.66
	Culvert at 3.875 Km	Detail as per BOQ	No.	121075.01
	Culvert at 5.150 Km	Detail as per BOQ	No.	159859.38
	Culvert at 5.460 Km	Detail as per BOQ	No.	138979.91
	Culvert at 5.890 Km	Detail as per BOQ	No.	35203.51
	TOTAL (In Rs.)			26564225.90
	TOTAL (In Lacs)			265.64

	NORTH KOEL RESERVOIR PROJEC				
SI.	ABSTRACT OF QUANTITY OF EARTHW	ORK FOR AD	HWARA N		
No.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.55	На	73027.00	39881.57827
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	ng discharge 0.14 cumecs (5 ion of soil item -A) in 225 mm layer & 5350.31 Cum 110.83 of 10 m and lift of sign, specification) aulic excavator in soft rock (where item C with ts by tipper 1783.44 Cum ade A & B type of with kankar, and disposal of the in the country side per including 819.18 Cum 106.11		110.83	592975.1344
3	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	1783.44	Cum	374.47	667843.8406
4	E/W in stripping by hydraulic M/c in grade A & B type of soil including morroum soil, soil mixed with kankar, pebbles, boulders upto 300 mm size and disposal of the same along with all organic materials in the country side beyond 150 m upto 500 m in all by tipper including construction & maintenance of haul road etc. all complete as per specification and direction of E/I. (WRD Part B 5.1.6.1)	819.18	Cum	106.11	86923.35
5	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	8439.34	Cum	117.56	992129.25
6	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i.	One extra lead - 1*12.3 = 12.3	4980.83	Cum	12.30	61264.22
ii.	Two extra lead - 2*24.6 = 24.6	3815.88	Cum	24.60	93870.60
iii. 7	Three extra lead - 3*12.19 = 36.57 Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide classification of soil item A & B). (WRD Part B 7.1.34.1)	1284.08	Cum	36.90	47382.37
i.	One extra lift - 1*12.3 = 12.3	4898.06	Cum	12.30	60246.09
ii.	Two extra lift - 1*12.3 = 24.6	1284.08	Cum	24.60	31588.25

8	Earthwork in flood embankment, canal banks as well as special repair of embankment in canal bank in grade A & B types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck obtained from borrow area or any other sources free from logs, roots, or any other ingredients with all lifts including breaking clods to maximum 60 mm size, placing earth in layers not exceeding 225mm thick complete as per specification & direction of E/I - Lead Beyond 150 m but upto 500 m. (WRD Part B 7.1.26.1)				
Α.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	11815.08	Cum	172.93	2043182.00
В.	, , , , , , , , , , , , , , , , , , , ,				1587271.77
	Lead Beyond 500 m but upto 1 km (25% of net filling)	8439.34	Cum	188.08	
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	5063.61	Cum	206.29	1044571.33
9	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 making arrangment for suppply and carriage 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. (WRD Part B 7.1.39)	40891.13	Cum	24.34	995289.98
	TOTAL COST OF EARTHWORK (i	in Rs.)			8344419.77
	TOTAL COST OF EARTHWORK (in R	s. Lakhs)			83.444

	NORTH KOEL RESERVOIR PRO Abstract of Cost of Head Regulator of Adhward					1. (LT))		
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	1049.595	Cum	110.83	116326.67			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	36.420	Cum	3279.00	119421.24	7.83	16.39	32.78
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	11.18	Cum	4068.00	45472.10	3.80	4.69	9.50
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	321.43	Cum	4891.00	1572096.22	125.36	135.00	273.21
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A 14.1 B)	8.81	Cum	5294.00	46652.95	3.75	3.44	6.87
6	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	7.89	M.T.	71410.00	563492.99			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	591.08	Sqm	385.50	227860.17			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	25.13	Sqm	414.88	10424.73			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry. (WRD Part B M-017)	3.54	Cum	408.85	1446.12			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I. (WRD Part B 7.7.18)	3.54	Cum	889.70	3146.87			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	39.21	Sqm	848.15	33255.96			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00			

17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B 7.1.31)	35.00	Cum	106.98	3744.30		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	3.93	MT	159668.03	627714.57		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	159.520	Cum	678.60	108250.05		
	Coarse Aggregates (60 Km lead)	323.025	Cum	1002.60	323865.26		
	Cement (80 km lead)	140.732	MT	984.50	138551.02		
	Boulder (60 Km)	3.537	Cum	1120.65	3963.72		
	Brick (80 Km)	2352.600	No.	0.93	2184.15		
	Steel (80 km)	11.822	MT	984.50	11639.08		
	TOTAL (In Rs.)				3964613.43		

	NORTH KOEL RESERVOIF ABSTRACT OF COST FOR CROS							
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregat e (Cum)
		ainage at C	ch. 0.500 K.I	M	l		ı	ı
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/L. (WRD Part B 7.1.8)	355.12	Cum	110.83	39357.98			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of £/I. (Part A 7.1.12.4)	57.44	Cum	3279.00	188350.31	12.35	25.85	51.70
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A 7.3.1.1)	12.47	Cum	4068.00	50741.50	4.24	5.24	10.60
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	120.44	Cum	4891.00	589055.20	46.97	50.58	102.37
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	114.75	Sqm	385.50	44236.74			
6	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	430.60	Sqm	414.88	178646.54			
7	Providing 1000mm 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 M-301(11.6)	15.00	RM	4465.81	66987.11			
8	Labour for laying 1000mm NP3RCC 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.(WRD Part B 7.6.2.4)	15.00	RM	1289.47	19342.05			
9	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	2.84	MT	71410.00	202538.82			
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 (WRD Part B. 7.1.31)	117.81	Cum	106.98	12603.15			
	Coarse Sand (35Km lead)	81.671	Cum	678.60	55421.79			
	Coarse Aggregates (60 Km lead)	164.671	Cum	1002.60	165098.80	ļ <u> </u>		
	Cement (80 km lead) Hume Pipe (80 Km)	63.561 15.00	MT RM	984.50 843.40	62575.89 12651.00	 		
	Steel (80 Km)	2.84	MT	984.50	2792.32			
	TOTAL (In Rs.)	•	•		1690399.19			
		ainage at C	h. 1.150 K.f	М				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part 8 7.1.8)	786.19	Cum	110.83	87133.02			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A. 7.1.12.4)	82.79	Cum	3279.00	271458.58	17.80	37.25	74.51
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A. 7.3.1.1)	17.46	Cum	4068.00	71027.25	5.94	7.33	14.84

4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A. 14.1 A)	292.11	Cum	4891.00	1428696.76	113.92	122.69	248.29
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	159.23	Sqm	385.50	61384.40			
6	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	781.72	Sqm	414.88	324320.93			
7	Providing 1000mm 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 M-301(11.6)	52.50	RM	4465.81	234454.89			
8	Labour for laying 1000mm NP3RCC 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 .(WRD Part B. 7.6.2.4)	52.50	RM	1289.47	67697.18			
9	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	11.47	MT	71410.00	818730.73			
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 (WRD Part B. 7.1.31)	328.99	Cum	106.98	35195.49			
	Coarse Sand (35Km lead)	167.272	Cum	678.60	113511.06			
	Coarse Aggregates (60 Km lead)	337.640	Cum	1002.60	338518.36			
	Cement (80 km lead)	137.657	MT	984.50	135523.76			
	Hume Pipe (80 Km)	52.50	RM	843.40	44278.50			
	Steel (80 Km) TOTAL (In Rs.)	11.47	MT	984.50	11287.50 4031930.90			
		ainage at C	h. 1.550 K.ľ	VI				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and	636.61	Cum	110.83	70555.15			
2	direction of E/l. (WRD Part B 7.1.8) Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job	79.90	Cum	3279.00	262007.70	17.18	35.96	71.91
3	as per specification & direction of E/I. (Part A. 7.1.12.4) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	17.46	Cum	4068.00	71027.25	5.94	7.33	14.84
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A. 14.1 A)	229.30	Cum	4891.00	1121529.48	89.43	96.31	194.91
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	158.29	Sqm	385.50	61021.26			
6	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	674.83	Sqm	414.88	279974.97			
7	Providing 1000mm 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	52.50	RM	4465.81	234454.89			

8	Labour for laying 1000mm NP3RCC 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.(WRD Part B. 7.6.2.4)	52.50	RM	1289.47	67697.18			
9	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	9.00	MT	71410.00	642705.07			
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 (WRD Part B. 7.1.31)	325.86	Cum	106.98	34860.20			
	Coarse Sand (35Km lead)	139.598	Cum	678.60	94731.43			
	Coarse Aggregates (60 Km lead)	281.664	Cum	1002.60	282396.63			
	Cement (80 km lead) Hume Pipe (80 Km)	112.545 52.50	MT RM	984.50 843.40	110800.32 44278.50			
	Steel (80 Km)	9.00	MT	984.50	8860.71			
	TOTAL (In Rs.)				3378040.03			
	Cross Dr	ainage at C	h. 2.100 K.I	vI				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	480.72	Cum	110.83	53277.80			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A. 7.1.12.4)	57.92	Cum	3279.00	189933.96	12.45	26.07	52.13
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A. 7.3.1.1)	12.47	Cum	4068.00	50741.50	4.24	5.24	10.60
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A. 14.1 A)	188.91	Cum	4891.00	923949.40	73.67	79.34	160.57
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	115.41	Sqm	385.50	44491.17			
6	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	565.33	Sqm	414.88	234543.36			
6	Providing 1000mm 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 M-301(11.6)	35.00	RM	4465.81	156303.26			
7	Labour for laying 1000mm NP3RCC 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.(WRD Part B. 7.6.2.4)	35.00	RM	1289.47	45131.45			
8	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	7.41	MT	71410.00	529479.59			
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 (WRD Part B. 7.1.31)	236.80	Cum	106.98	25332.41			
	Coarse Sand (35Km lead)	110.646	Cum	678.60	75084.48	ļ		
-	Coarse Aggregates (60 Km lead)	223.306	Cum	1002.60	223886.71	1		
-	Cement (80 km lead) Hume Pipe (80 Km)	90.369 35.00	MT RM	984.50 843.40	88968.10 29519.00	 		
	Steel (80 Km)	7.41	MT	984.50	7299.72			
	TOTAL (In Rs.)				2670642.19			

				PROJECT , BIHAR AND . OR CONSTRUCTION OF					
Sl. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregat e (Cum)	Boulders (cum)
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07	
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78	
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60
4	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 &	7.50	RM	243.69	1827.71				
5	direction of E/I . 4 (M-300) 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 (WRD Part- B 7.6.1.1)	7.50	RM	187.39	1405.43				
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A-8.3 - 13.6)	0.03	M.T.	71410.00	2188.57				
7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	МТ	159668.03	12657.95				
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07				
9	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Sand (35Km lead)	7.74 6.85	Cum	678.60 1002.60	5252.23 6866.76	-			
	Coarse Aggregates 60 Km lead) Cement (50 km lead)	3.26	MT	984.50	3208.65				
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76				
	Steel (80 Km lead)	0.11	M.T.	984.50	108.22				
	Hume Pipe (80 Km)	7.50	RM	843.40	6325.50 97760.15				

	NORTH KOEL RESERVOIR PRO ABSTRACT OF COST F							
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			
	Coarse Aggregates 60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (80 km lead) TOTAL (In Rs.)	0.07	MT	984.50	68.89 1373.28			

	NORTH KOEL RESERVOIR PROJ				RKHAND			
S. No.	ABSTRACT OF COST OF I	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggreg ate (Cum)
	AOC FOR CULVER	T (Ch	0.650	Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.003	На	73027.00	219.08			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11)	56.962	Sqm	51.66	2942.67	0.1566	0.205	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	3.01	Cum	4891.00	14720.93	1.17	1.26	2.56
4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31)	23.675	Cum	106.98	2532.75			
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	1.469	Cum	678.60	996.99			
	Coarse Aggregates (60 Km lead)	2.558	Cum	1002.60	2564.98			
	Cement (80 km lead)	1.330	MT	984.50	1309.85			
	TOTAL (In Rs.)				25287.24			
	AOC FOR CULVER	T (Ch 1	L.865	Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.011	На	73027.00	803.30			
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31)	16.650	Cum	106.98	1781.22			
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11)	79.440	Sqm	51.66	4103.88	0.22	0.29	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.286	Cum	678.60	194.07	Ì	i	Ì
	·							
	Coarse Aggregates 60 Km lead) Cement (80 km lead)	0.000 0.218	Cum	1002.60 984.50	0.00			

	AGC FOR CHIVER	T/Ch 1	400	Kara \				
	AOC FOR CULVER Clearing and Grubbing Road Land .(Clearing and grubbing	I (Cn 2	2.400	Km)		l		
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	401.65			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11)	42.953	Sqm	51.66	2218.97	0.118	0.155	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	19.20	Cum	4891.00	93892.53	7.49	8.06	16.32
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Aggregates (60 Km lead)	8.217 16.317	Cum	678.60 1002.60	5576.31 16359.88			
	Coarse Aggregates (60 Km lead) Cement (80 km lead)	7.605	MT	984.50	7487.08			
	TOTAL (In Rs.)			l	125936.41			
	AOC FOR CULVER	T (Ch	2.970	Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	328.62			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11)	59.092	Sqm	51.66	3052.69	0.1625	0.213	
3	Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead)	0.213	Cum	678.6	144.36			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.163	MT	984.50	159.98			
	TOTAL (In Rs.)				3685.66			
1	AOC FOR CULVER Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	T (Ch	3.875 Ha	73027.00	365.14			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11)	46.051	Sqm	51.66	2379.00	0.1266	0.166	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	18.00	Cum	4891.00	88038.00	7.02	7.56	15.30

_	Forthweek in filling foundation translage and healt filling of	ı	1	l		l	ı	ı
	Earthwork in filling foundation trenches and back filling of							
	structures in layer not exceeding 150 mm thick well watered							
	rammed and fully compacted and finely dressed with suitable							
4	earth obtained from excavation of foundation trenches and	25.000	Cum	106.98	2674.50			
	placed in 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 Corrigendum 7.1.31)							
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	7.726	Cum	678.60	5242.72			
	Coarse Aggregates (60 Km lead)	15.300	Cum	1002.60	15339.78			
	Cement (80 km lead)	7.147	MT	984.50	7035.87			
	TOTAL (In Rs.)				121075.01			
	AOC FOR CULVER	T (Ch !	5.150	Km)		ı	ı	ı
	Clearing and Grubbing Road Land .(Clearing and grubbing							
	road land including uprooting rank vegetation, grass, bushes,							
	shrubs, saplings and trees girth up to 300 mm, removal of							
1	stumps of trees cut earlier and disposal of unserviceable	0.004	На	73027.00	292.11			
-	materials and stacking of serviceable material to be used or							
	auctioned up to a lead of 1000 metres including removal and							
	disposal of top organic soil not exceeding 150 mm in							
	thickness.) (WRD Part A 2.3 (i) B)							
	Providing 1.5 mm thick cement punning including curing,							
2	carriage of water with all leads and lifts as per building	48.109	Sam	51.66	2485.30	0.1323	0.173	
	specification & direction of E/I. (WRD Part A Corrigendum		'					
	5.7.11)							
	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in							
	foundation of various components of canal or embankment							
	structures with approved quality of 20 mm graded coarse							
	aggregate of required grade and approved quality of sand of							
3	requisite F.M. (washed and screened including necessary	24.00	Cum	4891.00	117384.00	9.36	10.08	20.40
	tools & plants, vibrating, curing royalty etc. excluding cost of							
	form work as well as reinforcement, its cutting bending,							
	binding & placing complete as per specification & direction of							
	E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)							
	Earthwork in filling foundation trenches and back filling of							
	structures in layer not exceeding 150 mm thick well watered							
	rammed and fully compacted and finely dressed with suitable							
	earth obtained from excavation of foundation trenches and							
4	placed in a suitable profile within a lead of 30m and lift of 1.5	27.500	Cum	106.98	2941.95			
	m complete job, as per specification and direction of E/I							
	(WRD Part B Corrigendum 7.1.31)							
Ļ	Control of the Land Contro							
5	Carriage of materials(As per Jharkhand SoR 2021)	10.253	Cum	678.60	6057.92			
-	Coarse Aggregates (60 km lead)	20.400	Cum	1002.60	6957.82 20453.04			
-	Coarse Aggregates (60 Km lead) Cement (80 km lead)	9.492	MT	984.50	9345.17			
	TOTAL (In Rs.)	3.432	IVII	304.30	159859.38			
	AOC FOR CULVER	T (Ch.	5.460	Km)	133033.30			
	AGC TON COLVEN	- (611)	J100	,				

Clearing and Grubbing Boad Land. (Clearing and grubbing road land including uprooting rank expectation, grass, bushes, thrubs, spalings and tree girth up to 300 mm, removal of attumps of trees to carrier and disposal of unserviceable materials and stacking of serviceable materials to be used or auctioned up to a lead of 1000 meters including removal and disposal of top organic coil not exceeding 150 mm in thiciness.) (MPD PAR A.2.0) (B) 187. Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and list as up or building specification & direction of £/I. (WRD Part A. Corrigendum 1.3.) Providing & laying P.C.C. or R.C.C. M.200 with normal min in control of £/I. (WRD Part A. Corrigendum 1.3.) Providing & laying P.C.C. or R.C.C. M.200 with normal min in control of £/I. (WRD Part A. Corrigendum 1.3.) Providing & laying and the and approved quality of 20 mm greated coarse aggregate of required grade and approved quality of 20 mm greated coarse aggregate of required grade and approved quality of 20 mm greated coarse aggregate of required grade and approved quality of 20 mm greated coarse aggregate of required grade and approved quality of 20 mm greated coarse aggregate of required grade and approved quality of 20 mm greated coarse aggregate of coarse aggregate and and approved quality of 20 mm greated coarse aggregate of 20 mm greated and approved quality of 20 mm greated coarse aggregate of 20 mm greated and approved quality of 20 mm greated coarse aggregate of 20 mm greated and approved quality of 20 mm greated and 20									
road land including uproceining rank vegetation, grass, bushes, shrubs, salings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials to used or auctioned up to a lead of 1000 metres including removal and disposal of too organic soil not exceeding 130 mm in thickness.) (WRD Part A Ca? (i) 8) Providing 1.5 mm thick cement punning including curing, arrivage of water with all leads and lift as per building specification & direction of £1. (WRD Part A Corrigendum 5.7.11) Providing 1.6 with approved quality of 20 mm graded coarse agagregate of requirest £4.1 (WRD Part A Corrigendum 5.7.11) Tools & plants, wibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of £1. Including lead charges. WRD Part A Corrigendum 14.1. A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and filly compacted and finely dressed with suitable arm of the complete by as per specification and direction of £1. (WRD Part A Corrigendum 14.1.1) S Carriage of materials(As per Jharkhand SoR 2021) Cause Sang (138km lead) Coarse Sang (138km lead) Coarse Sang (138km lead) TOTAL (in Rs.) Clearing and Grubbing Road Land (Clearing and grubbing road land including uprooring rank vegetation, grass, bushes, spinsy and trees girth up to 300 mm, removal of turner of the such as a control of the process of the such as a control of the process of the such as a control of the process of the such as a control of the such as a co		Clearing and Grubbing Road Land .(Clearing and grubbing							
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E/l. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) 1.753 MT 984.50 1725.81	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of	70.176	Sqm	51.66	3625.29			3.40
A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) 1.753 MT 984.50 1725.81	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of	70.176	Sqm	51.66	3625.29			3.40
Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) 1.753 MT 984.50 1725.81	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending,	70.176	Sqm	51.66	3625.29			3.40
structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) 1.753 MT 984.50 1725.81	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of	70.176	Sqm	51.66	3625.29			3.40
structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) 1.753 MT 984.50 1725.81	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1	70.176	Sqm	51.66	3625.29			3.40
rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) 1.753 MT 984.50 1725.81	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	70.176	Sqm	51.66	3625.29			3.40
4 earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) Cement (80 km lead) 1.753 MT 984.50 1725.81	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of	70.176	Sqm	51.66	3625.29			3.40
4	2	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered	70.176	Sqm	51.66	3625.29			3.40
m complete job, as per specification and direction of E/I (WRD Part B Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Coement (80 km lead) 1.753 MT 984.50 1.725.81	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable	70.176	Sqm	51.66 4891.00	3625.29 19564.00			3.40
(WRD Part B Corrigendum 7.1.31) 5 Carriage of materials(As per Jharkhand SoR 2021) 1.933 Cum 678.60 1311.49 Coarse Sand (35Km lead) 1.933 Cum 678.60 1311.49 Coarse Aggregates (60 Km lead) 3.400 Cum 1002.60 3408.84 Cement (80 km lead) 1.753 MT 984.50 1725.81	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and	70.176	Sqm	51.66 4891.00	3625.29 19564.00			3.40
5 Carriage of materials(As per Jharkhand SoR 2021)	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5	70.176	Sqm	51.66 4891.00	3625.29 19564.00			3.40
Coarse Sand (35Km lead) 1.933 Cum 678.60 1311.49 Coarse Aggregates (60 Km lead) 3.400 Cum 1002.60 3408.84 Cement (80 km lead) 1.753 MT 984.50 1725.81	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	70.176	Sqm	51.66 4891.00	3625.29 19564.00			3.40
Coarse Sand (35Km lead) 1.933 Cum 678.60 1311.49 Coarse Aggregates (60 Km lead) 3.400 Cum 1002.60 3408.84 Cement (80 km lead) 1.753 MT 984.50 1725.81	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	70.176	Sqm	51.66 4891.00	3625.29 19564.00			3.40
Coarse Aggregates (60 Km lead) 3.400 Cum 1002.60 3408.84 Cement (80 km lead) 1.753 MT 984.50 1725.81	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31)	70.176	Sqm	51.66 4891.00	3625.29 19564.00			3.40
Cement (80 km lead) 1.753 MT 984.50 1725.81	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31)	70.176	Sqm	51.66 4891.00	3625.29 19564.00 5349.00			3.40
	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (j) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead)	70.176 4.00 50.00	Cum	51.66 4891.00 106.98	3625.29 19564.00 5349.00			3.40
TOTAL (In Rs.) 35203.51	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	70.176 4.00 50.00	Cum Cum Cum Cum	51.66 4891.00 106.98	3625.29 19564.00 5349.00 1311.49 3408.84			3.40
	3	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A Corrigendum 5.7.11) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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 Corrigendum 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Aggregates (60 Km lead) Coarse Aggregates (60 Km lead)	70.176 4.00 50.00	Cum Cum Cum Cum	51.66 4891.00 106.98	3625.29 19564.00 5349.00 1311.49 3408.84 1725.81			3.40

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST (PARTA MINOR)

5. NO.	ADSTRACT OF COST (F	City.	Unit	
3.110.	Techio			Amount
				(Rs.)
1		Detail as	C	1100100200
1	Earthwork	per BOQ	Cum	11801693.66
2		Detail as	NI -	2002002.00
2	Head Regulator	per BOQ	No.	3003903.08
2		Detail as		
3	Cross Drainage Works	per BOQ		
		Detail as	Na	1142051 05
	Ch. 1.250	per BOQ	No.	1143851.05
4	Falls			
		Detail as		240567.20
	Fall (4.20 Km)	per BOQ	No.	340567.29
5	Outlets	15	No.	1466383.64
6	Kilometer Stone	04	No.	5493.10
7		Detail as		
,	Remodelling of Structures	per BOQ		
		Detail as	No.	19490.22
	Cross Drainage at 0.090 Km	per BOQ	NO.	19490.22
		Detail as	No.	6659.38
	Culvert at 0.155 Km	per BOQ	NO.	0039.38
		Detail as	No.	4848.38
	Culvert at 0.82 Km	per BOQ	NO.	4040.30
		Detail as	No.	4229.82
	Culvert at 1.07 Km	per BOQ	INU.	4223.02
		Detail as	No.	29165.94
	Culvert at 2.45 Km	per BOQ	INO.	25105.54
	TOTAL (In Rs.)			17826285.55
	TOTAL (In Lacs)			178.26

	NORTH KOEL RESERVOIR PROJECT				
SI. No.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.59	На	73027.00	42730.65365
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	42421.05	Cum	110.83	4701524.972
3	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	4713.45	Cum	374.47	1765045.622
4	E/W in stripping by hydraulic M/c in grade A & B type of soil including morroum soil, soil mixed with kankar, pebbles, boulders upto 300 mm size and disposal of the same along with all organic materials in the country side beyond 150 m upto 500 m in all by tipper including construction & maintenance of haul road etc. all complete as per specification and direction of E/I. (WRD Part B 5.1.6.1)	877.70	Cum	106.11	93133.01
5	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	4975.55	Cum	117.56	584925.66
6	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i.	One extra lead - 1*12.3 = 12.3	12595.48	Cum	12.30	154924.43
ii. iii.	Two extra lead - 2*24.6 = 24.6 Three extra lead - 3*12.19 = 36.57	9976.88 8484.21	Cum	24.60 36.90	245431.13 313067.35
7	Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide classification of soil item A & B). (WRD Part B 7.1.34.1)	0404.21	Cum	30.30	313007.33
i.	One extra lift - 1*12.3 = 12.3	22205.64	Cum	12.30	273129.31
ii.	Two extra lift - 1*12.3 = 24.6	8484.21	Cum	24.60	208711.57

	.7.1.39)				
9	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 making arrangment for suppply and carriage 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. (WRD Part B	27232.30	Cum	24.34	662834.18
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	2985.33	Cum	206.29	615843.73
В.	Lead Beyond 500 m but upto 1 km (25% of net filling)	4975.55	Cum	188.08	935801.44
A.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	6965.77	Cum	172.93	1204590.61
8	Earthwork in flood embankment, canal banks as well as special repair of embankment in canal bank in grade A & B types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck obtained from borrow area or any other sources free from logs, roots, or any other ingredients with all lifts including breaking clods to maximum 60 mm size, placing earth in layers not exceeding 225mm thick complete as per specification & direction of E/I - Lead Beyond 150 m but upto 500 m. (WRD Part B 7.1.26.1)				

	NORTH KOEL RESERVOII Abstract of Cost of Head Regulator o)		
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	671.420	Cum	110.83	74413.53			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	30.441	Cum	3279.00	99815.43	6.54	13.70	27.40
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	9.55	Cum	4068.00	38832.15	3.25	4.01	8.11
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A .14.1 A)	219.31	Cum	4891.00	1072669.26	85.53	92.11	186.42
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A .14.1 B)	8.91	Cum	5294.00	47161.18	3.79	3.47	6.95
6	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	5.49	M.T.	71410.00	391771.66			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	510.81	Sqm	385.50	196915.57			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	15.53	Sqm	414.88	6441.88			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry. (WRD Part B M-017)	3.05	Cum	408.85	1247.41			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	3.05	Cum	889.70	2714.47			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B .7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B .6.6.3)	33.47	Sqm	848.15	28390.97			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20			

16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical	11.00	RM	208.00	2288.00		
	specifications. (RCD 14.18 ii)						
	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered						
	rammed and fully compacted and finely dressed with suitable						
17	earth obtained from excavation of foundation trenches and	10.00	Cum	106.98	1069.80		
	placed in 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)						
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	3.88	мт	159668.03	619117.38		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	113.294	Cum	678.60	76881.40		
	Coarse Aggregates (60 Km lead)	228.877	Cum	1002.60	229471.95		
	Cement (80 km lead)	99.109	MT	984.50	97573.04		
	Boulder (60 Km)	3.051	Cum	1120.65	3419.09		
	Brick (10 Km)	2008.440	No.	0.83	1673.03		
	Steel (80 km)	9.364	MT	984.50	9218.62		
	TOTAL (In Rs.)				3003903.08		

	NORTH KOEL RESERVOI ABSTRACT OF COST FOR CRO							
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	203.13	Cum	110.83	22512.55			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	29.73	Cum	3279.00	97475.94	6.39	13.38	26.75
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	7.05	Cum	4068.00	28696.55	2.40	2.96	6.00
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A .14.1 A)	83.23	Cum	4891.00	407081.94	32.46	34.96	70.75
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	67.18	Sqm	385.50	25899.19			
6	Providing shuttering,including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	330.43	Sqm	414.88	137090.15			
7	Providing 1000mm 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 M-301(11.6)	15.00	RM	4465.81	66987.11			
8	Labour for laying 1000mm NP3RCC 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. (WRD Part B.7.6.2.4)	15.00	RM	1289.47	19342.05			
9	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	1.96	MT	71410.00	139969.73			
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 (WRD Part B.7.1.31)	47.00	Cum	106.98	5028.55			
	Coarse Sand (35Km lead)	51.297	Cum	678.60	34810.16			
	Coarse Aggregates (60 Km lead)	103.497 41.250	Cum MT	1002.60 984.50	103765.98 40610.46			
	Cement (80 km lead) Hume Pipe (80 Km)	15.00	RM	984.50 843.40	12651.00			
	Steel (80 Km)	1.96	MT	984.50	1929.70			
	TOTAL (In Rs.)				1143851.05			

	NORTH KOEL RESE ABSTRACT OF (T , BIHAR AND					
S. No.	Item of Works	Qty.	Unit	Rate (As per	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulder's (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	132.000	Cum	110.83	14629.56				
	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	8.466	Cum	3279.00	27760.05	1.82	3.81	7.62	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I.(WRD Part A Corrigendum 7.3.13.5)	14.42	Cum	4068.00	58646.63	4.90	6.05	12.25	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A .14.1 A)	10.33	Cum	4891.00	50501.01	4.03	4.34	8.78	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	0.58	МТ	71410.00	41608.54				
1	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	59.99	Sqm	385.50	23124.41				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	37.69	Sqm	414.88	15636.83				
6	Providing 600mm 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 . (RCD M301, 11.3)	10.00	RM	2293.25	22932.53				
	Labour charges for laying 600mm 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 7. (WRD 7.6.2.2)	10.00	RM	646.96	6469.60				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B .6.6.3)	17.77	Sqm	848.15	15073.32				
	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	49.97	Cum	106.98	5345.36				
10	Carriage of materials(As per Jharkhand SoR 2021)	44		676.55	000				
	Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	14.201 28.650	Cum	678.60 1002.60	9637.00 28724.49				
	Cement (80 km lead)	10.749	MT	984.50	10582.09				
	Hume Pipe (80 km) Brick (10 Km)	10.000 1066.320	RM No.	843.40 0.83	8434.00 888.24				
	Steel (80 km)	0.583	MT	984.50	573.64				
	TOTAL (In Rs.)				340567.29				

				ROJECT , BIHAR AND I					
SI. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07	
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78	
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60
4	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. 4 (M-300)	7.50	RM	187.39	1405.43				
5	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 (WRD 7.6.1.1)	7.50	RM	243.69	1827.71				
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	0.03	M.T.	71410.00	2188.57				
7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	МТ	159668.03	12656.72				
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07				
9	Carriage of materials(As per Jharkhand SoR 2021)	774	6	670.50	F3F3 33				
	Coarse Sand (35Km lead) Coarse Aggregates 60 Km lead)	7.74 6.85	Cum	678.60 1002.60	5252.23 6866.76			-	
	Cement (50 km lead)	3.26	MT	984.50	3208.65				
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76				
	Steel (80 km)	0.11	MT	984.50	108.21				
	Hume Pipe (80 Km) TOTAL (In Rs.)	7.50	RM	843.40	6325.50 97758.91				

	ABSTRACT OF COST	FOR K	LOME	TER STONES				
6. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			_
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (50 km lead) TOTAL (In Rs.)	0.07	MT	984.50	68.89			

	NORTH KOEL RESERVOII					ND			
S. No.	ABSTRACT OF CC	OST OF RE	PAIRED Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggreg ate (Cum)	Boulder's (Cum)
	AOC FOR CROS	S DRAINA	AGE (Ch	0.090 Km)			•	l
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	438.16				
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	113.167	Sqm	51.66	5846.20	0.3112	0.407		
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A .14.1 A)	1.97	Cum	4891.00	9628.42	0.77	0.83	1.67	
4	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Sand (35Km lead)	1.234	Cum	678.60	837.54				
	Coarse Aggregates (60 Km lead)	1.673	Cum	1002.60	1677.66				
	Cement (80 km lead) TOTAL (In Rs.)	1.079	MT	984.50	1062.24 19490.22				
	AOC FOR	CUIVERT	(Ch 0.1	155 Km)	13430.22				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14				
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	16.650	Cum	106.98	1781.22				
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	79.440	Sqm	51.66	4103.88	0.22	0.29		
4	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Aggregates (60 Km lead)	0.286	Cum	678.60	194.07	-			
	Coarse Aggregates (60 Km lead) Cement (80 km lead)	0.000 0.218	Cum	1002.60 984.50	0.00 215.07				
	TOTAL (In Rs.)				6659.38				

	AOC FOR	CLILVEDT (Ch 0.0	20 (m)					
	AOC FOR	COLVERT (CII U.	ozu KMI)					
	Clearing and Grubbing Road Land .(Clearing and grubbing								
	road land including uprooting rank vegetation, grass,								
	bushes, shrubs, saplings and trees girth up to 300 mm,								
	removal of stumps of trees cut earlier and disposal of								
1	unserviceable materials and stacking of serviceable	0.004	Ha	73027.00	292.11				
1	material to be used or auctioned up to a lead of 1000	0.004	Па	73027.00	292.11				
	metres including removal and disposal of top organic soil								
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)								
	В)								
	Providing 1.5 mm thick cement punning including curing,								
	carriage of water with all leads and lifts as per building								
2	specification & direction of E/I. (WRD Part A .5.7.11)	80.201	Sqm	51.66	4143.20	0.221	0.289		
	specification & direction of E/1. (WKD Part A.5.7.11)								
2	Carriage of materials/As nor lharkhand SaB 2021)								
3	Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead)	0.289	Cum	678.60	195.93				
	, ,		Cum						
-	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00				
	Cement (80 km lead)	0.221	MT	984.50	217.14				
	TOTAL (In Rs.)			0701/	4848.38				
	AOC FOR	CULVERT (Ch 1.	070Km)					
	Clearing and Grubbing Road Land .(Clearing and grubbing								
	road land including uprooting rank vegetation, grass,								
	bushes, shrubs, saplings and trees girth up to 300 mm,								
	removal of stumps of trees cut earlier and disposal of								
1	unserviceable materials and stacking of serviceable	0.002		72027.00	240.00				
1	material to be used or auctioned up to a lead of 1000	0.003	На	73027.00	219.08				
	metres including removal and disposal of top organic soil								
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)								
	В)								
	Providing 1.5 mm thick cement punning including curing,								
	carriage of water with all leads and lifts as per building								
2		70.599	Sqm	51.66	3647.13	0.1941	0.254		
	specification & direction of E/I. (WRD Part A .5.7.11)								
3	Carriage of materials(As per Jharkhand SoR 2021)								
_	Coarse Sand (35Km lead)	0.254	Cum	678.60	172.47				
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00				
	Cement (80 km lead)	0.194	MT	984.50	191.14				
	TOTAL (In Rs.)	0.134	1011	304.30	4229.82				
	AOC FOR	CHIVEDT (Ch - 2	4E0Km)	4223.02				
	Clearing and Grubbing Road Land .(Clearing and grubbing	COLVERT	CII 2.	130KIII)					
	road land including uprooting rank vegetation, grass,								
	bushes, shrubs, saplings and trees girth up to 300 mm,								
	removal of stumps of trees cut earlier and disposal of								
1	unserviceable materials and stacking of serviceable	0.005	На	73027.00	365.14				
	material to be used or auctioned up to a lead of 1000								
	metres including removal and disposal of top organic soil								
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)								
	B)								
	Providing 1.5 mm thick cement punning including curing,								
2	carriage of water with all leads and lifts as per building	110 701	Sam	E1 66	E722 4F	0 2047	0.200		
-	specification & direction of E/I. (WRD Part A .5.7.11)	110.791	Sqm	51.66	5723.45	0.3047	0.399		
	D 11 01 1 000 D 22 1 22 1 1 1 1 1 1 1								
	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix								
	in foundation of various components of canal or								
	embankment structures with approved quality of 20 mm								
	graded coarse aggregate of required grade and approved								
_	quality of sand of requisite F.M. (washed and screened	2.54	C	4004.00	17107 44	1 27	1 47	2.00	
3	including necessary tools & plants, vibrating, curing royalty	3.51	Cum	4891.00	17167.41	1.37	1.47	2.98	
	etc. excluding cost of form work as well as reinforcement,								
	its cutting bending, binding & placing complete as per								
	specification & direction of E/I. including lead charges.								
	(WRD Part A .14.1 A)								
4	Carriage of materials(As per Jharkhand SoR 2021)								

Coarse Sand (35Km lead)	1.873	Cum	678.60	1271.05		
Coarse Aggregates (60 Km lead)	2.984	Cum	1002.60	2991.26		
Cement (80 km lead)	1.674	MT	984.50	1647.63		
TOTAL (In Rs.)						

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST (SALEMPUR MINOR)								
S. No.	Items	Qty.	Uı	nit	Total Estimated Amount (Rs.)			
1	Earthwork	Detail as per BOQ	Cı	ım	1599170.20			
2	Head Regulator	Detail as per BOQ	N	0.	2788570.62			
3	Outlets	09	N	0.	879841.32			
4	Kilometer Stone	01	N	0.	1373.28			
5	Remodelling of Structures							
	Culvert at 0.320 Km	Detail as per BOQ	N	0.	6063.44			
	Culvert at 0.870 Km	Detail as per BOQ	N	0.	4892.05			
	Culvert at 1.400 Km	Detail as per BOQ	N	0.	4412.39			
	TOTAL (In Rs.)				5284323.31			
	TOTAL (In Lacs)		52.84					

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

	ABSTRACT OF QUANTITY OF EARTHWORK FOR SALEMPUR MINOR.								
SI. No.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	273.51	Cum	110.83	30313.1133				
2	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	30.39	Cum	374.47	11380.1433				
3	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	1968.83	Cum	117.56	231455.80				
4	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).								
i.	One extra lead - 1*12.3 = 12.3	855.91	Cum	12.30	10527.69				
ii.	Two extra lead - 2*12.3 = 24.6	645.35	Cum	24.60	15875.64				
iii.	Three extra lead - 1*12.3 = 36.9	54.70	8179.23	36.90	2018.50				
5	Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide classification of soil item A & B). (WRD Part B 7.1.34.1)								
i.	One extra lead - 1*12.3 = 12.3	530.52	Cum	12.30	6525.41				
ii.	Two extra lead - 2*12.3 = 24.6	54.70	Cum	24.60	1345.67				
6	Earthwork in flood embankment, canal banks as well as special repair of embankment in canal bank in grade A & B types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck obtained from borrow area or any other sources free from logs, roots, or any other ingredients with all lifts including breaking clods to maximum 60 mm size, placing earth in layers not exceeding 225mm thick complete as per specification & direction of E/I - Lead Beyond 150 m but upto 500 m. (WRD Part B 7.1.26.1)								

A.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	2756.36	Cum	172.93	476657.98		
В.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1968.83	Cum	188.08	370297.78		
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	1181.30	Cum	206.29	243690.12		
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 making arrangment for suppply and carriage 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. (WRD Part B 7.1.39)	8179.23	Cum	24.34	199082.34		
TOTAL COST OF EARTHWORK (in Rs.)							
	TOTAL COST OF EARTHWORK (in Rs. Lakhs)						

	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE							
1	Cost of material (A)		Rs.	55000				
2	Wastage 5% =		Rs.	2750				
3	Cost of miscellaneous material like electrodes, oxygen, acetylene nut bolt, rope as	per site	Rs.	35750				
	Total 1+2-	+3= (B) =	Rs.	93500				
4	Labour charge 30%(B) =		Rs.	28050				
	Overhead charge + Contractor profit @14.95% A		Rs.	8222.5				
5	Workshop and energy charge ,12 % of (B)		Rs.	11220				
6	Transportation and erection charge ,15 % of B		Rs.	14025				
	Total = B+4+5	5+6+7 = C	Rs.	155017.5				
7	Other incidental charge , 3 % = of C		Rs.	4650.525				
	Tota	al C+8 = D	Rs.	159668				

	NORTH KOEL RESERVOIR PRO	JECT , BI	HAR	AND JHARK	(HAND			
	Abstract of Cost of Head Regulator of Salemp	ur Mr. (O	fftakir	ng from RMC	at RD 15.934 I	(M)		
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	533.465	Cum	110.83	59123.89			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	26.715	Cum	3279.00	87598.60	5.74	12.02	24.04
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum7.3.13.5)	9.18	Cum	4068.00	37344.24	3.12	3.86	7.80
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	200.89	Cum	4891.00	982570.29	78.35	84.38	170.76
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A 14.1 B)	7.80	Cum	5294.00	41302.15	3.32	3.04	6.09
6	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	5.02	М.Т.	71410.00	358674.36			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	481.95	Sqm	385.50	185791.40			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	12.43	Sqm	414.88	5157.83			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry. (WRD Part B M-017)	2.24	Cum	408.85	916.24			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	2.24	Cum	889.70	1993.82			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			

13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	33.87	Sqm	848.15	28726.84		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00		
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20		
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00		
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B 7.1.31)	20.00	Cum	106.98	2139.60		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	3.82	МТ	159668.03	610097.43		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	103.295	Cum	678.60	70096.20		
	Coarse Aggregates (60 Km lead)	209.351	Cum	1002.60	209895.67		
	Cement (80 km lead)	90.529	MT	984.50	89125.93		
	Boulder (60 Km)	2.241	Cum	1120.65	2511.37		
	Brick (10 Km)	2032.200	No.	0.83	1692.82		
	Steel (80 km)	8.844	MT	984.50	8706.71		
	TOTAL (In Rs.)				2788570.62		

				PROJECT , BIHAR AND OR CONSTRUCTION O					
SI. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07	
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78	
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60
4	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 . 4 (M-300)	7.50	RM	243.69	1827.71				
5	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 (WRD 7.6.1.1)	7.50	RM	187.39	1405.43				
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	0.03	M.T.	71410.00	2188.57				
7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	MT	159668.03	12657.95				
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07				
9	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Sand (35Km lead) Coarse Aggregates 60 Km lead)	7.74 6.85	Cum	678.60 1002.60	5252.23 6866.76				
	Cement (50 km lead)	3.26	MT	984.50	3208.65				
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76				
<u> </u>	Steel (80 Km lead) Hume Pipie (80 km lead)	7.50	M.T.	984.50 843.40	108.22 6325.50	-			
	TOTAL COST (In Rs.)	7.50		3.3.40	97760.15				

	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND											
	ABSTRACT OF COST FO	OR KILO	METE	R STONES								
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77							
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16				
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08				
4	Carriage of materials(As per Jharkhand SoR 2021)											
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57							
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04							
	Cement (50 km lead) TOTAL (In Rs.)	0.07	MT	984.50	68.89 1373.28							

	NORTH KOEL RESERVOIR	PROJECT	, BIH	AR AND JHARI	KHAND			
S. No.	ABSTRACT OF COS	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC FOR CL	JLVERT (Ch	0.32	20 Km)	1			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.008	На	73027.00	547.70			
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	13.275	Cum	106.98	1420.16			
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	72.092	Sqm	51.66	3724.28	0.198	0.260	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.260	Cum	678.60	176.12			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.198	MT	984.50	195.18			
	TOTAL (In Rs.)	IIIVEDT (C	h 07	70Km)	6063.44			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	80.970	Sqm	51.66	4182.92	0.2227	0.291	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.291	Cum	678.60	197.81			
	Cement (80 km lead)	0.223	MT	984.50	219.22			
	TOTAL (In Rs.) AOC FOR CULV	FRT + EALL	(Ch	1 400 Km)	4892.05			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	401.65			

2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	70.599	Sqm	51.66	3647.13	0.194	0.254	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.254	Cum	678.60	172.47			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.194	MT	984.50	191.14			
	TOTAL (In Rs.)				4412.39			

N	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND											
	ABSTRACT OF COST (SON	IPURWA MI	NOR)									
S. No.	Items	Qty.	Un	it	Total Estimated Amount (Rs.)							
1	Earthwork	Detail as per BOQ	No).	2702076.05							
1	Head Regulator	Detail as per BOQ	No).	2596034.66							
2	Outlets	10	No).	977601.47							
3	Kilometer Stone	03	No).	4119.83							
4	Remodelling of Structures											
	Fall at 0.740 Km	Detail as per BOQ	No).	27758.04							
	Culvert at .840 Km	Detail as per BOQ	No).	4173.94							
	Fall at 1.020 Km	Detail as per BOQ	No).	36768.55							
	Culvert at 1.490 Km	Detail as per BOQ	No).	6685.69							
	TOTAL (In Rs.)			6	355218.22							
	TOTAL (In Lacs)				63.55							

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ABSTRACT OF QUANTITY OF EARTHWORK FOR SONPURWA MINOR. SI. **Particular** Quantity Unit Rate (in Rs.) Amount in Rs. No. Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A)

1	including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	2220.03	Cum	110.83	246045.9249
2	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	246.67	Cum	374.47	92370.5149
3	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	2864.74	Cum	117.56	336778.54
4	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i.	One extra lead - 1*12.3 = 12.3	1700.90	Cum	12.30	20921.10
ii.	Two extra lead - 2*12.3 = 24.6	1303.43	Cum	24.60	32064.31
iii.	Three extra lead - 1*12.3 = 36.9	444.01	Cum	36.90	16383.82
5	Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide classification of soil item A & B). (WRD Part B 7.1.34.1)				
i.	One extra lead - 1*12.3 = 12.3	1682.96	Cum	12.30	20700.44
ii.	Two extra lead - 2*12.3 = 24.6	444.01	Cum	24.60	10922.55
6	Earthwork in flood embankment, canal banks as well as special repair of embankment in canal bank in grade A & B types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck obtained from borrow area or any other sources free from logs, roots, or any other ingredients with all lifts including breaking clods to maximum 60 mm size, placing earth in layers not exceeding 225mm thick complete as per specification & direction of E/I - Lead Beyond 150 m but upto 500 m. (WRD Part B 7.1.26.1)				

A.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	4010.63	Cum	172.93	693558.68
В.	Lead Beyond 500 m but upto 1 km (25% of net filling)	2864.74	Cum	188.08	538799.83
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	1718.84	Cum	206.29	354580.02
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 making arrangment for suppply and carriage 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. (WRD Part B 7.1.39)	13925.65	Cum	24.34	338950.32
		2702076.05			
	TOTAL COST OF EARTHWORK (in R	s. Lakhs)			27.021

	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE										
1	Cost of material (A)		Rs.	55000							
2	Wastage 5% =		Rs.	2750							
3	Cost of miscellaneous material like electrodes, oxygen, acetylene nut bolt, rope a	s per site	Rs.	35750							
	Total 1+	2+3= (B) =	Rs.	93500							
4	Labour charge 30%(B) =		Rs.	28050							
5	Overhead charge + Contractor profit @14.95% A		Rs.	8222.5							
6	Workshop and energy charge ,12 % of (B)		Rs.	11220							
7	Transportation and erection charge ,15 % of B		Rs.	14025							
	Total = B+4+	-5+6+7 = C	Rs.	155017.5							
8	Other incidental charge , 3 % = of C		Rs.	4650.525							
	Tot	tal C+8 = D	Rs.	159668.025							

	NORTH KOEL RESERVOIR Abstract of Cost of Head Regulator of So					1)		
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregat e (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	296.366	Cum	110.83	32846.24			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	25.930	Cum	3279.00	85022.99	5.57	11.67	23.34
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. ((WRD Part A Corrigendum 7.3.13.5))	9.54	Cum	4068.00	38816.04	3.24	4.01	8.11
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A .14.1 A)	180.95	Cum	4891.00	885017.33	70.57	76.00	153.81
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A .14.1 B)	8.67	Cum	5294.00	45889.34	3.68	3.38	6.76
6	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	4.58	M.T.	71410.00	327250.03			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	456.29	Sqm	385.50	175899.31			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	13.28	Sqm	414.88	5510.89			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	2.78	Cum	408.85	1137.02			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	2.78	Cum	889.70	2474.26			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B .7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B .6.6.3)	28.97	Sqm	848.15	24569.21		_	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20		
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00		
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B .7.1.31)		Cum	106.98	2139.60		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	3.83	МТ	159668.03	612042.89		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	95.055	Cum	678.60	64504.09		
	Coarse Aggregates (60 Km lead)	192.674	Cum	1002.60	193175.17		
	Cement (80 km lead)	83.073	MT	984.50	81785.19		
	Boulder (60 Km)	2.781	Cum	1120.65	3116.51		
	Brick (10 Km)	1738.080	_	0.83	1447.82		
	Steel (80 km)	8.416	MT	984.50	8285.47		
	TOTAL (In Rs.)				2596034.66		

				PROJECT , BIHAR AN OR CONSTRUCTION					
Sl. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07	
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78	
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60
4	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 . 4 (M-300)	7.50	RM	243.69	1827.71				
5	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 (WRD 7.6.1.1)	7.50	RM	187.39	1405.43				
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	0.03	M.T.	71410.00	2188.57				
7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	MT	159668.03	12657.95				
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07				
9	Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead)	7.74	Cum	678.60	5252.23				
	Coarse Aggregates 60 Km lead)	6.85	Cum	1002.60	6866.76				
	Cement (50 km lead)	3.26	MT	984.50	3208.65				
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76				
	Steel (80 Km lead) Hume Pipe (80 Km)	7.50	M.T.	984.50 843.40	108.22 6325.50				
	TOTAL (In Rs.)	,.50		0.3.40	97760.15				

	NORTH KOEL RESERVOIR PR	OJECT ,	BIHA	AR AND JHA	RKHAND			
	ABSTRACT OF COST	FOR KIL	OMET	ER STONES				
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (50 km lead)	0.07	MT	984.50	68.89			
	TOTAL (In Rs.)				1373.28			

	NORTH KOEL RESERVOIR PRO				KKHAND			
S. No.	ABSTRACT OF COST O	F REPAIRE Qty.	D STR	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggreg ate (Cum)
	AOC FOR FAL	L (Ch 0.7	40 Km	1)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.010	На	73027.00	730.27			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	54.000	Sqm	51.66	2789.64	0.1485	0.194	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	4.32	Cum	4068.00	17593.90	1.47	1.82	3.68
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	2.011	Cum	678.60	1364.58			
	Coarse Aggregates (60 Km lead)	3.676	Cum	1002.60	3685.77			
	Cement (80 km lead) TOTAL (In Rs.)	1.619	MT	984.50	1593.89 27758.04			
	AOC FOR CULV	ERT (Ch	.840 K	m)	27730.04			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.002	На	73027.00	146.05			
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	11.250	Cum	106.98	1203.53			
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	49.716	Sqm	51.66	2568.31	0.14	0.18	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.179	Cum	678.60	121.45			
	Coarse Aggregates (60 Km lead) Cement (80 km lead)	0.000	Cum	1002.60 984.50	0.00 134.60			

	AOC FOR FAL	I (Ch - 1 0	20 Km	1				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	401.65			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	70.800	Sqm	51.66	3657.53	0.195	0.255	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	5.84	Cum	4068.00	23750.81	1.99	2.45	4.96
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	2.707	Cum	678.60	1836.99			
	Coarse Aggregates (60 Km lead)	4.963	Cum	1002.60	4975.59			
	Cement (80 km lead)	2.180	MT	984.50	2145.99			
	TOTAL (In Rs.)				36768.55			
	AOC FOR CULVE	RT (Ch 1	.490 I	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.003	На	73027.00	219.08			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	113.828	Sqm	51.66	5880.35	0.3130	0.410	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.410	Cum	678.60	278.08			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.313	MT	984.50	308.18			
	TOTAL (In Rs.)				6685.69			

N	ORTH KOEL RESERVOIR PROJEC	T, BIHAR A	ND JH	IARKHAND
	ABSTRACT OF COST (DEV	ORI KALA M	INOR)	
S. No.	Items	Qty.	Unit	Total Estimated Amount (Rs.)
1	Earthwork	Detail as per BOQ	Cum	2773956.12
2	Head Regulator	Detail as per BOQ	No.	3253849.78
3	Falls			
	Fall (1.550 Km)	Detail as per BOQ	No.	694000.92
	Fall (1.750 Km)	Detail as per BOQ	No.	692959.24
4	Outlets	03	No.	293280.44
5	Kilometer Stone	02	No.	2746.55
6	Remodelling of Structures			
	Bridge at 0.235 Km	Detail as per BOQ	No.	17293.47
	Bridge at 0.650 Km	Detail as per BOQ	No.	63136.78
	Bridge at 0.880 Km	Detail as per BOQ	No.	64820.45
	Culvert at 1.450 Km	Detail as per BOQ	No.	29238.97
	TOTAL (In Rs.)			7885282.71
	TOTAL (In Lacs)			78.85

	NORTH KOEL RESERVOIR PROJECT				
SI. No.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.17	На	73027.00	12206.71864
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	10782.32	Cum	110.83	1195003.971
3	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	1198.04	Cum	172.93	207176.1926
4	E/W in stripping by hydraulic M/c in grade A & B type of soil including morroum soil, soil mixed with kankar, pebbles, boulders upto 300 mm size and disposal of the same along with all organic materials in the country side beyond 150 m upto 500 m in all by tipper including construction & maintenance of haul road etc. all complete as per specification and direction of E/I. (WRD Part B 5.1.6.1)	250.73	Cum	106.11	26604.99
5	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	1281.88	Cum	118.58	152004.74
6	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i.	One extra lead - 1*12.3 = 12.3	3208.33	Cum	12.30	39462.44
ii.	Two extra lead - 2*12.3 = 24.6 Three extra lead - 3*12.3 = 36.9	2541.03 2156.46	Cum	24.60 36.90	62509.23 79573.48
7	Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide classification of soil item A & B). (WRD Part B 7.1.34.1)		Cum	30.30	73373.48
i.	One extra lead - 1*12.3 = 12.3	5647.53	Cum	12.30	69464.65
ii.	Two extra lead - 2*12.3 = 24.6	2156.46	Cum	24.60	53048.99

8	Earthwork in flood embankment, canal banks as well as special repair of embankment in canal bank in grade A & B types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck obtained from borrow area or any other sources free from logs, roots, or any other ingredients with all lifts including breaking clods to maximum 60 mm size, placing				
	earth in layers not exceeding 225mm thick complete as per specification & direction of E/I - Lead Beyond 150 m but upto 500 m. (WRD Part B 7.1.26.1)				
A.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	1794.63	Cum	172.93	310344.50
В.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1281.88	Cum	188.08	241095.05
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	769.13	Cum	206.29	158662.80
9	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 making arrangment for suppply and carriage 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. (WRD Part B 7.1.39)	6852.85	Cum	24.34	166798.37
	TOTAL COST OF EARTHWORK (<u> </u>			2773956.12
	TOTAL COST OF EARTHWORK (in R	s. Lakhs)			27.740

	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKF ANALYSIS OF RATE OF HEAD REGULATOR GATE	IAND						
1	Cost of material (A)		Rs.	55000				
2	2 Wastage 5 % = Rs.							
3	Cost of miscellaneous material like electrodes, oxygen, acetylene nut bolt, rope as	per site	Rs.	35750				
	Total 1+	2+3= (B) =	Rs.	93500				
4	Labour charge 30%(B) =		Rs.	28050				
5	Overhead charge + Contractor profit @14.95% A		Rs.	8222.5				
6	Workshop and energy charge ,12 % of (B)		Rs.	11220				
7	Transportation and erection charge ,15 % of B		Rs.	14025				
	Total = B+4+	-5+6+7 = C	Rs.	155017.5				
8	Other incidental charge , 3 % = of C		Rs.	4650.525				
	То	tal C+8 = D	Rs.	159668.025				

	NORTH KOEL RESERVC Abstract of Cost of Head Regulator of					4)		
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregat e (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	292.073	Cum	110.83	32370.42			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	27.487	Cum	3279.00	90128.88	5.91	12.37	24.74
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	10.17	Cum	4068.00	41369.82	3.46	4.27	8.64
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	240.64	Cum	4891.00	1176991.88	93.85	101.07	204.55
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A 14.1 B)	11.00	Cum	5294.00	58243.11	4.68	4.29	8.58
6	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	6.05	M.T.	71410.00	431726.09			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	568.78	Sqm	385.50	219263.87			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	14.99	Sqm	414.88	6217.02			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	4.51	Cum	408.85	1843.52			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	4.51	Cum	889.70	4011.66			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	39.21	Sqm	848.15	33255.96			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20		
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00		
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B 7.1.31)	30.00	Cum	106.98	3209.40		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	4.36	МТ	159668.03	696030.35		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	122.002	Cum	678.60	82790.26		
	Coarse Aggregates (60 Km lead)	247.171	Cum	1002.60	247813.91		
	Cement (80 km lead)	107.894	MT	984.50	106221.99		
	Boulder (60 Km)	4.509	Cum	1120.65	5052.99		
	Brick (10 Km)	2352.60	No.	0.83	1959.72		
	Steel (80 km)	10.405	MT	984.50	10243.69		
	TOTAL (In Rs.)				3253849.78		

	NORTH KOEL RESERVO								
S. No.	SHARDA TYPE	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulder's (Cum)
	SHARDA	TYPE FALL A	T CH. 1.5	50 KM		1			
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	140.820	Cum	110.83	15607.08				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	10.049	Cum	3279.00	32950.72	2.16	4.52	9.04	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	73.22	Cum	4068.00	297876.94	24.90	30.75	62.24	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.18	Cum	4891.00	864.73	0.07	0.07	0.15	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	1.73	M.T.	71410.00	123439.24				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	188.07	Sqm	385.50	72500.54				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	21.57	Sqm	414.88	8950.21				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	13.49	Sqm	848.15	11439.85				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.59	Cum	408.85	242.86				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.59	Cum	889.70	528.48				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.59	Cum	1276.75	758.39				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.59	Cum	365.75	217.26				

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. (WRD Part A 5.7.11)	12.43	Sqm	51.66	642.18	0.0342	0.045	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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 (WRD Part B 7.1.31)	5.18	Cum	106.98	554.16			

16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	35.395	Cum	678.60	24019.26		
	Coarse Aggregates (60 Km lead)	72.029	Cum	1002.60	72216.43		
	Cement (80 km lead)	27.160	MT	984.50	26739.00		
	Boulder (60 Km)	0.59	Cum	1120.65	665.66		
	Brick (10 Km)	809.280	No.	0.83	674.13		
	Steel (80 km)	1.729	MT	984.50	1701.81		
	TOTAL (In Rs.)				694000.92		

	SHARDA	TYPE FALL A	T CH. 1.7	'50 KM					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	131.730	Cum	110.83	14599.64				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	10.049	Cum	3279.00	32950.72	2.16	4.52	9.04	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A 7.3.1.1)	73.22	Cum	4068.00	297876.94	24.90	30.75	62.24	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.18	Cum	4891.00	864.73	0.07	0.07	0.15	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	1.73	M.T.	71410.00	123439.24				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	188.07	Sqm	385.50	72500.54				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	21.57	Sqm	414.88	8950.21				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	13.49	Sqm	848.15	11439.85				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.59	Cum	408.85	242.86				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.59	Cum	889.70	528.48				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.59	Cum	1276.75	758.39				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.59	Cum	365.75	217.26				
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. (WRD Part A 5.7.11)	12.43	Sqm	51.66	642.18	0.0342	0.045		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00				

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 (WRD Part B 7.1.31)	4.86	Cum	106.98	519.92				
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16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	35.395	Cum	678.60	24019.26		
	Coarse Aggregates (60 Km lead)	72.029	Cum	1002.60	72216.43		
	Cement (80 km lead)	27.160	MT	984.50	26739.00		
	Boulder (60 Km)	0.59	Cum	1120.65	665.66		
	Brick (10 Km)	809.280	No.	0.83	674.13		
	Steel (80 km)	1.729	MT	984.50	1701.81		
	TOTAL (In Rs.)						

				PROJECT , BIHAR AN					
SI. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07	
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78	
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60
4	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. 4 (M-300)	7.50	RM	243.69	1827.71				
5	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 (WRD 7.6.1.1)	7.50	RM	187.39	1405.43				
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	0.03	M.T.	71410.00	2188.57				
7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	МТ	159668.03	12657.95				
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07				
9	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Sand (35Km lead)	7.74 6.85	Cum	678.60 1002.60	5252.23 6866.76	-			
	Coarse Aggregates 60 Km lead) Cement (50 km lead)	3.26	MT	984.50	3208.65				
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76				
	Steel (80 km)	0.11	MT	984.50	108.22				
	Hume Pipe (80 Km) TOTAL (In Rs.)	7.50	RM	843.40	6325.50 97760.15				
	TOTAL (III KS.)				37700.13				

	NORTH KOEL RESERVOIR PR	OJECT ,	BIHA	R AND JHAI	RKHAND			
	ABSTRACT OF COST	FOR KIL	ОМЕТ	ER STONES				
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (50 km lead)	0.07	MT	984.50	68.89			
	TOTAL (In Rs.)				1373.28			

	NORTH KOEL RESERVOIR PROJE				HAND			
S. No.	ABSTRACT OF COST OF R	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggreg ate (Cum)
	AOC FOR FALL (Ch 0.235 I	Km)					
1	Clearing and Grubbing Road Land . (Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.003	На	73027.00	219.08			
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	1.211	Sqm	4891.00	5924.96	0.47	0.51	1.03
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	92.262	Sqm	51.66	4766.25	0.2537	0.332	
4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	38.00	Cum	106.98	4065.24			
5	Carriage of materials(As per Jharkhand SoR 2021)							
-	Coarse Sand (35Km lead)	0.841	Cum	678.60	570.66			
	Coarse Aggregates (60 Km lead)	1.030	Cum	1002.60	1032.37			
	Cement (80 km lead)	0.726	MT	984.50	714.91			
	TOTAL (In Rs.)				17293.47			
	AOC FOR CULVERT	(Ch 0.65)	0 Km)					
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	240.0	Cum	106.98	25675.20			
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	58.320	Sqm	51.66	3012.81	0.16	0.21	

4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	5.28	Cum	4891.00	25824.48	2.06	2.22	4.49
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	2.428	Cum	678.60	1647.34			
	Coarse Aggregates (60 Km lead)	4.488	Cum	1002.60	4499.67			
	Cement (80 km lead)	2.220	MT	984.50	2185.18 63136.78			
	TOTAL (In Rs.) AOC FOR FALL ((ጉ - በ 880 ፤	(m)		03130.76			
	Clearing and Grubbing Road Land .(Clearing and grubbing road	.11 0.000 1	XIII)					
1	land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	438.16			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	58.320	Sqm	51.66	3012.81	0.160	0.210	
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	20.00	Cum	106.98	2139.60			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	9.19	Cum	4891.00	44949.51	3.58	3.86	7.81
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	4.070	Cum	678.60	2761.80			
	Coarse Aggregates (60 Km lead)	7.812	Cum	1002.60	7832.02			
	Cement (80 km lead)	3.745	MT	984.50	3686.54			
	TOTAL (In Rs.)	/Ch 1 40	0 1/202		64820.45			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	Ha	73027.00	438.16			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	110.791	Sqm	51.66	5723.45	0.3047	0.399	

3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	3.51	Cum	4891.00	17167.41	1.37	1.47	2.98
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	1.873	Cum	678.60	1271.05			
	Coarse Aggregates (60 Km lead)	2.984	Cum	1002.60	2991.26			
	Cement (80 km lead)	1.674	MT	984.50	1647.63			
	TOTAL (In Rs.)				29238.97			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST (BUDHUA MINOR)

S. No.	Items	Qty.	Unit	Amount (Rs.)
1		Detail as	Cum	6191817.59
	Earthwork	per BOQ	Cuiii	0131017.33
2		Detail as	No.	3160249.91
	Head Regulator	per BOQ	140.	3100243.31
3	Cross Drainage Works			
		Detail as	No	1647525.25
	Ch. 1.800 Km	per BOQ	No.	1647525.25
		Detail as	No.	930828.47
	Ch. 2.550 Km	per BOQ	INO.	930828.47
4	Falls			
		Detail as		1016601 11
	Fall (2.010 Km)	per BOQ	No.	1046681.44
		Detail as	NI -	1120700 12
	Fall (3.200 Km)	per BOQ	No.	1139799.43
		Detail as	No.	667397.33
	Fall (3.700 Km)	per BOQ	NO.	00/39/.33
5	Outlets	05	No.	488794.55
6		06	No.	9220 65
0	Kilometer Stone		NO.	8239.65
7	Remodelling of Structures			
		Detail as	N1 -	40500.35
	Bridge at 0.130 Km	per BOQ	No.	10580.25
		Detail as	No.	16387.47
	Bridge at 0.560 Km	per BOQ	NO.	10367.47
		Detail as	No.	109942.06
	Culvert at 0.770 Km	per BOQ	140.	103342.00
		Detail as	No.	18844.81
	Bridge at 0.880 Km	per BOQ		100 :
		Detail as	No.	8391.99
	Bridge at 0.970 Km	per BOQ		
	Cross Drain and at 1 030 Km	Detail as	No.	3983.64
	Cross Drainage at 1.020 Km	per BOQ		
	Bridge at 1.100 Km	Detail as per BOQ	No.	17096.06
	Bridge at 1.100 Kill	Detail as		
	Culvert at 1.335 Km	per BOQ	No.	6113.56
	Culvert at 1.555 km	Detail as		
	Culvert at 1.450 Km	per BOQ	No.	13273.71
	18.15.15.25.21.15.0	Detail as		
	Railway Bridge at 1.580 Km	per BOQ	No.	14143.19
		Detail as	N	17772 40
	Culvert at 1.735 Km	per BOQ	No.	17773.40
		Detail as	No.	15540.94
	Culvert at 1.940 Km	per BOQ	INU.	13340.94
		Detail as	No.	5411.97
	Culvert at 2.010 Km	per BOQ	140.	5711.57
		Detail as	No.	2717.39
	Culvert at 2.270 Km	per BOQ		

TOTAL (In Lacs)			155.94
TOTAL (In Rs.)			15594242.24
Culvert at 4.120 Km	per BOQ	No.	7932.94
	Detail as		
Culvert at 3.230 Km	per BOQ	No.	18689.52
Content at 21020 Km	Detail as		
Culvert at 2.810 Km	per BOQ	No.	9782.27
Culvert at 2.720 km	Detail as		
Culvert at 2.720 Km	Detail as per BOQ	No.	7720.62
Culvert at 2.650 Km	per BOQ		
	Detail as	No.	4260.61
Culvert at 2.475 Km	per BOQ	No.	4322.20
	Detail as	NI -	4222.20

	NORTH KOEL RESERVOIR PROJEC	T, BIHAR AN	ID JHARK	(HAND	
	ABSTRACT OF QUANTITY OF EARTH	WORK FOR BU	JDHUA MI	NOR.	
SI.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
No.	i di ticalai	Quarterty	Onic	nate (iii noi)	Amount in its
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.28	На	73027.00	20195.61685
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	2087.37	Cum	110.83	231343.2171
3	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	231.93	Cum	374.47	86850.8271
4	E/W in stripping by hydraulic M/c in grade A & B type of soil including morroum soil, soil mixed with kankar, pebbles, boulders upto 300 mm size and disposal of the same along with all organic materials in the country side beyond 150 m upto 500 m in all by tipper including construction & maintenance of haul road etc. all complete as per specification and direction of E/I. (WRD Part B 5.1.6.1)	414.83	Cum	106.11	44017.08
5	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	7270.93	Cum	117.56	854769.94
6	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i.	One extra lead - 1*12.3 = 12.3	3430.21	Cum	12.30	42191.61
ii.	Two extra lead - 2*12.3 = 24.6	2598.75	Cum	24.60	63929.29

417.47

Cum

36.90

15404.79

Three extra lead - 1*12.3 = 36.9

	Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide				
7	classification of soil item A & B). (WRD Part B 7.1.34.1)				
i.	One extra lead - 1*12.3 = 12.3	2497.87	Cum	12.30	30723.80
ii.	Two extra lead - 2*12.3 = 24.6	417.47	Cum	24.60	10269.86
8	Earthwork in flood embankment, canal banks as well as special repair of embankment in canal bank in grade A & B types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck obtained from borrow area or any other sources free from logs, roots, or any other ingredients with all lifts including breaking clods to maximum 60 mm size, placing earth in layers not exceeding 225mm thick complete as per specification & direction of E/I - Lead Beyond 150 m but upto 500 m. (WRD Part B 7.1.26.1)				
A.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	10179.30	Cum	172.93	1760305.48
В.	Lead Beyond 500 m but upto 1 km (25% of net filling)	7270.93	Cum	188.08	1367515.57
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	4362.56	Cum	206.29	899951.47
9	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 making arrangment for suppply and carriage 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. (WRD Part B 7.1.39)	31403.00	Cum	24.34	764349.02
	TOTAL COST OF EARTHWORK (i	n Rs.)	!		6191817.59
	TOTAL COST OF EARTHWORK (in R	<u>-</u>			61.918

	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKF ANALYSIS OF RATE OF HEAD REGULATOR GATE	IAND		
1	Cost of material (A)		Rs.	55000
2	Wastage 5% =		Rs.	2750
3	Cost of miscellaneous material like electrodes, oxygen, acetylene nut bolt, rope as	per site	Rs.	35750
	Total 1+	2+3= (B) =	Rs.	93500
4	Labour charge 30%(B) =		Rs.	28050
5	Overhead charge + Contractor profit @14.95% A		Rs.	8222.5
6	Workshop and energy charge ,12 % of (B)		Rs.	11220
7	Transportation and erection charge ,15 % of B		Rs.	14025
	Total = B+4+	-5+6+7 = C	Rs.	155017.5
8	Other incidental charge , 3 % = of C		Rs.	4650.525
	То	tal C+8 = D	Rs.	159668.025

	NORTH KOEL RESERVOIR F Abstract of Cost of Head Regulator of Bu)		
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregat e (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	673.018	Cum	110.83	74590.57			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A Corrigendum 7.1.12.4)	29.424	Cum	3279.00	96479.92	6.33	13.24	26.48
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	11.67	Cum	4068.00	47478.44	3.97	4.90	9.92
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/l. including lead charges. (WRD Part A Corrigendum 14.1 A)	223.45	Cum	4891.00	1092893.85	87.15	93.85	189.93
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A Corrigendum 14.1 B)	11.15	Cum	5294.00	59035.94	4.74	4.35	8.70
6	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A Corrigendum -8.3 - 13.6)	5.64	M.T.	71410.00	402810.10			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	530.19	Sqm	385.50	204386.35			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	17.15	Sqm	414.88	7113.16			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	5.51	Cum	408.85	2251.97			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	5.51	Cum	889.70	4900.47			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B Corrigendum 7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B Corrigendum 6.6.3)	37.98	Sqm	848.15	32212.74			

specifications & as per clause 2705 of specifications. (RCD 14.9)	14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20		
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00		
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B Corrigendum 7.1.31)	35.00	Cum	106.98	3744.30		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	4.34	МТ	159668.03	693497.40		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	116.341	Cum	678.60	78948.72		
	Coarse Aggregates (60 Km lead)	235.692	Cum	1002.60	236305.18		
	Cement (80 km lead)	102.179	MT	984.50	100595.37		
	Boulder (60 Km)	5.508	Cum	1120.65	6172.51		
	Brick (10 Km)	2278.800	No.	0.83	1898.24		
	Steel (80 km)	9.984	MT	984.50	9829.42		
	TOTAL (In Rs.)				3160249.91		

	NORTH KOEL RESEI ABSTRACT OF COST FO							
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Cr	oss Drainag	e at Ch. 1.8				(ca)	(20)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	280.16	Cum	110.83	31050.25			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A Corrigendum 7.1.12.4)	34.50	Cum	3279.00	113118.44	7.42	15.52	31.05
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	7.52	Cum	4068.00	30606.10	2.56	3.16	6.40
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	133.23	Cum	4891.00	651605.68	51.96	55.95	113.24
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	74.63	Sqm	385.50	28769.71			
6	Providing shuttering including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	426.85	Sqm	414.88	177092.83			
7	Providing 1000mm 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 M-301(11.6)	17.50	RM	4465.81	78151.63			
8	Labour for laying 1000mm NP3RCC 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.(WRD Part B Corrigendum 7.6.2.4)	17.50	RM	1289.47	22565.73			
9	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A Corrigendum -8.3 - 13.6)	3.14	MT	71410.00	224045.97			
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 (WRD Part B Corrigendum 7.1.31)	93.21	Cum	106.98	9971.20			
	Coarse Sand (35Km lead)	74.639	Cum	678.60	50649.78			
	Coarse Aggregates (60 Km lead) Cement (80 km lead)	150.685 61.933	Cum MT	1002.60 984.50	151076.56 60973.03			
	Hume Pipe (80 Km)	17.50	RM	843.40	14759.50			
	Steel (80 Km) TOTAL (In Rs.)	3.14	MT	984.50	3088.83 1647525.25			
		oss Drainag	e at Ch. 2.5	50 K.M				
	Earthwork in Excavation of canals having discharge between 8.5							
1	cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item-A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	164.51	Cum	110.83	18232.68			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A Corrigendum 7.1.12.4)	31.19	Cum	3279.00	102260.65	6.71	14.03	28.07
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	7.52	Cum	4068.00	30606.10	2.56	3.16	6.40

4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/L. including lead charges. (WRD Part A Corrigendum 14.1 A)	57.81	Cum	4891.00	282758.22	22.55	24.28	49.14
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	72.94	Sqm	385.50	28119.30			
6	Providing shuttering including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	256.19	Sqm	414.88	106286.20			
7	Providing 1000mm 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 M-301(11.6)	17.50	RM	4465.81	78151.63			
8	Labour for laying 1000mm NP3RCC 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 .(WRD Part B Corrigendum 7.6.2.4	17.50	RM	1289.47	22565.73			
9	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A Corrigendum -8.3 - 13.6)	1.36	MT	71410.00	97222.66			
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 (WRD Part B Corrigendum 7.1.31)	49.01	Cum	106.98	5243.36			
	Coarse Sand (35Km lead)	41.475	Cum	678.60	28144.85			
	Coarse Aggregates (60 Km lead)	83.603	Cum	1002.60	83820.48			
	Cement (80 km lead)	31.810	MT	984.50	31316.74			
	Hume Pipe (80 Km)	17.50	RM	843.40	14759.50			
	Steel (80 Km)	1.36	MT	984.50	1340.37			
	TOTAL (In Rs.)				930828.47			

	NORTH KOEL RESERVOIR PR				IAND			
S. No.	SHARDA TYPE FAL	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE F.	ALL AT CH.	2.010 K	(M			ı	
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	259.020	Cum	110.83	28707.19			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A Corrigendum 7.1.12.4)	16.471	Cum	3279.00	54006.92	3.54	7.41	14.82
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	110.14	Cum	4068.00	448064.87	37.45	46.26	93.62
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	0.32	Cum	4891.00	1556.51	0.12	0.13	0.27
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A Corrigendum -8.3 - 13.6)	2.60	M.T.	71410.00	185764.57			
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	265.13	Sqm	385.50	102205.91			
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	31.73	Sqm	414.88	13163.31			
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B Corrigendum 6.6.3)	18.19	Sqm	848.15	15427.85			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	1.25	Cum	408.85	512.09			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	1.25	Cum	889.70	1114.35			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B Corrigendum 7.2.2)	1.25	Cum	1276.75	1599.13			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	1.25	Cum	365.75	458.10			
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. (WRD Part A Corrigendum 5.7.11)	17.42	Sqm	51.66	900.12	0.0479	0.063	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

ſ		Earthwork in filling foundation trenches and back filling of						
		structures in layer not exceeding 150 mm thick well watered						
		rammed and fully compacted and finely dressed with suitable earth						
	15	obtained from excavation of foundation trenches and placed in a	41.64	Cum	106.98	4454.65		
		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 Corrigendum						
		7.1.31)						

16	Carriage of materials(As per Jharkhand SoR 2021)	Ι						
13	Coarse Sand (35Km lead)	53.869	Cum	678.60	36555.18			
	Coarse Aggregates (60 Km lead)	109.969	Cum	1002.60	110254.62			
	Cement (80 km lead)	41.162	MT	984.50	40524.07			
	Boulder (60 Km)	1.25	Cum	1120.65	1403.61			
	Brick (10 Km) Steel (80 km)	1091.400 2.601	No. MT	0.83 984.50	909.14 2561.06			
	TOTAL (In Rs.)	2.001	IVII	984.30	1046681.44			
	SHARDA TYPE F	ALL AT CH.	3.200 K	М	20 100021111			
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	51.070	Cum	110.83	5660.09			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A Corrigendum 7.1.12.4)	17.090	Cum	3279.00	56037.86	3.67	7.69	15.38
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	123.93	Cum	4068.00	504153.77	42.14	52.05	105.34
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	0.31	Cum	4891.00	1496.65	0.12	0.13	0.26
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A Corrigendum -8.3 - 13.6)	2.93	M.T.	71410.00	208931.06			
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	286.50	Sqm	385.50	110446.68			
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	31.72	Sqm	414.88	13158.33			
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B Corrigendum 6.6.3)	18.19	Sqm	848.15	15427.85			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	1.25	Cum	408.85	512.09			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	1.25	Cum	889.70	1114.35			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B Corrigendum 7.2.2)	1.25	Cum	1276.75	1599.13			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	1.25	Cum	365.75	458.10			

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. (WRD Part A Corrigendum 5.7.11)	1	Sqm	51.66	900.12	0.0479	0.063	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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 (WRD Part B Corrigendum 7.1.31)	44.95	Cum	106.98	4808.75			
16	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	59.933	Cum	678.60	40670.52			
	Coarse Aggregates (60 Km lead)	122.235	Cum	1002.60	122553.21			
	Cement (80 km lead)	45.978	MT	984.50	45265.67			
	Boulder (60 Km)	1.25	Cum	1120.65	1403.61			
	Brick (10 Km)	1091.400	No.	0.83	909.14			
	Steel (80 km)	2.926	MT	984.50	2880.45			
	TOTAL (In Rs.)				1139799.43			

	SHARDA TYPE FA	ALL AT CH.	3.700 K	M				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	128.232	Cum	110.83	14211.95			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A Corrigendum 7.1.12.4)	12.068	Cum	3279.00	39571.13	2.59	5.43	10.86
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	66.71	Cum	4068.00	271388.64	22.68	28.02	56.71
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A Corrigendum 14.1 A)	0.27	Cum	4891.00	1297.09	0.10	0.11	0.23
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A Corrigendum -8.3 - 13.6)	1.58	M.T.	71410.00	112637.67			
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	186.71	Sqm	385.50	71976.64			
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	25.61	Sqm	414.88	10624.45			
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B Corrigendum 6.6.3)	18.19	Sqm	848.15	15427.85			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	1.25	Cum	408.85	512.09			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	1.25	Cum	889.70	1114.35			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B Corrigendum 7.2.2)	1.25	Cum	1276.75	1599.13			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	1.25	Cum	365.75	458.10			
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. (WRD Part A Corrigendum 5.7.11)	14.45	Sqm	51.66	746.69	0.0397	0.052	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

Γ		Earthwork in filling foundation trenches and back filling of						
		structures in layer not exceeding 150 mm thick well watered						
		rammed and fully compacted and finely dressed with suitable earth						
	15	obtained from excavation of foundation trenches and placed in a	32.65	Cum	106.98	3492.79		
		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 Corrigendum						
		7.1.31)						

16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	33.614	Cum	678.60	22810.13		
	Coarse Aggregates (60 Km lead)	69.045	Cum	1002.60	69224.76		
	Cement (80 km lead)	25.420	MT	984.50	25026.23		
	Boulder (60 Km)	1.25	Cum	1120.65	1403.61		
	Brick (10 Km)	1091.40	No.	0.83	909.14		
	Steel (80 km)	1.577	MT	984.50	1552.89		
	TOTAL (In Rs.)	667397.33					

	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET												
Sl. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)				
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A Corrigendum 7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07					
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78					
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60				
4	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. 4 (M-300)	7.50	RM	243.69	1827.71								
5	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 (WRD 7.6.1.1)	7.50	RM	187.39	1405.43								
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A Corrigendum -8.3 - 13.6)	0.03	M.T.	71410.00	2188.57								
7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	МТ	159668.03	12656.72								
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07								
9	Carriage of materials(As per Jharkhand SoR 2021)												
	Coarse Sand (35Km lead) Coarse Aggregates 60 Km lead)	7.74 6.85	Cum	678.60 1002.60	5252.23 6866.76	-							
	Cement (50 km lead)	3.26	MT	984.50	3208.65								
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76								
	Steel (80 km lead) Hume Pipe (80 Km)	7.50	MT RM	984.50 843.40	108.21 6325.50	-							
	TOTAL	7.50		5.51-0	97758.91								

	NORTH KOEL RESERVOIR PF ABSTRACT OF COST		LOME	TER STONES				
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I.(WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (80 km lead) TOTAL (In Rs.)	0.07	MT	984.50	68.89			

	NORTH KOEL RESERVOIR PRO	OJECT , B	IHAR	AND JHA	RKHAND			
	ABSTRACT OF COST O	F REPAIRE	D STR	UCTURES				
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggreg ate (Cum)
	AOC FOR CULVI	ERT (Ch C).130 I	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	125.629	Sqm	51.66	6490.00	0.3455	0.452	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.48	Cum	4891.00	2366.02	0.16	0.20	0.41
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.655	Cum	678.60	444.78			
	Coarse Aggregates (60 Km lead)	0.411	Cum	1002.60	412.26			
	Cement (80 km lead)	0.510	MT	984.50	502.05			
	TOTAL (In Rs.) AOC FOR CULV	EPT (Ch -	560 K	m)	10580.25			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	401.65			
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	120.000	Cum	106.98	12837.60			
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	55.416	Sqm	51.66	2862.81	0.15	0.20	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.199	Cum	678.60	135.38			

Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00		
Cement (80 km lead)	0.152	MT	984.50	150.03		
TOTAL (In Rs.)	16387.47					

	AOC FOR CULV	ERT (Ch 0	.770 K	(m)				
	Clearing and Grubbing Road Land .(Clearing and grubbing	-KT (CIII-0	.,, o k	,				
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	89.724	Sqm	51.66	4635.14	0.247	0.323	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	16.42	Cum	4891.00	80310.22	5.58	6.90	13.96
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	7.219	Cum	678.60	4899.09			
	Coarse Aggregates (60 Km lead)	13.957	Cum	1002.60	13993.29			
	Cement (80 km lead)	5.830	MT	984.50	5739.18			
	TOTAL (In Rs.)				109942.06			
	AOC FOR CULVI	RT (Ch C	.880 K	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	328.62			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	325.930	Sqm	51.66	16837.54	0.8963	1.173	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	1.173	Cum	678.60	796.23			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.896	MT	984.50	882.41			
	TOTAL (In Rs.) AOC OF CULV	EDT AT O	70 KB	1	18844.81			
	Clearing and Grubbing Road Land .(Clearing and grubbing	ERT AT U.S	VO KIV					
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			

2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	95.500	Sqm	51.66	4933.53	0.2626	0.344	
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	25.00	Cum	106.98	2674.50			
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.344	Cum	678.60	233.30			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.263	MT	984.50	258.55			
	TOTAL (In Rs.)				8391.99			
	AOC OF CE	AT 1.020	KM					
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	64.980	Sqm	51.66	3356.87	0.1787	0.234	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.234	Cum	678.60	158.74			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.179	MT	984.50	175.93			
	TOTAL (In Rs.)				3983.64			
	AOC FOR CULV	ERT (Ch 1	.110 K	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	328.62			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	65.676	Sqm	51.66	3392.84	0.181	0.236	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	1.54	Cum	4891.00	7553.66	0.53	0.65	1.31

5	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Cement (80 km lead)	0.885 1.313 0.706	Cum Cum Cum MT	106.98 678.60 1002.60 984.50	3209.40 600.62 1316.15 694.77			
	TOTAL (In Rs.)				17096.06			
	AOC FOR CULV	ERT (Ch 1	.335 K	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.003	На	73027.00	219.08			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	47.264	Sqm	51.66	2441.66	0.130	0.170	
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	30.00	Cum	106.98	3209.40			
4	Carriage of materials(As per Jharkhand SoR 2021)							
+	Coarse Sand (35Km lead)	0.170	Cum	678.60	115.46			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.130	MT	984.50	127.96			
	TOTAL (In Rs.)				6113.56			
	AOC FOR CULVI	ERT (Ch 1	.450 K	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	41.360	Sqm	51.66	2136.66	0.114	0.149	

3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	30.00	Cum	106.98	3209.40			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	1.20	Cum	4891.00	5869.20	0.41	0.50	1.02
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	0.504 1.020	Cum	678.60 1002.60	342.01 1022.65			
	Cement (80 km lead)	0.408	MT	984.50	401.68			
	TOTAL (In Rs.)				13273.71			
	AOC FOR RAIL BR	IDGE (Ch	1.580	Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.010	На	73027.00	730.27			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	236.100	Sqm	51.66	12196.93	0.649	0.850	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.850	Cum	678.60 1002.60	576.78			
	Coarse Aggregates (60 Km lead) Cement (80 km lead)	0.649	MT	984.50	0.00 639.21			
	TOTAL (In Rs.)	J.043		334.30	14143.19			
	AOC FOR CULV	ERT (Ch 1	.735 K	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	47.170	Sqm	51.66	2436.80	0.130	0.170	

3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	30.00	Cum	106.98	3209.40			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	1.86	Cum	4891.00	9097.26	0.63	0.78	1.58
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.781	Cum	678.60	530.12			
	Coarse Aggregates (60 Km lead)	1.581	Cum	1002.60	1585.11			
	Cement (80 km lead) TOTAL (In Rs.)	0.632	MT	984.50	622.60 17773.40			
	AOC FOR CULV	FRT (Ch ₌ 1	940 k	(m)	1///3.40			
	Clearing and Grubbing Road Land .(Clearing and grubbing	-1(1 (CII 1	1.540 1					
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.003	На	73027.00	219.08			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	42.320	Sqm	51.66	2186.25	0.116	0.152	
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	30.00	Cum	106.98	3209.40			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	1.56	Cum	4891.00	7629.96	0.53	0.66	1.33
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.655	Cum	678.60	444.62			
	Coarse Aggregates (60 Km lead)	1.326	Cum	1002.60	1329.45			
	Cement (80 km lead)	0.530	MT	984.50	522.18			
	TOTAL (In Rs.)				15540.94			

	AOC FOR CULV	EPT (Ch = 2	010 k	(m)				
	Clearing and Grubbing Road Land .(Clearing and grubbing	_1(1)	.0101)				
	road land including uprooting rank vegetation, grass,							
	bushes, shrubs, saplings and trees girth up to 300 mm,							
	removal of stumps of trees cut earlier and disposal of							
1	unserviceable materials and stacking of serviceable	0.004	На	73027.00	292.11			
-	material to be used or auctioned up to a lead of 1000							
	metres including removal and disposal of top organic soil							
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)							
	B)							ļ
	Providing 1.5 mm thick cement punning including curing,							
1	carriage of water with all leads and lifts as per building	00 122	C	F1 CC	4655.70	0.240	0 224	
2	specification & direction of E/I. (WRD Part A 5.7.11)	90.122	Sqm	51.66	4655.70	0.248	0.324	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.324	Cum	678.60	220.16			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.248	MT	984.50	243.99			
	TOTAL (In Rs.)				5411.97			
	AOC FOR CULV	ERT (Ch	2.27 K	m)				
	Clearing and Grubbing Road Land .(Clearing and grubbing							
	road land including uprooting rank vegetation, grass,							
	bushes, shrubs, saplings and trees girth up to 300 mm,							
	removal of stumps of trees cut earlier and disposal of							
	unserviceable materials and stacking of serviceable							
1	1	0.006	На	73027.00	438.16			
	material to be used or auctioned up to a lead of 1000							
	metres including removal and disposal of top organic soil							
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)							
	B)							
	Providing 1.5 mm thick cement punning including curing,							
2	carriage of water with all leads and lifts as per building	40.120	Sqm	51.66	2072.60	0.110	0.144	
-	specification & direction of E/I. (WRD Part A 5.7.11)	10.120	Jqm	32.00	2072.00	0.110	0.1.1	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.144	Cum	678.60	98.01			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.110	MT	984.50	108.62			
	TOTAL (In Rs.)	EDT /el	475		2717.39			
	AOC FOR CULV	ERT (Ch 2	.475 k	im)				
	Clearing and Grubbing Road Land .(Clearing and grubbing							
	road land including uprooting rank vegetation, grass,							
	bushes, shrubs, saplings and trees girth up to 300 mm,							
	removal of stumps of trees cut earlier and disposal of							
1	unserviceable materials and stacking of serviceable	0.005	На	73027.00	365.14			
-	material to be used or auctioned up to a lead of 1000							
	metres including removal and disposal of top organic soil							
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)							
	B)							
	Providing 1.5 mm thick cement punning including curing,							
2	carriage of water with all leads and lifts as per building	69.654	Sam	E1 66	2500 22	0.102	0.251	
_	specification & direction of E/I. (WRD Part A 5.7.11)	09.004	Sqm	51.66	3598.33	0.192	0.231	
3	Carriage of materials(As per Jharkhand SoR 2021)							·
	Coarse Sand (35Km lead)	0.251	Cum	678.60	170.16			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.192	MT	984.50	188.58			
	TOTAL (In Rs.)				4322.20			
	AOC FOR CULV	ERT (Ch 2	.650 K	(m)				

	Clearing and Grubbing Road Land .(Clearing and grubbing							
	road land including uprooting rank vegetation, grass,							
	bushes, shrubs, saplings and trees girth up to 300 mm,							
	removal of stumps of trees cut earlier and disposal of							
1	unserviceable materials and stacking of serviceable	0.004	На	73027.00	255.59			
1	material to be used or auctioned up to a lead of 1000	0.004	l lu	73027.00	233.33			
	metres including removal and disposal of top organic soil							
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)							
	В)							
	-7							
	Providing 1.5 mm thick cement punning including curing,							
	carriage of water with all leads and lifts as per building							
2		70.498	Sqm	51.66	3641.93	0.194	0.254	
	specification & direction of E/I. (WRD Part A 5.7.11)							
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.254	Cum	678.60	172.22			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.194	MT	984.50	190.86			
	TOTAL (In Rs.)				4260.61			
	AOC FOR CULV	ERT (Ch 2	.720 k	(m)				
	Clearing and Grubbing Road Land .(Clearing and grubbing							
	road land including uprooting rank vegetation, grass,							
	bushes, shrubs, saplings and trees girth up to 300 mm,							
	removal of stumps of trees cut earlier and disposal of							
1	unserviceable materials and stacking of serviceable	0.003	На	73027.00	219.08			
-	material to be used or auctioned up to a lead of 1000		1					
	metres including removal and disposal of top organic soil							
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)							
	B)							
	Providing 1.5 mm thick cement punning including curing,							
	carriage of water with all leads and lifts as per building							
2	specification & direction of E/I. (WRD Part A 5.7.11)	75.552	Sqm	51.66	3903.02	0.208	0.272	
	Earthwork in filling foundation trenches and back filling of							
	structures in layer not exceeding 150 mm thick well							
	watered rammed and fully compacted and finely dressed							
	with suitable earth obtained from excavation of							
3		30.00	Cum	106.98	3209.40			
	foundation trenches and placed in 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)							
4	Carriage of materials(As per Jharkhand SoR 2021)		ļ					
<u></u>	Coarse Sand (35Km lead)	0.272	Cum	678.60	184.57			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.208	MT	984.50	204.55			
	TOTAL (In Rs.)				7720.62			
	AOC FOR CULV	ERT (Ch 2	.810 k	(m)				
	Clearing and Grubbing Road Land .(Clearing and grubbing							
	road land including uprooting rank vegetation, grass,							
	bushes, shrubs, saplings and trees girth up to 300 mm,							
	removal of stumps of trees cut earlier and disposal of							
	unserviceable materials and stacking of serviceable							
1	material to be used or auctioned up to a lead of 1000	0.004	На	73027.00	292.11			
	metres including removal and disposal of top organic soil							
	not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)							
	B)							
	Description 1.5 many thick assessment according to the discrete							
	Providing 1.5 mm thick cement punning including curing,							
2	carriage of water with all leads and lifts as per building	167.050	Sqm	51.66	8629.80	0.459	0.601	
	specification & direction of E/I. (WRD Part A 5.7.11)							
3	Carriage of materials(As per Jharkhand SoR 2021)							

	Coarse Sand (35Km lead)	0.601	Cum	678.60	408.10			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.459	MT	984.50	452.27			
	TOTAL (In Rs.)				9782.27			
	AOC FOR CULV	ERT (Ch 3	.230 K	(m)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	59.040	Sqm	51.66	3050.01	0.162	0.213	
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	40.00	Cum	106.98	4279.20			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	1.73	Cum	4891.00	8451.65	0.59	0.73	1.47
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.726	Cum	678.60	492.50			
	Coarse Aggregates (60 Km lead)	1.469	Cum	1002.60	1472.62			
	Cement (80 km lead)	0.588	MT	984.50	578.41			
	TOTAL (In Rs.)				18689.52			
1	AOC FOR CULVI Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	.120 K	73027.00	438.16			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	56.602	Sqm	51.66	2924.06	0.156	0.204	

3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	40.00	Cum	106.98	4279.20		
4	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	0.204	Cum	678.60	138.28		
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00		
	Cement (80 km lead)	0.156	MT	984.50	153.24		
	TOTAL (In Rs.)				7932.94		

N	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND											
	ABSTRACT OF COST (BISH	RAMPUR M	INOR)									
S. No.	Items	Qty.	Uni	Total Estimated Amount (Rs.)								
1	Earthwork	Detail as per BOQ	Cun	n 3915113.67								
2	Head Regulator	Detail as per BOQ	No	. 4257161.75								
3	Falls											
	Fall (2.200 Km)	Detail as per BOQ	No	. 539047.42								
4	Outlets	08	No	. 782081.18								
5	Kilometer Stone	03	No	. 4119.83								
6	Remodelling of Structures											
	Bridge at 0.140 Km	Detail as per BOQ	No	. 25283.60								
	Bridge at 0.330 Km	Detail as per BOQ	No	. 41043.65								
	Culvert at 0.550 Km	Detail as per BOQ	No	. 2309.65								
	Bridge at 0.800 Km	Detail as per BOQ	No	. 6758.71								
	Culvert at 1.395 Km	Detail as per BOQ	No	. 19659.14								
	Railway Bridge at 1.410 Km	Detail as per BOQ	No	. 43206.39								
	Fall at 2.925 Km	Detail as per BOQ	No	. 40658.95								
	TOTAL (In Rs.)			9676443.95								
	TOTAL (In Lacs)			96.76								

	NORTH KOEL RESERVOIR PROJE	CT, BIHAR A	ND JHAR	KHAND	
	ABSTRACT OF QUANTITY OF EARTHW	ORK FOR BIS	HRAMPUR	MINOR.	
SI. No.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.33	На	73027.00	24020.40598
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	15488.33	Cum	110.83	1716572.057
3	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	1720.93	Cum	374.47	644435.1592
4	E/W in stripping by hydraulic M/c in grade A & B type of soil including morroum soil, soil mixed with kankar, pebbles, boulders upto 300 mm size and disposal of the same along with all organic materials in the country side beyond 150 m upto 500 m in all by tipper including construction & maintenance of haul road etc. all complete as per specification and direction of E/I. (WRD Part B 5.1.6.1)	493.39	Cum	106.11	52353.35
5	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	1102.48	Cum	117.56	129607.99
6	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i.	One extra lead - 1*12.1* = 12.19	4313.08	Cum	12.30	53050.85
ii.	Two extra lead - 2*12.19 = 24.38	3428.41	Cum	24.60	84338.93
7	Three extra lead - 3*12.19 = 36.57 Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide classification of soil item A & B). (WRD Part B 7.1.34.1)	3097.67	Cum	36.90	114303.90
i.	One extra lift - 1*12.19 = 12.19	7964.66	Cum	12.30	97965.36
ii.	Two extra lift - 2*12.19 = 24.38	3097.67	Cum	24.60	76202.60

	Earthwork in flood embankment, canal banks as well as				
	special repair of embankment in canal bank in grade A & B				
	types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck				
	obtained from borrow area or any other sources free				
	from logs, roots, or any other ingredients with all lifts				
8	including breaking clods to maximum 60 mm size, placing				
	earth in layers not exceeding 225mm thick complete as				
	per specification & direction of E/I - Lead Beyond 150 m				
	but upto 500 m. (WRD Part B .7.1.26.1)				
A.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	1543.48	Cum	172.93	266913.52
В.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1102.48	Cum	188.08	207355.14
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	661.49	Cum	206.29	136458.82
	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 making				
	arrangment for suppply and carriage of water with all				
9	leads and lifts, finishing the surface as per plan and	12799.33	Cum	24.34	311535.57
	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. (WRD Part B				
	.7.1.39)				
	TOTAL COST OF EARTHWORK	(in Rs.)			3915113.67
	TOTAL COST OF EARTHWORK (in I				39.151

	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE											
1	Cost of material (A)		Rs.	55000								
2	Wastage 5% = Rs.											
3	Cost of miscellaneous material like electrodes, oxygen, acetylene nut bolt, rope as	per site	Rs.	35750								
	Total 1+	2+3= (B) =	Rs.	93500								
4	Labour charge 30%(B) =		Rs.	28050								
5	Overhead charge + Contractor profit @14.95% A		Rs.	8222.5								
6	Workshop and energy charge ,12 % of (B)		Rs.	11220								
7	Transportation and erection charge ,15 % of B		Rs.	14025								
	Total = B+4+	-5+6+7 = C	Rs.	155017.5								
8	Other incidental charge , 3 % = of C		Rs.	4650.525								
	То	tal C+8 = D	Rs.	159668.025								

	NORTH KOEL RESERVOIR Abstract of Cost of Head Regulator of Bis					4)		
S. No.	Abstract of Cost of Head Regulator of Bis	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregat e (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	1082.593	Cum	110.83	119983.79			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	34.839	Cum	3279.00	114236.93	7.49	15.68	31.36
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	9.58	Cum	4068.00	38988.58	3.26	4.03	8.15
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A .14.1 A)	348.00	Cum	4891.00	1702082.51	135.72	146.16	295.80
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A .14.1 B)	10.03	Cum	5294.00	53098.56	4.26	3.91	7.82
6	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	8.55	M.T.	71410.00	610838.20			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	654.73	Sqm	385.50	252400.22			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	23.40	Sqm	414.88	9709.89			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	3.75	Cum	408.85	1534.43			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	3.75	Cum	889.70	3339.04			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B .7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B.6.6.3)	37.98	Sqm	848.15	32212.74			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR	4.40	Sam	73.00	321.20		
	CHHATISGARH 2021)		- 4				

16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00		
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B .7.1.31)	30.00	Cum	106.98	3209.40		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	4.28	МТ	159668.03	683407.14		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	169.776	Cum	678.60	115209.88		
	Coarse Aggregates (60 Km lead)	343.128	Cum	1002.60	344019.65		
	Cement (80 km lead)	151.393	MT	984.50	149046.30		
	Boulder (60 Km)	3.753	Cum	1120.65	4205.78		
	Brick (10 Km)	2278.800	No.	0.83	1898.24		
	Steel (80 km)	12.834	MT	984.50	12635.21		
	TOTAL (In Rs.)				4257161.75		

	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR BISHRAMPUR MINOR											
S. No.	ltem of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulder's (Cum)			
	SHARDA TY	PE FALL A	T CH. 2.2	00 KM								
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	92.820	Cum	110.83	10287.24							
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	10.401	Cum	3279.00	34105.30	2.24	4.68	9.36				
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	53.89	Cum	4068.00	219242.88	18.32	22.64	45.81				
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A .14.1 A)	0.18	Cum	4891.00	882.34	0.07	0.08	0.15				
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	1.27	M.T.	71410.00	90938.08							
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	165.00	Sqm	385.50	63606.62							
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	20.79	Sqm	414.88	8627.35							
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B .6.6.3)	8.97	Sqm	848.15	7609.60							
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.76	Cum	408.85	311.55							
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.76	Cum	889.70	677.95							
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B .7.2.2)	0.76	Cum	1276.75	972.88							
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.76	Cum	365.75	278.70							

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. (WRD Part A .5.7.11)	13.92	Sqm	51.66	719.17	0.0383	0.050	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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 (WRD Part B .7.1.31)	22.25	Cum	106.98	2380.31			

16	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	27.442	Cum	678.60	18622.20			
	Coarse Aggregates (60 Km lead)	55.325	Cum	1002.60	55468.54			
	Cement (80 km lead)	20.669	MT	984.50	20348.65			
	Boulder (60 Km)	0.76	Cum	1120.65	853.93			
	Brick (10 Km)	538.320	No.	0.83	448.42			
	Steel (80 km)	1.273	MT	984.50	1253.73			
	TOTAL (In Rs.)							

				PROJECT , BIHAR AND OR CONSTRUCTION O					
SI. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07	
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78	
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60
4	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 . 4 (M-300)	7.50	RM	243.69	1827.71				
5	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 (WRD 7.6.1.1)	7.50	RM	187.39	1405.43				
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	0.03	M.T.	71410.00	2188.57				
7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	МТ	159668.03	12657.95				
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07				
9	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Sand (35Km lead)	7.74	Cum	678.60	5252.23				
	Coarse Aggregates 60 Km lead)	6.85	Cum	1002.60	6866.76	-			
	Cement (50 km lead) Boulders (60 km lead)	3.26 8.60	MT Cum	984.50 1120.65	3208.65 9639.76				
	Steel (80 km)	0.11	MT	984.50	108.22				
	Hume Pipe(80Km)	7.50	RM	843.40	6325.50				
	TOTAL (In Rs.)				97760.15				

	NORTH KOEL RESERVOIR PR ABSTRACT OF COST		•		RKHAND			
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A .7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (80 km lead) TOTAL (In Rs.)	0.07	MT	984.50	68.89 1373.28			

	NORTH KOEL RESERVOIR	PROJECT	, BIHA	AR AND JHAR	KHAND			
	ABSTRACT OF COS	T OF REPA	RED S	TRUCTURES				
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggreg ate (Cum)
	ABSTRACT OF COST	FOR CULV	ERT (C	h0.140 Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	2.76	Cum	4068.00	11227.68	0.94	1.16	2.35
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	90.00	Cum	106.98	9628.20			
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	1.159	Cum	678.60	786.63			
	Coarse Aggregates (60 Km lead)	2.346	Cum	1002.60	2352.10			
	Cement (80 km lead)	0.938	MT	984.50	923.85			
	TOTAL (In Rs.)				25283.60			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	Ha	h0.330 Km) 73027.00	438.16			
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	6.33	Cum	4068.00	25765.90	2.15	2.66	5.38
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	261.213	Sqm	51.66	13494.25	0.72	0.94	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.940	Cum	678.60	638.13			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.718	MT	984.50	707.20 41043.65			
	TOTAL (In Rs.)				41043.05			

	ARSTRACT OF COST	FOR CHILV	EDT (C	h 0 550 Km)				
	ABSTRACT OF COST Clearing and Grubbing Road Land. (Clearing and grubbing	POR CULV	EKI (C	IIIA UCC.U-III)				
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.010	На	73027.00	730.27			
	Providing 1.5 mm thick cement punning including curing							
2	etc. complete job as per specifications & directions of E/I . BCD 5.7.11	27.801	Sqm	51.66	1436.20	0.076	0.100	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.100	Cum	678.6	67.92			
	Cement (80 km lead) TOTAL (In Rs.)	0.076	MT	984.50	75.27 2309.65			
	ABSTRACT OF COST	FOR CULV	ERT (C	h0.880 Km)	2303.03			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			
	Providing 1.5 mm thick cement punning including curing,							
2	carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	113.828	Sqm	51.66	5880.35	0.3130	0.410	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.410	Cum	678.6	278.08			
	Coarse Aggregates (60 Km lead) Cement (80 km lead)	0.000 0.313	Cum MT	1002.60 984.50	0.00 308.18			
	TOTAL (In Rs.)	0.515	1411	304130	6758.71			
	ABSTRACT OF COST	FOR CULV	ERT (C	h1.395 Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.008	На	73027.00	584.22			
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.71	Cum	4068.00	6936.75	0.58	0.72	1.45
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	90.00	Cum	106.98	9628.20			
	Carriage of materials(As per Jharkhand SoR 2021)							
4								
4	Coarse Sand (35Km lead)	0.716	Cum	678.60	486.00			
4		0.716 1.449 0.580	Cum Cum MT	678.60 1002.60 984.50	486.00 1453.19 570.78			

	TOTAL (In Rs.)				19659.14			
	ABSTRACT OF CO	ST FOR FA	LL (Ch	1.490 Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	5.77	Cum	4068.00	23471.18	1.96	2.42	4.90
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	90.00	Cum	106.98	9628.20			
4	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	24.180	Sqm	51.66	1249.14	0.0665	0.087	
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	2.423	Cum	678.60	1644.44			
	Coarse Aggregates (60 Km lead)	4.904	Cum	1002.60	4917.00			
1	Cement (80 km lead)							
		1.962	MT	984.50	1931.30			
	TOTAL (In Rs.)				43206.39			
1								
	TOTAL (In Rs.) ABSTRACT OF CO Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)	ST FOR FA	LL (Ch	2.925 Km)	43206.39	2.40	2.96	5.99
	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD	0.005	Ha	2.925 Km) 73027.00	43206.39 365.14	2.40	2.96	5.99
2	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per	0.005 7.05	Ha Cum	73027.00 4068.00	365.14 28668.42	0.0154	2.96	5.99
3	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	0.005 7.05 9.00	Ha Cum	2.925 Km) 73027.00 4068.00 106.98	365.14 28668.42 962.82			5.99
3	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A .5.7.11)	0.005 7.05	Ha Cum	2.925 Km) 73027.00 4068.00	365.14 28668.42 962.82			5.99

Cement (80 km lead)	2.396	MT	984.50	2358.94		
TOTAL (In Rs.)				40658.95		

N	IORTH KOEL RESERVOIR PROJEC			RKHAND
S. No.	ABSTRACT OF COST (SO	NBARSHA N Qty.	Unit	Total Estimated Amount (Rs.)
1	Earthwork	Detail as per BOQ	Cum	7699434.29
2	Head Regulator	Detail as per BOQ	No.	2463860.29
3	Falls			
	Fall (0.50 Km)	Detail as per BOQ	No	475513.04
	Fall (2.775 Km)	Detail as per BOQ	No	860711.31
	Fall (3.750 Km)	Detail as per BOQ	No	903607.71
	Fall (4.225 Km)	Detail as per BOQ	No	532535.06
	Fall (6.050 Km)	Detail as per BOQ	No	779478.74
4	Outlets	16	No	1564162.35
5	Kilometer Stone	07	No	9612.93
6	Remodelling of Structures			
		Detail as	NI -	4505044
	Culvert at 0.770 Km	per BOQ	No	16969.11
	Cultivant at 1 220 Km	Detail as	No	49200.17
	Culvert at 1.230 Km	per BOQ Detail as		
	Culvert at 2.075 Km	per BOQ	No	64998.88
	Culvert at 2.365 Km	Detail as per BOQ	No	28676.80
	Fall at 2.470 km	Detail as per BOQ	No	730.27
	Culvert at 2.710 Km	Detail as per BOQ	No	45816.18
	Fall at 3.200 Km	Detail as per BOQ	No	53385.08
	Culvert at 4.050 Km	Detail as per BOQ	No	41796.41
	Culvert at 4.410 Km	Detail as per BOQ	No	3006.47
	Fall at 5.030 Km	Detail as per BOQ	No	43573.82
	Culvert at 5.340 Km	Detail as per BOQ	No	7639.89
7	CD WORK (5.300 Km)	Detail as per BOQ	No	1156987.16
	TOTAL (In Rs.)			16801695.95
	TOTAL (In Lacs)			168.02

	NORTH KOEL RESERVOIR PROJECT ABSTRACT OF QUANTITY OF EARTHWO				
SI. No.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.73	На	73027.00	53177.4581
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	8403.68	Cum	110.83	931379.6327
3	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	933.74	Cum	374.47	349658.3667
4	E/W in stripping by hydraulic M/c in grade A & B type of soil including morroum soil, soil mixed with kankar, pebbles, boulders upto 300 mm size and disposal of the same along with all organic materials in the country side beyond 150 m upto 500 m in all by tipper including construction & maintenance of haul road etc. all complete as per specification and direction of E/I. (WRD Part B 5.1.6.1)	1092.28	Cum	106.11	115902.20
5	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	7401.15	Cum	117.56	870079.34
6	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i. ii.	One extra lead - 1*12.19 = 12.19 Two extra lead - 2*12.19 = 24.38	5061.38 3901.08	Cum Cum	12.30 24.60	62254.97 95966.59

1680.74

Cum

36.90

62019.14

iii. Three extra lead - 3*12.19= 36.57

	Extra for Earth work for each subsequent lift of 1m over				
7	the initial lift of 1.5 m for ordinary and hard soil (vide				
'	classification of soil item A & B). (WRD Part B 7.1.34.1)				
i.	One extra lift - 1*12.19 = 12.19	5682.07	Cum	12.30	69889.45
ii.	Two extra lift - 2*12.19 = 24.38	1680.74	Cum	24.60	41346.10
	Earthwork in flood embankment, canal banks as well as				
	special repair of embankment in canal bank in grade A &				
	B types of soil (vide soil - A and B) in proper profile				
	excavation by hydraulic m/c and carriage by tipper truck				
	obtained from borrow area or any other sources free				
8	from logs, roots, or any other ingredients with all lifts				
	including breaking clods to maximum 60 mm size, placing				
	earth in layers not exceeding 225mm thick complete as				
	per specification & direction of E/I - Lead Beyond 150 m				
	but upto 500 m. (WRD Part B . 7.1.26.1)				
A.	Lead Beyond 150 m but upto 500 m (35 % of net filling)	10361.61	Cum	172.93	1791833.52
		10301.01	Cuin	172.55	1731033.32
B.	Lead Beyond 500 m but upto 1 km (25% of net filling)	7401.15	Cum	188.08	1392008.53
-	Lead Beyond 1 km but upto 2 km (15% of net filling)				
C.	Lead Beyond 1 km but upto 2 km (15% of flet filling)	4440.69	Cum	206.29	916070.09
	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 making				
	arrangment for suppply and carriage of water with all				
9	leads and lifts, finishing the surface as per plan and	38942.03	Cum	24.34	947848.89
	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. (WRD Part B.				
	7.1.39)				
	,				
	TOTAL COST OF EARTHWORK (in Rs.)			7699434.29
	TOTAL COST OF EARTHWORK (in R	s. Lakhs)			76.994

	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE			
1	Cost of material (A)		Rs.	55000
2	Wastage 5% =		Rs.	2750
3	Cost of miscellaneous material like electrodes, oxygen, acetylene nut bolt, rope as site conditions, etc 65 % of (A)	per	Rs.	35750
	Total 1+2+3:	= (B) =	Rs.	93500
4	Labour charge 30%(B) =		Rs.	28050
5	Overhead charge + Contractor profit @14.95% A		Rs.	8222.5
6	Workshop and energy charge ,12 % of (B)		Rs.	11220
7	Transportation and erection charge ,15 % of B		Rs.	14025
	Total = B+4+5+6	+7 = C	Rs.	155017.5
8	Other incidental charge , 3 % = of C		Rs.	4650.525
	Total C	C+8 = D	Rs.	159668

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND Abstract of Cost of Head Regulator of Sonbharsha Mr. (Offtaking from RMC at RD 27.035 KM) Rate (As per Coarse Coarse

	Abstract of Cost of Head Regulator of Sonbharsha Mr. (Offtaking from RMC at RD 27.035 KM)										
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)			
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	360.518	Cum	110.83	39956.23						
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	24.644	Cum	3279.00	80807.86	5.30	11.09	22.18			
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	8.63	Cum	4068.00	35088.03	2.93	3.62	7.33			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A)	169.82	Cum	4891.00	830611.34	66.23	71.33	144.35			
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A . 14.1 B)	6.67	Cum	5294.00	35286.42	2.83	2.60	5.20			
6	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	4.27	M.T.	71410.00	304817.98						
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	444.16	Sqm	385.50	171221.86						
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	11.58	Sqm	414.88	4804.77						
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	1.27	Cum	408.85	518.84						
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	1.27	Cum	889.70	1129.03						

11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B . 7.2.2)	0.66	Cum	1276.75	842.66		
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40		
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B . 6.6.3)	30.97	Sqm	848.15	26268.90		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00		
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20		
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00		
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B . 7.1.31)	10.00	Cum	106.98	1069.80		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	3.76	MT	159668.03	599867.29		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	88.638	Cum	678.60	60149.91		
	Coarse Aggregates (60 Km lead)	179.721	Cum	1002.60	180188.25		
	Cement (80 km lead)	77.295	MT	984.50	76097.33		
	Boulder (70 Km)	1.269	Cum	1120.65	1422.10		
	Brick (10 Km)	1858.320	No.	0.83	1547.98		
	Steel (80 km)	8.026	MT	984.50	7901.13		
	TOTAL (In Rs.)		2463860.29				

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST OF FALL OF SONBARSHA MINOR AT KM. 0.050											
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)			
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	159.790	Cum	110.83	17709.53						
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	8.300	Cum	3279.00	27215.09	1.78	3.73	7.47			
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	46.62	Cum	4068.00	189664.87	15.85	19.58	39.63			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A)	0.11	Cum	4891.00	534.10	0.01	0.05	0.09			
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	1.10	M.T.	71410.00	78590.83						
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	151.66	Sqm	385.50	58466.45						
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	17.47	Sqm	414.88	7249.61						
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B . 6.6.3)	10.60	Sqm	848.15	8993.78						
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry. (WRD Part B M-017)	0.28	Cum	408.85	115.30						
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.28	Cum	889.70	250.90						
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B . 7.2.2)	0.28	Cum	1276.75	360.04						
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.28	Cum	365.75	103.14						
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. (WRD Part A . 5.7.11)	12.02	Sqm	51.66	620.97						
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00						

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 (WRD Part B . 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead)	13.80	Cum	106.98	1476.32 15853.93			
	Coarse Aggregates (60 Km lead)	47.475	Cum	1002.60	47598.16			
	Cement (80 km lead)	17.642	MT	984.50	17368.50			
	Boulder (60 Km)	0.282	Cum	1120.65	316.02			
	Brick (10 Km)	636.240	No.	0.83	529.99			
	Steel (80 km)	1.101	MT	984.50	1083.50			
	TOTAL (In Rs.)				475513.04			
	SHARDA	TYPE FALL	AT CH. 2.	775 KM				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	189.410	Cum	110.83	20992.31			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	11.777	Cum	3279.00	38617.55	2.53	5.30	10.60
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	91.52	Cum	4068.00	372319.64	31.12	38.44	77.80
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A)	0.18	Cum	4891.00	865.71	0.07	0.07	0.15
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	2.16	M.T.	71410.00	154214.08			
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	241.18	Sqm	385.50	92973.33			
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	22.76	Sqm	414.88	9441.92			
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B . 6.6.3)	10.31	Sqm	848.15	8742.73			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.76	Cum	408.85	311.55			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.76	Cum	889.70	677.95			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B . 7.2.2)	0.76	Cum	1276.75	972.88			

12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.76	Cum	365.75	278.70			
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. (WRD Part A . 5.7.11)	13.92	Sqm	51.66	719.17			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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 (WRD Part B . 7.1.31)	20.64	Cum	106.98	2208.07			
16	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	43.814	Cum	678.60	29732.30			
	Coarse Aggregates (60 Km lead)	89.307	Cum	1002.60	89539.56			
	Cement (80 km lead)	33.719	MT	984.50	33196.65	-		
	Boulder (60 Km)	0.76	Cum	1120.65	853.93			
	Brick (10 Km)	618.480 2.160	No.	0.83	515.19			
	Steel (80 km) TOTAL (In Rs.)	2.100	MT	984.50	2126.09 860711.31			
		TYPE FALL	AT CH. 3	.750 KM	800711.31			
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	298.930	Cum	110.83	33130.41			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	12.366	Cum	3279.00	40546.67	2.66	5.56	11.13
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	95.39	Cum	4068.00	388041.20	32.43	40.06	81.08
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A)	0.18	Cum	4891.00	865.71	0.07	0.07	0.15
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	2.25	M.T.	71410.00	160713.35			
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	245.98	Sqm	385.50	94826.20			
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	23.71	Sqm	414.88	9837.22			
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B . 6.6.3)	8.97	Sqm	848.15	7609.60			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry. (WRD Part B M-017)	0.49	Cum	408.85	198.70			

10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.49	Cum	889.70	432.39			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B . 7.2.2)	0.49	Cum	1276.75	620.50			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.49	Cum	365.75	177.75			
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. (WRD Part A . 5.7.11)	15.86	Sqm	51.66	819.22			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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 (WRD Part B . 7.1.31)	27.48	Cum	106.98	2939.81			
16	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	45.702	Cum	678.60	31013.44			
	Coarse Aggregates (60 Km lead)	92.360	Cum	1002.60	92599.98			
	Cement (80 km lead) Boulder (60 Km)	35.160 0.49	MT Cum	984.50 1120.65	34614.80 544.63			
	Brick (10 Km)	538.320	No.	0.83	448.42			
	Steel (80 km)	2.251	MT	984.50	2215.69			
	TOTAL (In Rs.)				903607.71			
	SHARDA	TYPE FALL ,	4T CH. 4.	.225 KM				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	113.380	A <i>T CH. 4.</i> Cum	225 KM 110.83	12565.91			
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design,				12565.91 28534.02	1.87	3.92	7.83
	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8) Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job	113.380	Cum	110.83		1.87	3.92	7.83 45.96
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8) Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum	113.380 8.702	Cum	110.83 3279.00	28534.02			
3	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/l. (WRD Part B 7.1.8) Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/l. (Part A . 7.1.12.4) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/l. (WRD Part A Corrigendum 7.3.13.5) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/l. including lead	8.702 54.07	Cum	3279.00 4068.00	28534.02 219967.90	18.38	22.71	45.96
3	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8) Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A) Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as	113.380 8.702 54.07	Cum	110.83 3279.00 4068.00 4891.00	28534.02 219967.90 750.28	18.38	22.71	45.96

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7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	19.71	Sqm	414.88	8178.16			
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B . 6.6.3)	10.34	Sqm	848.15	8766.48			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.49	Cum	408.85	198.70			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.49	Cum	889.70	432.39			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B . 7.2.2)	0.49	Cum	1276.75	620.50			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.49	Cum	365.75	177.75			
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. (WRD Part A . 5.7.11)	12.11	Sqm	51.66	625.62			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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 (WRD Part B . 7.1.31)	18.88	Cum	106.98	2020.00			
16	Carriage of materials(As per Jharkhand SoR 2021)							
<u> </u>	Coarse Sand (35Km lead)	26.691	Cum	678.60	18112.45			
	Coarse Aggregates (60 Km lead)	54.410	Cum	1002.60	54551.53			
	Cement (80 km lead)	20.315	MT	984.50	20000.61			
	Boulder (60 Km)	0.49	Cum	1120.65	544.63			
	Brick (10 Km)	620.160	No.	0.83	516.59			
	Steel (80 km)	1.277	MT	984.50	1257.23			
	TOTAL (In Rs.)				532535.06			
		TYPE FALL	AT CH. 6.	050 KM				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	179.132	Cum	110.83	19853.20			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	10.041	Cum	3279.00	32925.62	2.16	4.52	9.04
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	81.64	Cum	4068.00	332101.35	27.76	34.29	69.39

4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A)	0.11	Cum	4891.00	513.56	0.04	0.04	0.09
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	1.93	M.T.	71410.00	137466.81			
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	225.61	Sqm	385.50	86974.25			
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	20.59	Sqm	414.88	8543.37			
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B . 6.6.3)	10.22	Sqm	848.15	8664.70			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry. (WRD Part B M-017)	0.20	Cum	408.85	80.95			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.20	Cum	889.70	176.16			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B . 7.2.2)	0.20	Cum	1276.75	252.80			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.20	Cum	365.75	72.42			
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. (WRD Part A . 5.7.11)	15.37	Sqm	51.66	794.16			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			
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 dresched with suitable earth obtained from excavation of foundation trenches and placed in 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)	20.55	Cum	106.98	2198.44			
16	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	38.850	Cum	678.60	26363.92			
	Coarse Aggregates (60 Km lead)	88.734	Cum	1002.60	88965.06			
	Cement (80 km lead)	29.957	MT	984.50	29492.27			
	Boulder (60 Km)	0.20	Cum	1120.65	221.89			
	Brick (10 Km)	612.960	No.	0.83	510.60			
	Steel (80 km)	1.925	MT	984.50	1895.20			
	TOTAL (In Rs.)				779478.74			

	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET											
Sl. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)			
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07				
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78				
3	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60			
4	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 . 4 (M-300)	7.50	RM	243.69	1827.71							
5	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 (WRD 7.6.1.1)	7.50	RM	187.39	1405.43							
6	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	0.03	М.Т.	71410.00	2188.57							

7	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	MT	159668.03	12657.95		
8	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07		
9	Carriage of materials(As per Jharkhand Sol	R 2021)					
	Coarse Sand (35Km lead)	7.74	Cum	678.60	5252.23		
	Coarse Aggregates 60 Km lead)	6.85	Cum	1002.60	6866.76		
	Cement (50 km lead)	3.26	MT	984.50	3208.65		
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76		
	Steel (80 km)	0.11	MT	984.50	108.22		
	Hume Pipe(80Km)	7.50	RM	843.40	6325.50		
	TOTAL (In Rs.)				97760.15		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
	ABSTRACT OF COST F	OR KIL	OMETI	ER STONES				
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (50 km lead)	0.07	MT	984.50	68.89			
	TOTAL (In Rs.)				1373.28			

	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
	ABSTRACT OF COST OF REP.	AIRED STR	JCTUF	RES OF SONBAR	SHA MINOR					
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)		
	AOC FOR	CULVERT	(Ch 0).770 Km)						
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	306.71					
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A)	1.15	Cum	4891.00	5631.50	0.45	0.48	0.98		
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	88.016	Sqm	51.66	4546.91	0.2420	0.317			
4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	40.000	Cum	106.98	4279.20					
5	Carriage of materials(As per Jharkhand SoR 2021)									
	Coarse Sand (35Km lead)	0.800	Cum	678.60	543.18					
	Coarse Aggregates (60 Km lead)	0.979	Cum	1002.60	981.23					
	Cement (80 km lead)	0.691	MT	984.50	680.38					
	TOTAL (In Rs.)				16969.11					
		CULVERT	(Ch 1	.230 Km)						
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including	0.004	На	73027.00	262.90					
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	110.000	Cum	106.98	11767.80					

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3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	58.320	Sqm	51.66	3012.81	0.16	0.21	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	5.28	Cum	4891.00	25824.48	2.06	2.22	4.49
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	2.428	Cum	678.60	1647.34			
	Coarse Aggregates (60 Km lead)	4.488	Cum	1002.60	4499.67			
	Cement (80 km lead)	2.220	MT	984.50	2185.18			
	TOTAL (In Rs.)				49200.17			
	AOC FOR	CULVERT	(Ch 2	.075 Km)				
	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut							
1	earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	328.62			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	56.240	Sqm	51.66	2905.36	0.155	0.202	
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	30.000	Cum	106.98	3209.40			
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	9.09	Cum	4891.00	44443.29	3.54	3.82	7.72
5	Carriage of materials(As per Jharkhand SoR 2021)		-					
	Coarse Sand (35Km lead)	4.019	Cum	678.60	2727.22			
	Coarse Aggregates (60 Km lead)	7.724	Cum	1002.60	7743.82			
	Cement (80 km lead)	3.698	MT	984.50	3641.17			
	TOTAL (In Rs.)				64998.88			
	AOC FOR	CULVERT	(Ch 2	2.365 Km)				

1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.007	На	73027.00	474.68			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	110.411	Sqm	51.66	5703.82	0.3036	0.397	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	3.42	Cum	4891.00	16727.22	1.33	1.44	2.91
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	1.834	Cum	678.60	1244.47			
	Coarse Aggregates (60 Km lead)	2.907	Cum	1002.60	2914.56			
	Cement (80 km lead)	1.637	MT	984.50	1612.05			
	TOTAL (In Rs.)				28676.80			
		OR FALL (C	ո 2.4	70 Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.010	На	73027.00	730.27			
	TOTAL (In Rs.)				730.27			
	ABSTRACT OF CO	OST FOR CL	JLVER	T (Ch2.710 Km	i)			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.008	На	73027.00	584.22			

4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	27.36 87.973 2.863 5.794	Cum Sqm Cum	106.98 51.66 678.60 1002.60	2926.97 4544.67 1942.64 5808.66	0.2419	0.317	
	Cement (80 km lead)	2.317	MT	984.50	2281.52			
	TOTAL (In Rs.)				45816.18			
	ABSTRACT OF	COST FOR	FALL (Ch3.200 Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	9.52	Cum	4068.00	38720.24	3.24	4.00	8.09
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	5.600	Sqm	51.66	289.30	0.0154	0.020	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	3.998	Cum	678.60	2712.82			
	Coarse Aggregates (60 Km lead)	8.091	Cum	1002.60	8111.55			
	Cement (80 km lead) TOTAL (In Rs.)	3.236	MT	984.50	3186.04 53385.08			
	ABSTRACT OF CO	ST FOR C	III VER	T (Ch4.050 Km				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.008	На	73027.00	584.22			
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	6.56	Cum	4068.00	26700.40	2.23	2.76	5.58

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3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	8.13	Cum	106.98	869.21			
4	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	77.069	Sqm	51.66	3981.39	0.2119	0.277	
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	2.757	Cum	678.60	1870.68			
	Coarse Aggregates (60 Km lead)	5.579	Cum	1002.60	5593.50			
	Cement (80 km lead)	2.232	MT	984.50	2197.01			
	TOTAL (In Rs.)				41796.41			
	ABSTRACT OF CO	ST FOR C	II VER	T (Ch -4 410 Km				
	Clearing and Grubbing Road Land .(Clearing and	31 FOR C	JEVER	(CII:-4:410 KIII	,			
1	grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.008	На	73027.00	584.22			
2	Providing 1.5 mm thick cement punning including curing etc. complete job as per specifications & directions of E/I. BCD 5.7.11	42.638	Sqm	51.66	2202.66	0.1173	0.153	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.153	Cum	678.60	104.16			
	Cement (80 km lead)	0.117	MT	984.50	115.44			
	TOTAL (In Rs.)				3006.47			
	ABSTRACT OF CO	ST FOR C	JLVER'	Г (Ch5.030 Km)			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including	0.005	На	73027.00	365.14			
	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)							
2	removal and disposal of top organic soil not exceeding	7.73	Cum	4068.00	31439.94	2.63	3.25	6.57
3	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	7.73	Cum	4068.00 51.66	31439.94	2.63 0.0209	3.25	6.57
	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11) Carriage of materials(As per Jharkhand SoR 2021)	7.600	Sqm	51.66	392.62			6.57
3	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead)	7.600	Sqm	51.66 678.60	392.62 2202.74			6.57
3	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	7.600 3.246 6.569	Sqm Cum Cum	51.66 678.60 1002.60	392.62 2202.74 6586.39			6.57
3	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	7.600	Sqm	51.66 678.60	392.62 2202.74 6586.39 2586.99			6.57
3	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	7.600 3.246 6.569	Sqm Cum Cum	51.66 678.60 1002.60	392.62 2202.74 6586.39			6.57
3	removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	7.600 3.246 6.569 2.628	Sqm Cum Cum MT	51.66 678.60 1002.60 984.50	392.62 2202.74 6586.39 2586.99 43573.82			6.57

1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.008	На	73027.00	584.22			
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.00	Cum	4068.00	4051.85	0.34	0.42	0.85
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A . 5.7.11)	29.766	Sqm	51.66	1537.71	0.0819	0.107	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.418	Cum	678.60	283.88			
	Coarse Aggregates (60 Km lead)	0.847	Cum	1002.60	848.83			
	Cement (80 km lead)	0.339	MT	984.50	333.40			
	TOTAL (In Rs.)				7639.89			

	NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST CROSS DRAINAGE OF SONBARSHA MINOR AT KM 5.300												
	ABSTRACT OF COST CROSS D	RAINAGE (OF SONBAI	RSHA MINOR AT KN	A 5.300								
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	200.04	Cum	110.83	22170.03								
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A . 7.1.12.4)	28.79	Cum	3279.00	94391.31	6.19	12.95	25.91					
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of F/L (WRD Part A 7.3.13.5)	6.61	Cum	4068.00	26894.20	2.25	2.78	5.62					
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A . 14.1 A)	87.09	Cum	4891.00	425940.69	33.96	36.58	74.02					
5	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	61.45	Sqm	385.50	23689.44								
6	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	343.28	Sqm	414.88	142421.01								
7	Providing 1000mm 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 M-301(11.6)	12.50	RM	4465.81	55822.59								
8	Labour for laying 1000mm NP3RCC 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 .(WRD Part B . 7.6.2.4)	12.50	RM	1289.47	16118.38								
9	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A8.3 - 13.6)	2.05	MT	71410.00	146454.06								
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 (WRD Part B . 7.1.31)	69.73	Cum	106.98	7459.28								
	Coarse Sand (35Km lead)	52.307	Cum	678.60	35495.56								
	Coarse Aggregates (60 Km lead)	105.551	Cum	1002.60	105825.51								
	Cement (80 km lead) Hume Pipe (80 Km)	42.401 12.50	MT RM	984.50 843.40	41743.49 10542.50								
	Steel (80 Km)	2.05	MT	984.50	2019.10								
	TOTAL (In Rs.)				1156987.16								

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ABSTRACT OF COST (POKHRAHI MINOR)

	ABSTRACT OF COST (PC	KHKAHI WII	NOK)	
S. No.	Items	Qty.	Unit	Total Estimated Amount (Rs.)
1	Earthwork	Detail as per BOQ	Cum	2762902.14
2	Head Regulator	Detail as per BOQ	No.	2758139.11
3	Falls			
	Fall (3.300Km)	Detail as per BOQ	No.	499104.10
	Fall (4.000 Km)	Detail as per BOQ	No.	906303.63
	Fall (5.150 Km)	Detail as per BOQ	No.	485009.45
	Fall (5.850 Km)	Detail as per BOQ	No.	452963.16
	Fall (6.100 Km)	Detail as per BOQ	No.	415411.69
	Fall (6.350 Km)	Detail as per BOQ	No.	499123.62
	Fall (6.850 Km)	Detail as per BOQ	No.	464363.63
4	Outlets	17	No.	1661922.50
5	Kilometer Stone	08	No.	10986.20
6	Remodelling of Structures			
		Detail as		
	Bridge at 0.320 Km	per BOQ	No.	130127.10
	Bridge at 1.150 Km	Detail as per BOQ	No.	14513.76
	Railway Bridge at 1.660 Km	Detail as per BOQ	No.	657.24
	Bridge at 1.895 Km	Detail as per BOQ	No.	6058.39
	Fall at 2.080 Km	Detail as per BOQ	No.	5042.70
	Bridge at 2.220 Km	Detail as per BOQ	No.	11427.39
	Fall at 2.780 Km	Detail as per BOQ	No.	5433.75
	Bridge at 2.830 Km	Detail as per BOQ	No.	11354.36
	Fall at 3.580 Km	Detail as per BOQ	No.	5359.07
	Bridge at 3.710 Km	Detail as per BOQ	No.	10327.13
	Bridge at 4.000 Km	Detail as per BOQ	No.	7113.47
	Fall at 4.415 Km	Detail as per BOQ	No.	43679.27
	Bridge at 5.090 Km	Detail as per BOQ	No.	9073.47
	Culvert at 5.820 Km	Detail as per BOQ	No.	10655.50

Bridge at 6.590 Km per l	l No).	1800.68	
Culvert at 6.810 Km per l	l No).	5508.00	
TOTAL (In Rs.)		11194360.52		
TOTAL (In Lacs)			111.94	

	NORTH KOEL RESERVOIR PROJECT				
SI. No.	ABSTRACT OF QUANTITY OF EARTHW Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
1	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.17	На	73027.00	12087.64812
2	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	11810.79	Cum	110.83	1308989.856
3	E/W in excavation in canal by the hydraulic excavator (Rock breaker) as per designed section in soft rock (where blasting is prohibited) vide type of soil item C with disposal of spoil upto 500 m with all lifts by tipper including construction and maintenance of haul road all complete as per specification and direction of E/I (WRD Part B 7.1.43.8).	1312.31	Cum	374.47	491420.7257
4	E/W in stripping by hydraulic M/c in grade A & B type of soil including morroum soil, soil mixed with kankar, pebbles, boulders upto 300 mm size and disposal of the same along with all organic materials in the country side beyond 150 m upto 500 m in all by tipper including construction & maintenance of haul road etc. all complete as per specification and direction of E/I. (WRD Part B 5.1.6.1)	189.11	Cum	106.11	20066.41
5	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 15m and lift of 1.5 m as per specification and direction of E/I (WRD Part B 7.1.25)	381.03	Cum	117.56	44793.30
6	Extra for earth work in each additional of 25m beyond the initial as per specification and direction of E/I. for ordinary or hard soil (vide classification os soil item A &B) (Part B 7.1.33.1).				
i.	One extra lead - 1*12.19 = 12.19	3105.11	Cum	12.30	38192.82
ii.	Two extra lead - 2*12.19 = 24.38	2476.47	Cum	24.60	60921.05
7	Three extra lead - 3*12.19 = 36.57 Extra for Earth work for each subsequent lift of 1m over the initial lift of 1.5 m for ordinary and hard soil (vide classification of soil item A & B). (WRD Part B 7.1.34.1)	2362.16	Cum	36.90	87163.63
i.	One extra lift - 1*12.19 = 12.19	5981.60	Cum	12.30	73573.68
ii.	Two extra lift - 2*12.19 = 24.38	2362.16	Cum	24.60	58109.09

8	Earthwork in flood embankment, canal banks as well as special repair of embankment in canal bank in grade A & B types of soil (vide soil - A and B) in proper profile excavation by hydraulic m/c and carriage by tipper truck obtained from borrow area or any other sources free from logs, roots, or any other ingredients with all lifts including breaking clods to maximum 60 mm size, placing earth in layers not exceeding 225mm thick complete as per specification & direction of E/I - Lead Beyond 150 m				
A.	but upto 500 m. (WRD Part B 7.1.26.1) Lead Beyond 150 m but upto 500 m (35 % of net filling)	533.44	Cum	172.93	92246.91
В.	Lead Beyond 500 m but upto 1 km (25% of net filling)	381.03	Cum	188.08	71663.18
C.	Lead Beyond 1 km but upto 2 km (15% of net filling)	228.62	Cum	206.29	47160.99
9	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 making arrangment for suppply and carriage 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. (WRD Part B 7.1.39)	14647.20	Cum	24.34	356512.85
	TOTAL COST OF EARTHWORK (•			2762902.14
	TOTAL COST OF EARTHWORK (in R	s. Lakhs)			27.629

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE									
1	Cost of material (A)		Rs.	55000					
2	Wastage 5% =		Rs.	2750					
3	Cost of miscellaneous material like electrodes, oxygen, acetylene nut bolt, rope as	per site	Rs.	35750					
	Total 1+	2+3= (B) =	Rs.	93500					
4	Labour charge 30%(B) =		Rs.	28050					
5	Overhead charge + Contractor profit @14.95% A		Rs.	8222.5					
6	Workshop and energy charge ,12 % of (B)		Rs.	11220					
7	Transportation and erection charge ,15 % of B		Rs.	14025					
	Total = B+4+	-5+6+7 = C	Rs.	155017.5					
8	Other incidental charge , 3 % = of C		Rs.	4650.525					
	То	tal C+8 = D	Rs.	159668.025					

	NORTH KOEL RESERV Abstract of Cost of Head Regulator of					км)		
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	1 604.528	Cum	110.83	66999.87			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	26.853	Cum	3279.00	88049.50	5.77	12.08	24.17
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	9.12	Cum	4068.00	37113.58	3.10	3.83	7.75
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	196.50	Cum	4891.00	961084.80	76.64	82.53	167.03
5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M. (2.5 to 3.0) washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. (WRD Part A 14.1 B)	8.91	Cum	5294.00	47159.90	3.79	3.47	6.95
6	Supplying, fitting and placing HYSD bar reinforcement in sub- structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	4.96	M.T.	71410.00	354013.37			
7	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	485.23	Sqm	385.50	187058.04			
8	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	15.20	Sqm	414.88	6307.46			
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	2.94	Cum	408.85	1203.26			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	2.94	Cum	889.70	2618.39			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.66	Cum	1276.75	842.66			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.66	Cum	365.75	241.40			
13	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	35.11	Sqm	848.15	29780.24			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (14.17 PWD NH SOR CHHATISGARH 2021)	4.40	Sqm	73.00	321.20		
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 14.18 ii)	11.00	RM	208.00	2288.00		
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I (WRD Part B 7.1.31)	30.00	Cum	106.98	3209.40		
18	Structural Steel (Average rate of Angle, Joint and Channel) etc. (WRD M-178)	3.70	МТ	159668.03	590691.98		
19	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	101.920	Cum	678.60	69162.85		
	Coarse Aggregates (60 Km lead)	206.556	Cum	1002.60	207093.10		
	Cement (80 km lead)	89.296	MT	984.50	87912.36		
	Boulder (60 Km)	2.943	Cum	1120.65	3298.06		
	Brick (80 Km)	2106.720	No.	0.83	1754.90		
	Steel (80 km)	8.657	MT	984.50	8522.79		
	TOTAL (In Rs.)				2758139.11		

	NORTH KOEL RESERVO SHARDA TYI			IHAR AND JI	HARKHAND				
S. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulder's (Cum)
	SHARDA	TYPE FALL	AT CH. 3	.300 KM					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	185.110	Cum	110.83	20515.74				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	8.572	Cum	3279.00	28108.56	1.84	3.86	7.72	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	48.87	Cum	4068.00	198814.98	16.62	20.53	41.54	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.16	Cum	4891.00	763.00	0.06	0.07	0.13	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	1.15	M.T.	71410.00	82452.18				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	152.53	Sqm	385.50	58798.72				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	18.89	Sqm	414.88	7837.71				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	11.02	Sqm	848.15	9346.61				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.50	Cum	408.85	203.61				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.50	Cum	889.70	443.07				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.50	Cum	1276.75	635.82				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.50	Cum	365.75	182.14				

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. (WRD Part A 5.7.11)	12.35	Sqm	51.66	637.80	0.0340	0.044	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

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 (WRD Part B 7.1.31)	16.83	Cum	106.98	1800.47		
16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	24.494	Cum	678.60	16621.71		
	Coarse Aggregates (60 Km lead)	49.888	Cum	1002.60	50017.35		
	Cement (80 km lead)	18.555	MT	984.50	18267.03		
	Boulder (60 Km)	0.50	Cum	1120.65	558.08		
	Brick (10 Km)	661.200	No.	0.83	550.78		
	Steel (80 km)	1.155	MT	984.50	1136.73		
	TOTAL (In Rs.)						

	SHARDA	TYPE FALL	AT CH. 4	.000 KM					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	330.140	Cum	110.83	36589.42				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	12.385	Cum	3279.00	40611.47	2.66	5.57	11.15	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	95.12	Cum	4068.00	386968.23	32.34	39.95	80.86	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.18	Cum	4891.00	880.38	0.07	0.08	0.15	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	2.24	M.T.	71410.00	160274.83				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	243.24	Sqm	385.50	93769.14				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	23.36	Sqm	414.88	9692.63				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	11.02	Sqm	848.15	9346.61				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.50	Cum	408.85	203.61				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.50	Cum	889.70	443.07				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.50	Cum	1276.75	635.82				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.50	Cum	365.75	182.14				
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. (WRD Part A 5.7.11)	15.32	Sqm	51.66	791.23	0.0421	0.055		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00				

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 (WRD Part B 7.1.31)	25.55	Cum	106.98	2733.77					•
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16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	45.657	Cum	678.60	30982.57		
	Coarse Aggregates (60 Km lead)	92.654	Cum	1002.60	92894.88		
	Cement (80 km lead)	35.118	MT	984.50	34573.32		
	Boulder (60 Km)	0.50	Cum	1120.65	558.08		
	Brick (10 Km)	661.200	No.	0.83	550.78		
	Steel (80 km)	2.244	MT	984.50	2209.64		
	TOTAL (In Rs.)	906303.63					

	SHARDA	TYPE FALL	AT CH. 5	.150 KM					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	130.046	Cum	110.83	14413.00				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	9.296	Cum	3279.00	30482.38	2.00	4.18	8.37	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	47.45	Cum	4068.00	193024.52	16.13	19.93	40.33	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.10	Cum	4891.00	483.23	0.04	0.04	0.08	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	1.12	M.T.	71410.00	79962.22				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	151.43	Sqm	385.50	58375.42				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	18.13	Sqm	414.88	7520.16				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	11.02	Sqm	848.15	9346.61				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.50	Cum	408.85	203.61				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.50	Cum	889.70	443.07				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.50	Cum	1276.75	635.82				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.50	Cum	365.75	182.14				
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. (WRD Part A 5.7.11)	12.35	Sqm	51.66	637.80	0.0340	0.044		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00				

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 (WRD Part B 7.1.31)	17.99	Cum	106.98	1924.78					
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16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	24.198	Cum	678.60	16420.79		
	Coarse Aggregates (60 Km lead)	49.281	Cum	1002.60	49408.79		
	Cement (80 km lead)	18.204	MT	984.50	17921.84		
	Boulder (60 Km)	0.50	Cum	1120.65	558.08		
	Brick (10 Km)	661.200	No.	0.83	550.78		
	Steel (80 km)	1.120	MT	984.50	1102.41		
	TOTAL (In Rs.)	485009.45					

	SHARDA	TYPE FALL	AT CH. 5	.850 KM					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	22.066	Cum	110.83	2445.57				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	8.146	Cum	3279.00	26712.03	1.75	3.67	7.33	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	45.54	Cum	4068.00	185248.27	15.48	19.13	38.71	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.10	Cum	4891.00	508.66	0.04	0.04	0.09	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	1.07	M.T.	71410.00	76756.27				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	150.26	Sqm	385.50	57924.17				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	18.15	Sqm	414.88	7528.41				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	11.82	Sqm	848.15	10021.74				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.26	Cum	408.85	105.48				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.26	Cum	889.70	229.54				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.26	Cum	1276.75	329.40				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.26	Cum	365.75	94.36				
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. (WRD Part A 5.7.11)	13.09	Sqm	51.66	675.98	0.0360	0.047		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00				

16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	22.883	Cum	678.60	15528.13		
	Coarse Aggregates (60 Km lead)	46.385	Cum	1002.60	46505.99		
	Cement (80 km lead)	17.311	MT	984.50	17042.59		
	Boulder (60 Km)	0.26	Cum	1120.65	289.13		
	Brick (10 Km)	708.960	No.	0.83	590.56		
	Steel (80 km)	1.075	MT	984.50	1058.21		
	TOTAL (In Rs.)	452963.16					

	SHARDA	TYPE FALL	AT CH. 6	.100 KM					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	142.934	Cum	110.83	15841.38				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	7.373	Cum	3279.00	24177.29	1.59	3.32	6.64	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	40.20	Cum	4068.00	163518.46	13.67	16.88	34.17	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.10	Cum	4891.00	508.66	0.04	0.04	0.09	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	0.95	M.T.	71410.00	67773.20				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	134.56	Sqm	385.50	51873.66				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	16.90	Sqm	414.88	7010.64				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	10.20	Sqm	848.15	8651.13				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.26	Cum	408.85	105.48				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.26	Cum	889.70	229.54				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.26	Cum	1276.75	329.40				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.26	Cum	365.75	94.36				
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. (WRD Part A 5.7.11)	13.09	Sqm	51.66	675.98	0.0360	0.047		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00				

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 (WRD Part B 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Cement (80 km lead) Boulder (60 Km) Brick (10 Km) Steel (80 km)	20.291 41.149 15.329 0.26 612.000 0.949	Cum Cum MT Cum No.	106.98 678.60 1002.60 984.50 1120.65 0.83 984.50	1360.36 13769.64 41256.26 15090.96 289.13 509.80 934.36 415411.69				
		TYPE FALL	AT CH. 6	350 KM	413411.03				
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	141.041	Cum	110.83	15631.57				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	7.724	Cum	3279.00	25326.70	1.66	3.48	6.95	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	50.31	Cum	4068.00	204652.88	17.10	21.13	42.76	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.10	Cum	4891.00	508.66	0.04	0.04	0.09	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	1.19	M.T.	71410.00	84778.11				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	155.82	Sqm	385.50	60070.12				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	18.00	Sqm	414.88	7469.08				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	10.20	Sqm	848.15	8651.13				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.26	Cum	408.85	105.48				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.26	Cum	889.70	229.54				

11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.26	Cum	1276.75	329.40			
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.26	Cum	365.75	94.36			
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. (WRD Part A 5.7.11)	12.18	Sqm	51.66	629.20	0.0335	0.044	
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00			

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 (WRD Part B 7.1.31)	16.58	Cum	106.98	1773.94		
16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	24.693	Cum	678.60	16756.43		
	Coarse Aggregates (60 Km lead)	50.060	Cum	1002.60	50189.86		
	Cement (80 km lead)	18.839	MT	984.50	18547.40		
	Boulder (60 Km)	0.26	Cum	1120.65	289.13		
	Brick (10 Km)	612.000	No.	0.83	509.80		
	Steel (80 km)	1.187	MT	984.50	1168.80		
	TOTAL (In Rs.)				499123.62		

	SHARDA	TYPE FALL	AT CH. 6	.850 KM					
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	55.850	Cum	110.83	6189.86				
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	7.393	Cum	3279.00	24240.25	1.59	3.33	6.65	
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	47.28	Cum	4068.00	192346.90	16.08	19.86	40.19	
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.08	Cum	4891.00	368.78	0.03	0.03	0.06	
5	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	1.12	M.T.	71410.00	79642.74				
6	Providing shuttering including strutting proping etc. and its removal after use in foundation as per specification and direction of E/I. (7.3.18)	151.99	Sqm	385.50	58591.81				
7	Providing shuttering, including strutting proping etc and its removal after use in various components of canal structure or embankment structure as per specification and direction of E/I. (WRD 7.3.19)	17.42	Sqm	414.88	7225.38				
8	Providing pitching work with designation 75A brick in panel in herring bond pattern one brick on edge over a brick flat soling, joints filled with local sand free from clay contents including royalty and all taxes as per specification and direction of E/I. (Part B 6.6.3)	10.90	Sqm	848.15	9248.23				
9	Supply of quarried stone 150-200 mm size for hand broken at Quarry.(WRD Part B M-017)	0.13	Cum	408.85	51.52				
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m) and all lifts as per specification and direction of E/I.	0.13	Cum	889.70	112.10				
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD Part B 7.2.2)	0.13	Cum	1276.75	160.87				
12	Labour charges for laying fine filter or coarse dry graded filter either of jhama khoa or stone metal or stone chips under brick pitching or boulder pitching in slope and apron including light ramming etc. as per specification and direction of E/I. (WRD Part B 7.7.13)	0.13	Cum	365.75	46.08				
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. (WRD Part A 5.7.11)	12.72	Sqm	51.66	657.05	0.0350	0.046		
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications. (RCD 14.9)	2.00	No.	706.00	1412.00				

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 (WRD Part B 7.1.31)	17.65	Cum	106.98	1888.30					_
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16	Carriage of materials(As per Jharkhand SoR 2021)						
	Coarse Sand (35Km lead)	23.263	Cum	678.60	15786.23		
	Coarse Aggregates (60 Km lead)	47.034	Cum	1002.60	47156.17		
	Cement (80 km lead)	17.730	MT	984.50	17455.16		
	Boulder (60 Km)	0.13	Cum	1120.65	141.20		
	Brick (10 Km)	654.240	No.	0.83	544.98		
	Steel (80 km)	1.115	MT	984.50	1098.00		
	TOTAL (In Rs.)				464363.63		

				ROJECT , BIHAR AND R CONSTRUCTION O					
Sl. No.	Name of Item	Qty.	Unit	Rate/unit (in Rs.)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	5.64	Cum	3279.00	18481.26	1.21	2.54	5.07	
2	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	1.97	Cum	4068.00	8029.01	0.67	0.89	1.78	
4	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation and plinth with hammer dressed stone of less than 0.03 m3 in volume and clean coarse sand of F.M. 2 to 2.5 including cost of screening, raking out joints to 20 mm depth, curing, taxes and royalty all complete job as per specification and direction of E/I. 3 (WRD 5.2.28 - Part A 4.28)	8.60	Cum	2500.94	21513.02	1.38	3.87		8.60
5	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. 4 (M-300)	7.50	RM	243.69	1827.71				
6	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 (WRD 7.6.1.1)	7.50	RM	187.39	1405.43				
7	Supplying, fitting and placing HYSD bar reinforcement in sub-structure complete as per drawing and technical specifications as per direction of E/I. (WRD Part A -8.3 - 13.6)	0.03	M.T.	71410.00	2188.57				
8	Structural Steel (Average rate of Angle, Joint and Channel) etc. (M-178)	0.08	МТ	159668.03	12657.95				
9	Providing coarse clean sand in filling (100 mm) in foudation of trenches including ramming, watering, royalty and all other taxes complete job as per specification and direction . (WRD 7.1.37)	0.89	Cum	287.45	256.07				
10	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Sand (35Km lead) Coarse Aggregates 60 Km lead)	7.74 6.85	Cum	678.60 1002.60	5252.23 6866.76			-	
	Cement (50 km lead)	3.26	MT	984.50	3208.65				
	Boulders (60 km lead)	8.60	Cum	1120.65	9639.76				
	Steel (80 km)	0.11	MT	984.50	108.22				
	Hume Pipe (80 Km) TOTAL (In Rs.)	7.50	RM	843.40	6325.50 97760.15				

	ABSTRACT OF COST F	OR KILO	OMETE	R STONES				
. No.	Item of Works	Qty.	Unit	Rate (As per Jharkhand SoR 2021)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Earthwork in Excavation of canals having discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) including clod breaking, having earth in 225 mm layer & rough dressing of soil with initial lead of 10 m and lift of 1.5 m.all complete as per approved design, specification and direction of E/I. (WRD Part B 7.1.8)	0.21	Cum	110.83	23.77			
2	Providing & laying P.C.C. or R.C.C. M-100 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (Part A 7.1.12.4)	0.18	Cum	3279.00	574.23	0.04	0.08	0.16
3	Providing & laying P.C.C. or R.C.C. M-150 with nominal mix of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate, complete job as per specification & direction of E/I. (WRD Part A Corrigendum 7.3.13.5)	0.10	Cum	4068.00	386.76	0.03	0.04	0.08
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.12	Cum	678.60	80.57			
	Coarse Aggregates (60 Km lead)	0.24	Cum	1002.60	239.04			
	Cement (80 km lead)	0.07	MT	984.50	68.89			

	NORTH KOEL RESERVOIR PRO							
S. No.	ABSTRACT OF COST OF	REPAIR Qty.	ED ST Unit	RUCTURES Rate (As per Jharkhand	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggreg ate
				SoR 2021)			(Cuiii)	(Cum)
	AOC FOR BRID	GE (Ch	0.320	Km)				ı
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.008	На	73027.00	584.22			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	54.000	Sqm	51.66	2789.64	0.1485	0.194	
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	19.88	Cum	4891.00	97217.43	6.76	8.35	16.90
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	8.543	Cum	678.60	5797.05			
	Coarse Aggregates (60 Km lead) Cement (80 km lead)	16.895 6.907	Cum	1002.60 984.50	16939.21 6799.56			
	TOTAL (In Rs.)	0.307	IVII	364.30	130127.10			
	AOC FOR BRIDE	GE (Ch:	1.150	Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	401.65			
	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or							
2	embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	1.37	Cum	4891.00	6708.50	0.47	0.58	1.17
3	graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	94.784	Cum	4891.00 51.66	6708.50 4896.52	0.47	0.58	1.17
	graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11) Carriage of materials(As per Jharkhand SoR 2021)	94.784	Sqm	51.66	4896.52			1.17
3	graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)							1.17

TOTAL (In Rs.) 14513.76

	AOC FOR RAILWAY	RDIDGE (Ch - 1	660 Km)				
	Clearing and Grubbing Road Land .(Clearing and grubbing	SKIDGE (сп 1	.ooo Kili)		 		
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.009	На	73027.00	657.24			
	TOTAL (In Rs.)	n= /el	4 00=		657.24			
	AOC FOR BRIDG Clearing and Grubbing Road Land .(Clearing and grubbing	SE (Ch	1.895	Km)		ı		
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.21	Cum	4891.00	1043.54	0.07	0.09	0.18
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	76.318	Sqm	51.66	3942.59	0.2099	0.275	
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.364	Cum	678.60	247.25			
	Coarse Aggregates (60 Km lead)	0.181	Cum	1002.60	181.83			
	Cement (80 km lead)	0.282	MT	984.50	278.04			
	TOTAL (In Rs.) AOC FOR FALI	(Ch 2	080 K	m)	6058.39			
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.004	На	73027.00	292.11			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	83.622	Sqm	51.66	4319.91	0.2300	0.301	
3	Carriage of materials(As per Jharkhand SoR 2021)	0.204	C	670.60	204.20			
	Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	0.301	Cum	678.60 1002.60	0.00	-		
	Cement (80 km lead)	0.230	MT	984.50	226.40			
	TOTAL (In Rs.)				5042.70			
	AOC FOR BRIDG	GE (Ch	2.220	Km)				

1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	438.16			
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.22	Cum	4891.00	1056.46	0.07	0.09	0.18
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	93.920	Sqm	51.66	4851.91	0.2583	0.338	
4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	40.00	Cum	106.98	4279.20			
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.429	Cum	678.60	291.01			
	Coarse Aggregates (60 Km lead)	0.184	Cum	1002.60	184.08			
	Cement (80 km lead)	0.332	MT	984.50	326.58			
	TOTAL (In Rs.)				11427.39			
	AOC FOR FAL	L (Ch 2	.78 Kr	n)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	89.220	Sqm	51.66	4609.11	0.2454	0.321	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.321	Cum	678.60	217.96			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.245	MT	984.50	241.55			
	TOTAL (In Rs.)				5433.75			
	AOC FOR BRID	GE (Ch	2.83	(m)				

1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.22	Cum	4891.00	1056.46	0.07	0.09	0.18
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	93.920	Sqm	51.66	4851.91	0.2583	0.338	
4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	40.00	Cum	106.98	4279.20			
4	Carriage of materials(As per Jharkhand SoR 2021)							
Ė	Coarse Sand (35Km lead)	0.429	Cum	678.60	291.01			
	Coarse Aggregates (60 Km lead)	0.184	Cum	1002.60	184.08			
	Cement (80 km lead)	0.332	MT	984.50	326.58			
	TOTAL (In Rs.)				11354.36			
	AOC FOR FAL	.L (Ch 3	.58 Kr	n)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	438.16			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	86.620	Sqm	51.66	4474.79	0.2382	0.312	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.312	Cum	678.60	211.61			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.238	MT	984.50	234.51			
	TOTAL (In Rs.)	05 / Ol		· \	5359.07			
	AOC FOR BRIDG	5E (Ch	3.710	Km)				

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1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	81.200	Sqm	51.66	4194.79	0.2233	0.292	
3	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	50.00	Cum	106.98	5349.00			
4	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.292	Cum	678.60	198.37			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.223	MT	984.50	219.84 10327.13			
	TOTAL (In Rs.)	or Ich	4 000	March.	10327.13			
	AOC FOR BRIDG Clearing and Grubbing Road Land .(Clearing and grubbing	3E (Cn	4.000	KIII)		l	l	
1	road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.006	На	73027.00	438.16			
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.14	Cum	4891.00	704.30	0.05	0.06	0.12
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	44.880	Sqm	51.66	2318.50	0.1234	0.162	
4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	30.00	Cum	106.98	3209.40			
5	Carriage of materials(As per Jharkhand SoR 2021)							
-	Coarse Sand (35Km lead)	0.222	Cum	678.60	150.68			
	Coarse Aggregates (60 Km lead)	0.122	Cum	1002.60	122.72			
	Cement (80 km lead)	0.172	MT	984.50	169.71			
	TOTAL (In Rs.)	10	445		7113.47			
	AOC FOR FAL	C(Ch 4.	.415 K	m)				

1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14				
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	6.01	Cum	4891.00	29398.12	2.04	2.52	5.11	
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	89.220	Sqm	51.66	4609.11	0.2454	0.321		
4	Carriage of materials(As per Jharkhand SoR 2021)								
	Coarse Sand (35Km lead)	2.846	Cum	678.60	1931.07				
	Coarse Aggregates (60 Km lead)	5.109	Cum	1002.60	5122.34				
	Cement (80 km lead)	2.289	MT	984.50	2253.50				
TOTAL (In Rs.) AOC FOR BRIDGE (Ch 5.09 Km)									
	ACC ECP RPID	GE ICh	E no i	(m)					
		GE (Ch	5.09	Km)					
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	GE (Ch 0.004	Ha	73027.00	292.11				
2	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i)				292.11	0.2697	0.353		
	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building	0.004	На	73027.00		0.2697	0.353		
2	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11) 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	98.080	Ha	73027.00 51.66	5066.81	0.2697	0.353		
3	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11) 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 (WRD Part B 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead)	98.080 30.00	Ha	73027.00 51.66	5066.81	0.2697	0.353		
3	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11) 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 (WRD Part B 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	98.080 30.00 0.353 0.000	Ha Sqm Cum Cum Cum	73027.00 51.66 106.98 678.60 1002.60	3209.40 239.61 0.00	0.2697	0.353		
3	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11) 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 (WRD Part B 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead) Cement (80 km lead)	98.080 30.00	Ha Sqm	73027.00 51.66 106.98	3209.40 239.61 0.00 265.54	0.2697	0.353		
3	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B) Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11) 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 (WRD Part B 7.1.31) Carriage of materials(As per Jharkhand SoR 2021) Coarse Sand (35Km lead) Coarse Aggregates (60 Km lead)	98.080 30.00 0.353 0.000 0.270	Sqm Cum Cum MT	73027.00 51.66 106.98 678.60 1002.60 984.50	3209.40 239.61 0.00	0.2697	0.353		

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1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.005	На	73027.00	365.14			
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.79	Cum	4891.00	3846.20	0.27	0.33	0.67
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	45.980	Sqm	51.66	2375.33	0.1264	0.166	
4	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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)	25.00	Cum	106.98	2674.50			
5	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.496	Cum	678.60	336.46			
	Coarse Aggregates (60 Km lead)	0.668	Cum	1002.60	670.16			
	Cement (80 km lead)	0.394	MT	984.50	387.71			
	TOTAL (In Rs.)				10655.50			
	AOC FOR BRID	GE (Ch	6.59	Km)				
1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.003	На	73027.00	219.08			
2	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	27.840	Sqm	51.66	1438.21	0.0766	0.100	
3	Carriage of materials(As per Jharkhand SoR 2021)							
	Coarse Sand (35Km lead)	0.100	Cum	678.60	68.01			
	Coarse Aggregates (60 Km lead)	0.000	Cum	1002.60	0.00			
	Cement (80 km lead)	0.077	MT	984.50	75.37			
	TOTAL (In Rs.)				1800.68			
	AOC FOR BRIDG	E (Ch	6.810	Km)				

1	Clearing and Grubbing Road Land .(Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to a lead of 1000 metres including removal and disposal of top organic soil not exceeding 150 mm in thickness.) (WRD Part A 2.3 (i) B)	0.003	На	73027.00	219.08			
2	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix in foundation of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I. including lead charges. (WRD Part A 14.1 A)	0.57	Cum	4891.00	2772.84	0.19	0.24	0.48
3	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I. (WRD Part A 5.7.11)	29.600	Sqm	51.66	1529.14	0.0814	0.107	
5	Carriage of materials(As per Jharkhand SoR 2021)							
L	Coarse Sand (35Km lead)	0.345	Cum	678.60	233.89			
	Coarse Aggregates (60 Km lead)	0.482	Cum	1002.60	483.14			
	Cement (80 km lead)	0.274	MT	984.50	269.91			
	TOTAL (In Rs.)	5508.00						