

CENTRAL RLY**CR-CAO-C-HQ-ENGG****Office of CAO/C,
CSTM, 6th FLOOR,
NEW ADMN.
BUILDING, D N
ROAD, MUMBAI CST,
PIN 400001.****Mumbai, 400001
Maharashtra, India****Letter No: CR-CAO-C-HQ-ENGG / CAOC-12-
2023 / 00901790086837****Dated: 14/09/2023****M/s K K Vidyut****"Vidyut", Opp Amol Vihar, Rasnenagar, savedi,
Ahmednagar - 414003 Maharashtra****Sub: Letter Of Acceptance**

- Ref:**
- 1.** Tender No. CAOC-12-2023 closing date 26-06-2023 11:00 for 1) Provision of Good shed facilities along with goods circulating area at various locations, 2) Construction of track machine rest house along with pathway, construction of EI building, platform surfacing work & balance work of ORH at various locations, 3) Construction of FOB, 4) Supply of Ballast, 5) Balance Earthwork in ANG, VLD & RRI yard and other miscellaneous work for commissioning of section, 6) Construction of 4 Nos. of Major Bridges at Manmad Entry Arrangement & Br. No.265/1 at Daund yard in connection with Daund - Manmad Doubling Project.
 - 2.** Your bid ID **15351301** dated **26/06/2023 10:49** submitted by M/s KALYAN TOLL INFRASTRUCTURE LIMITED-KHANDWA

The Competent Authority has accepted your offered rates in connection with the subject work. The total cost of the work at the accepted rates works out to Rs. 1533273754.02 (Rupees One Hundred And Fifty-Three Crore Thirty-Two Lakh Seventy-Three Thousand Seven Hundred And Fifty-Four Rupees And Two Paise Only)

A sum of Rs.7878500 deposited as Earnest Money vide IREPS reference ID NE435219012053 has been retained towards initial Security Money for due and faithful fulfillment of the contract, and the balance Security Money will be recovered from the progressive bills @ 6 % of the bill amount till it reaches 5 % of the contract value in terms of clause 16.(1) of Part-II, GCC, April 2022. If you submit the Cash or Term Deposit Receipt issued from a Scheduled commercial bank of India or irrevocable Bank Guarantee Bond from a Scheduled commercial bank of India, either towards the Full Security Deposit or the Part Security Deposit equal to or more than Bid Security, the Railway shall return the Bid Security, to you. Balance of Security

Deposit may be deposited by you in cash or Term Deposit Receipt issued from Scheduled commercial bank of India or irrevocable Bank Guarantee bond issued from Scheduled commercial bank of India, or it will be recovered at the rate of 6% of the bill amount till the full Security Deposit is recovered. Provided also that in case of default on your part, the Railway may retain any amount due for payment to you on the pending "on account bills" so that the amounts so retained (including amount guaranteed through Performance Guarantee) may not exceed 10% of the total value of the contract. The Irrevocable Bank Guarantee submitted towards Security deposit shall be initially valid up to the stipulated date of Maintenance period plus 60 days and shall be extended from time to time, depending upon extension of contract granted in terms of Clause 17A and 17B of the Standard General Conditions of Contract.

You are requested to submit Performance Guarantee in the form as given in Clause 16.(4) of Part-II, GCC, April 2022 equivalent to 5 % of the contract value amounting to Rs. 76663687.7 (Rupees Seven Crore Sixty-Six Lakh Sixty-Three Thousand Six Hundred And Eighty-Seven Rupees And Seventy Paise Only) within 21 days from the date of issue of Letter of Acceptance, valid up to stipulated date of completion plus 60 days so that contract agreement can be executed. Extension of time for submission of PG beyond 21 (Twenty one) days and upto 60 days from the date of issue of LOA may be given by the Authority who is competent to sign the contract agreement. However, a penal interest of 12% per annum shall be charged for the delay beyond 21 (Twenty one) days, i.e. from 22nd day after the date of issue of LOA. Further, if the 60th day happens to be a declared holiday in the concerned office of the Railway, submission of PG can be accepted on the next working day. In all other cases, if you fail to submit the requisite PG even after 60 days from the date of issue of LOA, the contract is liable to be terminated. In case contract is terminated railway shall be entitled to forfeit Bid Security and other dues payable to you against this contract, subject to maximum of PG amount. You shall be debarred from participating in re-tender for this work. You shall submit the Performance Guarantee (PG) in any of the forms mentioned in the tender document. The Performance Guarantee shall be submitted by you after the Letter of Acceptance (LOA) has been issued, but before signing of the contract agreement. In case, the time for completion of work gets extended, you shall get the validity of P.G. extended to cover such extended time for completion of work plus 60 days. The value of PG to be submitted by you is based on original contract value and shall not change due to subsequent variation(s) in the original contract value. The Performance Guarantee (PG) shall be released after physical completion of the work based on 'Completion Certificate' issued by the competent authority stating that you has completed the work in all respects satisfactorily. Whenever the contract is rescinded, the Performance Guarantee already submitted for the contract shall be encashed.

The entire work shall be completed within 12 month from the date of issue of Letter of Acceptance. Maintenance period shall be 6 (Six) months including monsoon.

Price Variation Clause: Price Variation Clause (PVC) is applicable to this tender / contract, from the date of opening of First Packet: Technical Bids i.e. 26.06.2023.

Contract: Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Right or Remedies: Full value of the Bid Security shall stand forfeited without prejudice to any other right or remedies if: (a) You do not submit the Performance Guarantee within the time specified in Para 3 above; (b) You do not execute the contract documents within seven days after receipt of notice issued by the Railway that such documents are ready; and (c) You do not commence the work within 15 (Fifteen) days of receipt of this letter.

Registration with Regional Labour Commissioner: You are requested to get yourself registered immediately under Contract Labour (Regulation & Abolition) Act, 1970, with the Regional Labour Commissioner (Central) and intimate the date of commencement and completion of the work in Form VI(A) to the Regional Labour Commissioner (C) & Labour Enforcement Officer, Daund District.

Reporting to the Executive: In the meantime you are requested to report to Dy.Chief Engineer (Const.), Daund immediately for programming the execution of work with Bar Chart in duplicate & commencement of work as per contract conditions.

Submission of Documents: You are also advised to submit the Original copies of 'MOU for JV' and 'Power of Attorney/s' & 'Board's Resolution/s' along with Notarised copy of 'MOA&AOA' of both the Members of the JV firm, as uploaded along with your Offer for the subject tender, immediately.

Acknowledgement: Please acknowledge receipt of this letter.

All Other terms and conditions, as stipulated in the tender documents shall be applicable.

DINESH KATARIA
CE/C/CENTRAL
Digitally Signed
[View Signature Details](#)

Awarded Quantities And Rates

Item Sno.	Item Desc	Item Code	Item Qty	Qty Unit	Unit Rate (Rs)	Excl. (%)	Advt.Value (Rs)	Bid Rate/ Unit Rate	Bid Amount (Rs)
Schedule A-CPWD DSR-2021 Items (Item Directory - CPWD DSR 2021-Ver-2)							829984115.84		
1			View Details			3.00	358752668.14	9.00	326464928.01

	Provision of Good Shed Facilities						% Below	
2	Construction of track machine rest house along with pathway, construction of EI building, platform surfacing work & balance work of ORH	View Details	3.00	471231447.70	8.00	% Below	433532931.88	
Schedule Totals				759997859.89				
Schedule B-Construction of FOB (Item Directory - CPWD DSR 2021-Ver-2)				177592118.78	2.00	% Above	181143961.16	
1	Part-I: FOB Substructure : Civil work	View Details	3.00	44507180.65				
2	Part-II: FOB Substructure & Superstructure	View Details	3.00	97154549.15				
3	Part-III: Barricading at various Station	View Details	3.00	35930388.98				
Schedule Totals				181143961.16				
Schedule B-Construction of FOB (Item Directory - CR-HQ-IR-USSOR 2021-2-Ver-1)				52799869.28	35.00	% Above	71279823.53	
4	Part-IV: General items	View Details	At Par	52799869.28				
Schedule Totals				71279823.53				
Schedule C-NS Items (Item Directory - Not Applicable)				131301240.00	10.00	% Above	144431364.00	
1	Supplying, collecting and stacking of hard stone, Machine Crushed 65 mm gauge ballast as per RDSO specification for track ballast IRS-GE-1, June 04 (with updated correction slip) along the cess/within Railway land or whenever space is available or on the completed embankment as directed by Engineer-in charge including levelling the ground before stacking, all lead, lift, ascent/descent, crossing of nallah, track, of any other type of obstruction etc making approach	1	134000	cum	979.86	At Par	131301240.00	

	road wherever require for this work including all taxes/cess, royalty, octroi and other fees/charges, if any levied from time to time, measuring instrument and manpower for measurement of ballast will be arranged by contractor at his own cost including testing of ballast as per specification. Note: The royalty charges will be recovered for this item at source as per special condition No.9.1 & 9.2 in case of increase/decrease in the Royalty rate during the currency of the contract payment/recovery will be effected as per clause No.9.1 & 9.2.							
Schedule Totals							144431364.00	
Schedule D-Balance Earthwork in ANG, VLD & RRI yard and other miscellaneous work for commissioning of section (Item Directory - CR-HQ-IR-USSOR 2021-2-Ver-1)					119227883.82	14.00	% Above	135919787.55
1	Part-I: Earthwork Items	View Details	At Par	94257922.06				
2	Part-II: Cement Items	View Details	At Par	6873355.50				
3	Part-III: Steel Items	View Details	At Par	7803479.76				
4	Part-IV: Retaining wall & Miscellaneous Items	View Details	At Par	10293126.50				
Schedule Totals							135919787.55	
Schedule D-CPWD DSR-2021 Items (Item Directory - CPWD DSR 2021-Ver-2)					18562559.58	10.00	% Below	16706303.62
5	Part-V: Road work Items	View Details	3.00	18562559.58				
Schedule Totals							16706303.62	
Schedule E-Construction of Major Bridges (Item Directory - CR-HQ-IR-USSOR 2021-2-Ver-1)					216226719.10	3.50	% Above	223794654.27
1	Part-I: Earthwork Items	View Details	At Par	59340507.00				
2		View Details	At Par	67685422.45				

	Part-II: Steel Items					
3	Part-III: Cement Items	View Details	At Par	31316909.66		
4	Part-IV: Retaining wall & Miscellaneous Items	View Details	At Par	57883879.99		
Schedule Totals				223794654.27		
Total Value				1545694506.40		1533273754.02
				Rebate on Total Value (%)		0.00
				Net Bid Value		1533273754.02

Item Breakup

Schedule	A-CPWD DSR-2021 Items					
Item - 1	Provision of Good Shed Facilities					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	2.0	EARTH WORK				
2	2.6.1	All kinds of soil	cum	3246	205.45	666890.70
3	2.7.1	Ordinary rock	cum	2349	412.95	970019.55
4	2.7.3	Hard rock (blasting prohibited)	cum	1566	1184.30	1854613.80
5	2.28.1	All kinds of soil	Sqm	5595	28.15	157499.25
6	5.0	REINFORCED CEMENT CONCRETE				
7	5.1S	CAST IN SITU				
8	5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	4677	8364.20	39119363.40
9	5.9S	FORM WORK				
10	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	552	307.95	169988.40
11	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	1200	669.55	803460.00
12	5.9.3	Suspended floors, roofs, landings, balconies and access platform	Sqm	842	766.55	645435.10
13	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	1628	608.35	990393.80
14	5.9.6		Sqm	701	804.25	563779.25

		Columns, Pillars, Piers, Abutments, Posts and Struts				
15	5.9.16.1	Under 20 cm wide	Metre	73	181.90	13278.70
16	5.9.19	Weather shade, Chajjas, corbels etc., including edges	Sqm	161	814.95	131206.95
17	5.22S	STEEL REINFORCEMENT				
18	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	526994	89.65	47245012.10
19	5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	24389	89.65	2186473.85
20	5.33S	DESIGN MIX CONCRETE				
21	5.33.1	All works upto plinth level				
22	5.33.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	1239	8683.80	10759228.20
23	5.33.2	All works above plinth level upto floor V level				
24	5.33.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	218	10306.20	2246751.60
25	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Quintal	550	688.45	378647.50
26	6.0	MASONRY WORK				
27	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	339	6658.25	2257146.75
28	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	485	8288.35	4019849.75
29	8.0	CLADDING WORK				
30	8.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing,				

		moulding and polishing of edges to give high gloss finish etc. complete at all levels.				
31	8.2.2.1	Area of slab upto 0.50 sqm	Sqm	135	4679.35	631712.25
32	8.2.2.2	Area of slab over 0.50 sqm	Sqm	149	4425.35	659377.15
33	8.3.2	Granite work	Metre	1671	418.85	699898.35
34	8.20S	STONE WORK DRY CLADDING				
35	8.31	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	552	1063.45	587024.40
36	9.0	WOOD AND P.V.C. WORK				
37	9.16	Providing and fixing 25 mm thick shutters for cup board etc. :				
38	9.20.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	151	2818.50	425593.50
39	9.40S	MISCELLANEOUS-WOOD WORK				
40	9.48.1	Fixed to steel windows by welding	Kg	3197	181.00	578657.00
41	9.51.2	With 12 mm mild steel U beading	Sqm	76	812.40	61742.40
42	9.88S	CHROMIUM PLATED BRASS FITTINGS				
43	9.92.1	125 mm	Each	120	226.50	27180.00
44	9.92.2	100 mm	Each	120	199.20	23904.00
45	9.95S	ANODISED ALUMINIUM FITTINGS (ALL FITTINGS SHALL BE ISI MARKED)				
46	9.96.1	300x16 mm	Each	120	260.30	31236.00

47	9.97.2	250x10 mm	Each	120	104.40	12528.00
48	9.105S	GYPSUM BOARD PARTITIONS				
49	9.118.1	24 mm thick factory made PVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (+/- 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (+/- 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (+/- 0.2 mm) wall thickness, fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (+/- 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge. (For W.C. and bathroom door shutter).	Sqm	68	1790.65	121764.20
50	10.0	STEEL WORK				
51	10.1	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	22794	93.05	2120981.70
52	10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	76373	111.95	8549957.35
53	10.25.2		Kg	50	142.30	7115.00

		In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works				
54	11.0	FLOORING				
55	11.37S	CERAMIC GLAZED TILES				
56	11.39	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in colours White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement: 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.	Sqm	117	1142.80	133707.60
57	11.41S	VITRIFIED FLOOR TILES				
58	11.41A.2	Glazed vitrified floor tiles polished finish of size				
59	11.41A.2.1	Size of Tile 600 x 600 mm	Sqm	1113	1359.20	1512789.60
60	12.0	ROOFING				
61	12.40	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
62	12.41.2	110 mm diameter	Metre	360	319.75	115110.00
63	12.42	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
64	12.42.5.2	110 mm bend	Each	144	132.00	19008.00
65	12.45.3	12.5 mm thick tapered edge gypsum moisture resistant board	Sqm	150	1300.50	195075.00
66	12.50	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of	Sqm	100	671.55	67155.00

		corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.				
67	12.51.1	Ridges plain (500 - 600mm)	Metre	50	450.60	22530.00
68	13.0	FINISHING				
69	13.1S	CEMENT PLASTER (IN FINE SAND)				
70	13.1.1	1:4 (1 cement: 4 fine sand)	Sqm	3114	294.85	918162.90
71	13.2.1	1:4 (1 cement: 4 fine sand)	Sqm	2840	339.70	964748.00
72	13.25	Extra for plastering:				
73	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	3114	214.30	667330.20
74	13.44S	EXTERIOR FINISHING				
75	13.44.1	New work (Two or more coats applied @ 3.84 kg/10 sqm)	Sqm	162	97.60	15811.20
76	13.48.1	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	Sqm	5954	158.95	946388.30
77	13.78	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming	Sqm	1980	363.45	719631.00

		to IS: 2547 (Part - I & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete				
78	15.0	DISMANTLING AND DEMOLISHING				
79	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	20	2007.10	40142.00
80	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	60	2928.10	175686.00
81	15.7.4	In cement mortar	cum	150	1698.45	254767.50
82	15.9.2	In cement mortar	cum	25	2027.10	50677.50
83	15.12.1	Of area 3 sq. metres and below	Each	20	302.70	6054.00
84	15.14.1	Of sectional area 40 square centimetres and above	cum	10	3674.50	36745.00
85	15.17.2	Channels, angles, tees and flats	Kg	500	1.90	950.00
86	15.18	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.	Kg	500	4.65	2325.00
87	15.23.1	For thickness of tiles 10 mm to 25 mm	Sqm	700	60.50	42350.00
88	15.28.1	G.S. Sheet	Sqm	500	136.00	68000.00
89	15.28.2	Asbestos Cement sheet	Sqm	200	63.75	12750.00
90	15.60	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial	cum	500	219.35	109675.00

		lead, for all leads including all lifts involved.				
91	16.0	ROAD WORK				
92	16.1S	ROADS				
93	16.3.1	90 mm to 45 mm size stone aggregate	cum	9040	1937.60	17515904.00
94	16.3.2	63 mm to 45 mm size stone aggregate	cum	6780	1624.50	11014110.00
95	16.3.7	Stone screening 11.2 mm nominal size (Type B)	cum	2260	2065.70	4668482.00
96	16.3.10	Moorum	cum	10830	888.30	9620289.00
97	16.4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	cum	21000	865.80	18181800.00
98	16.42S	CONCRETE PAVEMENTS				
99	16.43.2	Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer	cum	14675	10006.65	146847588.75
100	16.44	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	Litre	12000	48.15	577800.00
101	16.49S	MISCELLANEOUS				
102	16.91.1	60mm thick cement concrete paver block of M-35 grade with approved colour, design & pattern.	Sqm	200	932.35	186470.00
103	17.0	SANITARY INSTALLATIONS				
104	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	Each	24	5781.35	138752.40
105	17.25.1	Flat back wash basin of size 630x450 mm	Each	36	1149.60	41385.60
106	17.29		Each	18	45.25	814.50

		Providing and fixing 100 mm sand cast Iron grating for gully trap.				
107	17.70.2	Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms	Each	36	325.10	11703.60
108	18.0	WATER SUPPLY				
109	18.7S	C.P.V.C. PIPES				
110	18.8.1	15 mm nominal dia Pipes	Metre	300	441.15	132345.00
111	18.8.2	20 mm nominal dia Pipes	Metre	100	513.75	51375.00
112	18.9.6	50 mm nominal dia Pipes	Metre	250	811.85	202962.50
113	18.10.3	25 mm dia nominal bore	Metre	50	491.20	24560.00
114	18.10.6	50 mm dia nominal bore	Metre	150	893.20	133980.00
115	18.12.8	80 mm dia nominal bore	Metre	150	919.10	137865.00
116	18.15S	BRASS FITTINGS				
117	18.16.1	15 mm nominal bore	Each	30	303.85	9115.50
118	18.23S	C.I./DUCTILE IRON PIPES & SPECIALS				
119	18.27.1	100 mm dia pipe	Metre	200	1210.50	242100.00
120	18.30.1	80 mm diameter pipe	Each	150	182.85	27427.50
121	18.30.2	100 mm diameter pipe	Each	150	284.75	42712.50
122	18.31S	C.I. SLUICE VALVES/ FIRE HYDRANTS & FIXTURES				
123	18.31.1	100 mm diameter				
124	18.31.1.2	Class II	Each	4	4500.25	18001.00
125	18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	Litre	14000	9.70	135800.00
126	18.49S	C.P. BRASS FITTINGS				

127	18.49.1	15 mm nominal bore	Each	40	434.20	17368.00
128	18.54S	PTMT FITTINGS				
129	18.56.1	15 mm nominal bore, 107 mm long, weighing not less than 110 gms	Each	25	180.80	4520.00
130	19.0	DRAINAGE				
131	19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:				
132	19.6.2	150 mm dia. R.C.C. pipe	Metre	100	493.10	49310.00
133	19.6.4	300 mm dia. R.C.C. pipe	Metre	40	902.05	36082.00
134	21.0	ALUMINIUM WORK				
135	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
136	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	566	466.30	263925.80
137	21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	427	564.80	241169.60

138	21.3.1	With float glass panes of 4.0 mm thickness (weight not less than 10kg/sqm)	Sqm	151	1019.80	153989.80
139	21.8.1	Upto 5mm depth and 5 mm width	Metre	432	85.25	36828.00
140	22.0	WATER PROOFING				
141	22.23.2	For horizontal surface one coat @1.10 kg per sqm.	Sqm	2317	311.50	721745.50
					Total	348303561.30
Item - 2	Construction of track machine rest house along with pathway, construction of EI building, platform surfacing work & balance work of ORH					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	2.0	EARTH WORK				
2	2.6.1	All kinds of soil	cum	9320	205.45	1914794.00
3	2.7.1	Ordinary rock	cum	1961	412.95	809794.95
4	2.7.3	Hard rock (blasting prohibited)	cum	800	1184.30	947440.00
5	2.28.1	All kinds of soil	Sqm	11281	28.15	317560.15
6	5.0	REINFORCED CEMENT CONCRETE				
7	5.1S	CAST IN SITU				
8	5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources: 3 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	2895	8364.20	24214359.00
9	5.9S	FORM WORK				
10	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	2458	307.95	756941.10
11	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	21425	669.55	14345108.75
12	5.9.3	Suspended floors, roofs, landings, balconies and access platform	Sqm	3156	766.55	2419231.80
13	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	5864	608.35	3567364.40
14	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	1193	804.25	959470.25

15	5.9.16.1	Under 20 cm wide	Metre	43	181.90	7821.70
16	5.9.19	Weather shade, Chajjas, corbels etc., including edges	Sqm	426	814.95	347168.70
17	5.22S	STEEL REINFORCEMENT				
18	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	1141694	89.65	102352867.10
19	5.33S	DESIGN MIX CONCRETE				
20	5.33.1	All works upto plinth level				
21	5.33.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	4874	8683.80	42324841.20
22	5.33.2	All works above plinth level upto floor V level				
23	5.33.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	727	10306.20	7492607.40
24	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Quintal	600	688.45	413070.00
25	6.0	MASONRY WORK				
26	6.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	760	6658.25	5060270.00
27	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	806	8288.35	6680410.10
28	8.0	CLADDING WORK				
29	8.2	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing of edges to give high gloss finish etc. complete at all levels.				
30	8.2.2.1	Area of slab upto 0.50 sqm	Sqm	176	4679.35	823565.60
31	8.2.2.2	Area of slab over 0.50 sqm	Sqm	170	4425.35	752309.50

32	8.3.2	Granite work	Metre	1526	418.85	639165.10
33	8.20S	STONE WORK DRY CLADDING				
34	8.31	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	911	1063.45	968802.95
35	9.0	WOOD AND P.V.C. WORK				
36	9.16	Providing and fixing 25 mm thick shutters for cup board etc. :				
37	9.20.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	Sqm	330	2818.50	930105.00
38	9.40S	MISCELLANEOUS-WOOD WORK				
39	9.48.1	Fixed to steel windows by welding	Kg	4622	181.00	836582.00
40	9.51.2	With 12 mm mild steel U beading	Sqm	154	812.40	125109.60
41	9.88S	CHROMIUM PLATED BRASS FITTINGS				
42	9.92.1	125 mm	Each	182	226.50	41223.00
43	9.92.2	100 mm	Each	191	199.20	38047.20
44	9.95S	ANODISED ALUMINIUM FITTINGS (ALL FITTINGS SHALL BE ISI MARKED)				
45	9.96.1	300x16 mm	Each	245	260.30	63773.50
46	9.97.2	250x10 mm	Each	245	104.40	25578.00
47	9.105S	GYPSUM BOARD PARTITIONS				
48	9.118.1	24 mm thick factory made PVC door shutters made of styles	Sqm	68	1790.65	121764.20

		and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm (+/- 0.2 mm) with inbuilt edging on both sides. The styles and rails mitred and joint at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm (+/- 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm (+/- 0.2 mm) wall thickness, fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (+/- 0.1 mm) wall thickness. The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge. (For W.C. and bathroom door shutter).				
49	10.0	STEEL WORK				
50	10.1	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	4993	93.05	464598.65
51	10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	402703	111.95	45082600.85
52	10.19	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	Kg	5000	88.50	442500.00
53	10.20	Providing and fixing bolts including nuts and washers complete.	Kg	3500	140.15	490525.00
54	10.25.2		Kg	200	142.30	28460.00

		In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works				
55	11.0	FLOORING				
56	11.37S	CERAMIC GLAZED TILES				
57	11.39	Providing and laying rectified Glazed Ceramic floor tiles of size 300x300 mm or more (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in colours White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement: 4 Coarse sand), jointing with grey cement slurry @ 3.3 kg/ sqm including grouting the joints with white cement and matching pigments etc., complete.	Sqm	200	1142.80	228560.00
58	11.41S	VITRIFIED FLOOR TILES				
59	11.41A.2	Glazed vitrified floor tiles polished finish of size				
60	11.41A.2.1	Size of Tile 600 x 600 mm	Sqm	1542	1359.20	2095886.40
61	12.0	ROOFING				
62	12.1S	SHEET ROOFING				
63	12.7.1	0.80 mm thick with zinc coating not less than 275 gm/sqm	Metre	1050	811.85	852442.50
64	12.40	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately):				
65	12.41.2	110 mm diameter	Metre	424	319.75	135574.00
66	12.42	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
67	12.42.5.2	110 mm bend	Each	176	132.00	23232.00

68	12.45.3	12.5 mm thick tapered edge gypsum moisture resistant board	Sqm	150	1300.50	195075.00
69	12.50	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	5250	671.55	3525637.50
70	12.51.1	Ridges plain (500 - 600mm)	Metre	525	450.60	236565.00
71	13.0	FINISHING				
72	13.1S	CEMENT PLASTER (IN FINE SAND)				
73	13.1.1	1:4 (1 cement: 4 fine sand)	Sqm	10028	294.85	2956755.80
74	13.2.1	1:4 (1 cement: 4 fine sand)	Sqm	7976	339.70	2709447.20
75	13.25	Extra for plastering:				
76	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	9234	214.30	1978846.20
77	13.44S	EXTERIOR FINISHING				
78	13.44.1	New work (Two or more coats applied @ 3.84 kg/10 sqm)	Sqm	5745	97.60	560712.00
79	13.48.1	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	Sqm	17203	158.95	2734416.85

80	13.78	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - I & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete	Sqm	6448	363.45	2343525.60
81	15.0	DISMANTLING AND DEMOLISHING				
82	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	10	2007.10	20071.00
83	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	30	2928.10	87843.00
84	15.7.4	In cement mortar	cum	70	1698.45	118891.50
85	15.9.2	In cement mortar	cum	15	2027.10	30406.50
86	15.12.1	Of area 3 sq. metres and below	Each	10	302.70	3027.00
87	15.14.1	Of sectional area 40 square centimetres and above	cum	10	3674.50	36745.00
88	15.17.2	Channels, angles, tees and flats	Kg	200	1.90	380.00
89	15.18	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50 metres lead.	Kg	250	4.65	1162.50
90	15.23.1	For thickness of tiles 10 mm to 25 mm	Sqm	300	60.50	18150.00
91	15.28.1	G.S. Sheet	Sqm	200	136.00	27200.00
92	15.28.2	Asbestos Cement sheet	Sqm	100	63.75	6375.00
93	15.60	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials	cum	300	219.35	65805.00

		by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.				
94	16.0	ROAD WORK				
95	16.1S	ROADS				
96	16.3.1	90 mm to 45 mm size stone aggregate	cum	12868	1937.60	24933036.80
97	16.3.2	63 mm to 45 mm size stone aggregate	cum	4346	1624.50	7060077.00
98	16.3.7	Stone screening 11.2 mm nominal size (Type B)	cum	3069	2065.70	6339633.30
99	16.3.10	Moorum	cum	48603	888.30	43174044.90
100	16.4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	cum	20000	865.80	17316000.00
101	16.42S	CONCRETE PAVEMENTS				
102	16.43.2	Cement concrete manufactured in automatic batching plant (RMC plant) i/c transportation to site in transit mixer	cum	6469	10006.65	64733018.85
103	16.44	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	Litre	7000	48.15	337050.00
104	16.49S	MISCELLANEOUS				
105	16.91.1	60mm thick cement concrete paver block of M-35 grade with approved colour, design & pattern.	Sqm	2000	932.35	1864700.00
106	17.0	SANITARY INSTALLATIONS				
107	17.1.1	White Vitreous china Orissa pattern W.C. pan of size	Each	28	5781.35	161877.80

		580x440 mm with integral type foot rests				
108	17.25.1	Flat back wash basin of size 630x450 mm	Each	27	1149.60	31039.20
109	17.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.	Each	37	45.25	1674.25
110	17.70.2	Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms	Each	37	325.10	12028.70
111	18.0	WATER SUPPLY				
112	18.7S	C.P.V.C. PIPES				
113	18.8.1	15 mm nominal dia Pipes	Metre	900	441.15	397035.00
114	18.8.2	20 mm nominal dia Pipes	Metre	150	513.75	77062.50
115	18.9.6	50 mm nominal dia Pipes	Metre	525	811.85	426221.25
116	18.10.3	25 mm dia nominal bore	Metre	50	491.20	24560.00
117	18.10.6	50 mm dia nominal bore	Metre	150	893.20	133980.00
118	18.15S	BRASS FITTINGS				
119	18.16.1	15 mm nominal bore	Each	63	303.85	19142.55
120	18.31S	C.I. SLUICE VALVES/ FIRE HYDRANTS & FIXTURES				
121	18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	Litre	20000	9.70	194000.00
122	18.49S	C.P. BRASS FITTINGS				
123	18.49.1	15 mm nominal bore	Each	68	434.20	29525.60
124	18.54S	PTMT FITTINGS				
125	18.56.1	15 mm nominal bore, 107 mm long, weighing not less than 110 gms	Each	34	180.80	6147.20
126	19.0	DRAINAGE				

127	19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:				
128	19.6.2	150 mm dia. R.C.C. pipe	Metre	300	493.10	147930.00
129	19.6.4	300 mm dia. R.C.C. pipe	Metre	100	902.05	90205.00
130	21.0	ALUMINIUM WORK				
131	21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
132	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	1083	466.30	505002.90
133	21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	816	564.80	460876.80
134	21.3.1	With float glass panes of 4.0 mm thickness (weight not less than 10kg/sqm)	Sqm	300	1019.80	305940.00
135	21.8.1	Upto 5mm depth and 5 mm width	Metre	944	85.25	80476.00
136	22.0	WATER PROOFING				

137	22.23.2	For horizontal surface one coat @1.10 kg per sqm.	Sqm	2714	311.50	845411.00
					Total	457506259.90
Schedule	B-Construction of FOB					
Item - 1	Part-I: FOB Substructure : Civil work					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	2.0	EARTH WORK				
2	2.6.1	All kinds of soil	cum	4000	205.45	821800.00
3	2.9.1	Ordinary rock	cum	250	523.50	130875.00
4	4.0	CONCRETE WORK				
5	4.14S	MISCELLANEOUS				
6	4.20.1	All works upto plinth level :				
7	4.20.1.3	Concrete of M20 grade with minimum cement content of 270 kg /cum	cum	200	8387.15	1677430.00
8	5.0	REINFORCED CEMENT CONCRETE				
9	5.9S	FORM WORK				
10	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	700	307.95	215565.00
11	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	1600	804.25	1286800.00
12	5.22S	STEEL REINFORCEMENT				
13	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	90000	89.65	8068500.00
14	5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	40000	89.65	3586000.00
15	5.33S	DESIGN MIX CONCRETE				
16	5.33.1	All works upto plinth level				
17	5.33.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	400	8683.80	3473520.00
18	5.33.1.3	Concrete of M35 grade with minimum cement content of 370 kg /cum	cum	1000	8966.95	8966950.00
19	5.33.2	All works above plinth level upto floor V level				

20	5.33.2.3	Concrete of M35 grade with minimum cement content of 370 kg /cum	cum	500	10589.35	5294675.00
21	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Quintal	300	688.45	206535.00
22	15.0	DISMANTLING AND DEMOLISHING				
23	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	200	2007.10	401420.00
24	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	200	2928.10	585620.00
25	16.0	ROAD WORK				
26	16.1S	ROADS				
27	16.3.10	Moorum	cum	4000	888.30	3553200.00
28	16.49S	MISCELLANEOUS				
29	16.74.3	Stone aggregate 40 mm nominal size	Sqm	2500	167.25	418125.00
30	16.81	Providing and erecting 2.00 metre high temporary barricading at site; each panel of size 2.50mx2.00m made of 40x40x6mm angle iron or 50x50x3mm hollow MS tube posts/horizontal members/bracings covered with 1.63mm thick MS sheet. The sheet shall be fixed with 30x5mm MS flat by suitable welding/riveting. The panels shall be made so that gap of 50cm above the ground is available making overall height as 2.5m. MS channel ISLC 75 @ 5.70 kg/m, 50cm long shall be provided at the bottom having oval shaped holes of size 50x25mm at both ends with 50cm long MS angle 40x40x6mm bracing. Suitable arrangement shall be made to fix the barricading to avoid from overturning by providing 250mm long expansion fasteners at both ends. The work shall be executed as per drawing/direction of Engineer-in-Charge which includes	Metre	1600	2827.40	4523840.00

		writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed by the Engineer-in-Charge. The barricading provided shall be retained in position at site continuously i/c shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge.				
					Total	43210855.00
Item - 2	Part-II: FOB Substructure & Superstructure					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	10.0	STEEL WORK				
2	10.1	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	40000	93.05	3722000.00
3	10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	500000	111.95	55975000.00
4	10.16.1	Hot finished welded type tubes	Kg	20000	154.90	3098000.00
5	10.16.2	Hot finished seamless type tubes	Kg	120000	168.95	20274000.00
6	10.19	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	Kg	8000	88.50	708000.00
7	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel	Kg	4300	612.25	2632675.00

		nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).				
8	11.0	FLOORING				
9	11.21	Providing and fixing 10 mm thick acid and/or alkali resistant tiles of approved make and colour using acid and/or alkali resisting mortar bedding, and joints filled with acid and/or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in- Charge.				
10	11.21.1.1	Acid and alkali resistant tile	Sqm	2500	1515.45	3788625.00
11	12.0	ROOFING				
12	12.42	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
13	12.50	Providing and fixing pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch	Sqm	3500	671.55	2350425.00

		in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.				
14	12.51.1	Ridges plain (500 - 600mm)	Metre	800	450.60	360480.00
15	13.0	FINISHING				
16	13.44S	EXTERIOR FINISHING				
17	13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	Sqm	8000	55.50	444000.00
18	13.63	Painting with aluminium paint of approved brand and manufacture to give an even shade .				
19	13.63.1	Two or more coats on new work	Sqm	8000	121.45	971600.00
					Total	94324805.00
Item - 3	Part-III: Barricading at various Station					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	2.0	EARTH WORK				
2	2.6.1	All kinds of soil	cum	2156	205.45	442950.20
3	2.9.1	Ordinary rock	cum	144	523.50	75384.00
4	4.0	CONCRETE WORK				
5	4.14S	MISCELLANEOUS				
6	4.20.1	All works upto plinth level :				
7	4.20.1.3	Concrete of M20 grade with minimum cement content of 270 kg /cum	cum	287	8387.15	2407112.05
8	5.0	REINFORCED CEMENT CONCRETE				
9	5.9S	FORM WORK				
10	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	Sqm	1917	307.95	590340.15
11	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	7187	669.55	4812055.85
12	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers	Sqm	1437	608.35	874198.95

13	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	2635	804.25	2119198.75
14	5.22S	STEEL REINFORCEMENT				
15	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	62288	89.65	5584119.20
16	5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	52705	89.65	4725003.25
17	5.33S	DESIGN MIX CONCRETE				
18	5.33.1	All works upto plinth level				
19	5.33.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	671	8683.80	5826829.80
20	5.33.2	All works above plinth level upto floor V level				
21	5.33.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	cum	719	10306.20	7410157.80
22	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Quintal	24	688.45	16522.80
					Total	34883872.80
Schedule	B-Construction of FOB					
Item - 4	Part-IV: General items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:1888 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit.				
1	021061	Plate size 30cm x 30cm	Each	16	21711.08	347377.28
		Supplying, fabrication, assembling of all types of steel girders of specified spans with structural steel conforming to Quality "B0" Grade Designation E250 conforming to IS:2062, erection / slewing / end launching of steel girders with cranes or any other approved launching methods as per site conditions (not requiring traffic block) on sub-structure including provision of trolley refuges etc., complete as per				

		approved QAP and drawings conforming to IRS-B1-2001 and other relevant codes and specifications. Note: 1. Detailed fabrication and erection drawings & launching methodology will be prepared by the contractor and got approved from Railway. 2. The rate is all inclusive including launching in position, complete in all respect except cost of (i) Painting / Metalising; (ii) Bearings & (iii) HSFG bolts which shall be paid extra under relevant item. 3. The payment shall be made on the theoretical weight of main components and gusset plates only. 4. Payment Schedule: (i) Receipt of material at site: 40% (ii) Fabrication of girders: 20% (iii) Erection/Launching: 20% (iv) Completion in all respects: 20%				
2	041011	Plate Girder/Semi Through Girder/Composite Girder (Steel Work)	MT	400	106000.00	42400000.00
3	041014	Deduct for using steel conforming to Quality "BR" instead of Quality "B0" of Grade designation E250 as per IS:2062.	MT	400	-3077.26	-1230904.00
4	041020	Supplying and fixing HSFG bolts of any dia and any length with suitable nuts including DTI washers conforming to IRS-B1-2001 for bridges and steel structures with contractors labour, tools and plants and lead and lift etc., complete.	Kg	11000	177.73	1955030.00
		Metallizing of steel work of girders with sprayed aluminium after surface preparation by Sand/grit blasting, followed by one coat of etch primer (IS:5666) & one coat of Zinc Chrome primer (IS:104) and two coats of aluminium paint (IS:2339) with all labour, T&P and material as a complete job duly conforming to all relevant specifications and process given under Clause 39 of IRS-B1-2001. Note: Nominal Thickness of sprayed Aluminium coating shall be 150 microns. DFT of Zinc chrome primer shall be 25-30 microns and DFT of each coat of Aluminium paint shall be 12-14 microns.				
5	041041		Sqm	9000	626.63	5639670.00

		On new girder during fabrication				
6	041300	Assembling and erecting pre-fabricated structures, such as columns, beams, girders, other members of FOBs and sheds; including leading all structural elements within 1 Km lead, bolting, riveting or welding as per approved drawing or as directed by Engineer In-charge. Rate shall include cost of labour, materials, tools & plants and only pre-fabricated structural elements shall be given by Railway. (Work not requiring traffic or power block).	MT	400	8948.67	3579468.00
7	041301	Extra over item no 041300, if the work is to be executed under traffic or power block.	MT	400	273.07	109228.00
					Total	52799869.28
Schedule	D-Balance Earthwork in ANG, VLD & RRI yard and other miscellaneous work for commissioning of section					
Item - 1	Part-I: Earthwork Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, platforms etc. with contractor's own earth conforming to Soil Quality Class SQ1/SQ2/SQ3, after preparation of foundations as applicable, benching in existing banks wherever required, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as per RDSO Specifications: RDSO/2020/GE: IRS-0004 with latest correction slips. Note: 1) Foundation preparation, Benching including additional earthwork on account of this, wherever required, shall be paid extra under relevant schedule item for benching. 2) Payment for Earthwork under this item shall be made based on the cross section measurements calculated (i) with original ground profile of existing bank based on initial ground levels before doing benching and (ii) final profile of the bank worked				

		out with final levels as per prevailing guidelines.				
1	011032	Using Soil Class SQ2	cum	50000	270.68	13534000.00
2	011033	Using Soil Class SQ3	cum	225000	306.16	68886000.00
		Earthwork in cutting in formation, trolley refuges, side drains, level crossing approaches, platforms, catch water drains, diversion of nallah & finishing to required dimension and slopes to obtain a neat appearance to standard profile inclusive of all labour, materials, plant & machinery, leading all cut spoils either to make spoil dumps or for filling in embankment with leads within 2 km on either side of edge of the cutting(s) including all lifts, ascent, descent, loading, unloading, bailing & pumping out water, if required, clearance of site and all other works incidental thereto for completing the work as per RDSO Specification No. RDSO/2020/GE: IRS-0004 with latest updated correction slips and to the satisfaction of the Engineer-in-Charge. Note: (i) All usable earth arising from cut spoils shall be led into bank formation and Unusable spoils shall be dumped / stacked away from toe of embankment. (ii) All hard rock /and boulders not fit for filling will be stacked by the contractor and will be property of the Railways. (iii) Cut trees shall be property of Railways and to be deposited in the railway godown unless specified otherwise in the Conditions of Contract.				
3	012011	In all conditions and classifications of soil except rock	cum	35000	98.70	3454500.00
4	012014	In hard rock with hammer / chisel / pavement breaker etc. where blasting is not permitted due to special circumstances and if specifically ordered in writing including drilling and all incidental works thereto.	cum	1000	952.04	952040.00
5	012040	Manufacturing of blanketing material by wet mixing of naturally available suitable soil including additional blending with naturally available or manufactured material as required to achieve specified gradation, in designed	cum	5000	859.69	4298450.00

		proportion in Pug mill or wet mix plant to have uniform gradation including all incidental transportation, laying over finished formation in uniform layer(s) with motor grader, compaction with suitable vibratory roller to specified density and finishing to correct profile, complete as per RDSO Specification No. RDSO/2020/GE: IRS-0004 with latest correction slips.				
6	181040	Dismantling existing lifting barrier along with winch assembly and other components like boom, fringes, locking arrangements, pedestal, boom rest, locking rods/wires, pulley stakes, turn out wheels, 'A' base and other materials connected with functioning of lifting barrier, removing engineering indicators on track and level crossing road signages without any damage including demolishing concrete base of existing structures, filling, ramming and levelling the ground disturbed during demolition, clearing debris and stacking all released material in a neat and countable manner and clear of infringements, as directed. Note: Barriers on both sides of level crossing constitute one set.	Set	3	19592.64	58777.92
		Manufacture, supply, assembly, erection, commissioning and testing of Lifting Barrier assembly, having fragmented boom, boom light boxes with suitable gate lamps, bell, boom supports (stay wires) with adjusters, counter weight, pedestal and lock posts with foundation of 'A' type as required, turn-union wheel with brackets, balance and auxiliary weights clamps etc. to approved standard drawing with all fittings and fastenings excluding fringes, complete with contractor's men, equipments and materials, as per specifications and as directed.				
7	185041	Up to 6m long Lifting Barrier	Set	2	129603.59	259207.18
8	185042	Above 6m and up to 8m long Lifting Barrier	Set	1	179144.38	179144.38
9	185050	Manufacture, supply, assembly, erection, commissioning and	Each	3	51446.86	154340.58

		testing of Winch Arrangement for operation of level crossing lifting barriers, as per RDSO's approved layout, having standard covering arrangement, foundation of 'A' type as required and pulleys, pulley guides & stakes, horizontal rope wheel, vertical rope wheel, wire adjusting screws, wire ropes 6 x 6 x 19 with all fittings, fixtures & accessories to RDSO's approved drawings with all parts including painting of steel work as per specification, as directed with cement concreting complete. Note: Excavation and concrete work will be paid separately.				
10	211130	Providing and fixing Trolley Refuge of size 3.0m x3.0m on cess, placing with released unserviceable PSC sleepers and keeping them at all four sides of refuge and also placing as matting inside the refuge by keeping them in upside down position with a minimum of 14 sleepers including levelling with earth, excavation, all lead and lift, crossing of tracks, leading the sleepers with in a free lead and lift, handling etc., with all contractor's men material complete and as directed by the Engineer-in-charge. Note: Earth-work will to be paid separately under relevant item.	Each	600	4135.77	2481462.00
					Total	94257922.06
Item - 2	Part-II: Cement Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Supply and using Cement at Worksite				
1	025071	Ordinary Portland Cement 43 grade approved brands/makes	MT	100	7978.98	797898.00
2	025072	Ordinary Portland Cement 53 grade of approved brands/makes	MT	750	8100.61	6075457.50
					Total	6873355.50
Item - 3	Part-III: Steel Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Supply of steel reinforcement of approved brands/makes for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				

1	025082	Thermo-Mechanically Treated bars of grade Fe-500D or more of approved brands/makes.	Kg	60000	88.90	5334000.00
2	041370	Supplying fabricating and erecting welded and/or bolted and/or riveted steel work in built up sections, trusses and framed work, staging, racks, Height Gauge etc. for Steel Structures other than bridge girders, using RSJ, tees, angles and channels/flats, plates, gussets, round or square bars, cleats, bolts etc., with contractors own steel including cutting, bending, straightening, drilling, riveting, hoisting, fixing, erecting, welding, bolting etc., with Providing stiffeners wherever required as per approved drawing including applying a priming coat of a approved steel primer with all contractor's materials, labour, tools & plants, lead & lift including crossing of tracks if required etc., complete as per specification and as directed by Engineer-in-charge. Note: The payment shall be made on the theoretical weight of main components and gusset plates only.	MT	24	102894.99	2469479.76
					Total	7803479.76
Item - 4	Part-IV: Retaining wall & Miscellaneous Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	011010	Preparation of foundation for Embankment by clearing, grubbing, stripping top soil (average 150 mm) and stacking beyond foundation area, thereafter ploughing and pulverizing 150 - 200 mm of top of soil with tractor trolley, mixing water to achieve OMC with water sprinkler or left for natural drying, as required, and compaction with vibratory roller of suitable capacity to achieve 98% MDD for laying first layer of soil for embankment construction.	100 Sqm	25000	537.37	134342.50
		Earthwork in excavation by mechanical means (Hydraulic Excavator)/Manual Means for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and				

		consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil up to a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge. Note: This item will be used for excavation work in connection with other miscellaneous works also like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines.				
2	022011	All kinds of soils	cum	1800	199.78	359604.00
3	022014	Hard rock (blasting prohibited)	cum	50	636.00	31800.00
4	022040	Providing and laying in position machine batched, machine mixed and machine vibrated Cement Concrete of specified grade as per approved Design Mix (mixed in Mobile Concrete Batching/Mixing Plant at site or RMC from approved plants) using 20mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, using Plasticiser in approved proportions (as per IS:9103), to modify workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Note: 1. Payment for cement, reinforcement and shuttering shall be made extra under relevant item. 2. Plasticiser shall invariably be used in approved proportion to increase workability with minimum possible quantity of cement for all grade of Design Mix Concrete unless it is specifically approved citing reasons for not using plasticiser at the stage of Mix Design and in that case deduction shall be made as per relevant item.	cum	800	2536.39	2029112.00
		Providing and laying in position machine batched, machine mixed and machine vibrated Cement Concrete of specified grade as per approved Design Mix (mixed in Mobile Concrete				

		Batching/Mixing Plant at site or RMC from approved plants) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 9.0 m from foundation top level, including finishing, using Plasticiser in approved proportions (as per IS:9103), to modify workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Note: 1. Payment for cement, reinforcement and shuttering shall be made extra under relevant item. 2. Plasticiser shall invariably be used in approved proportion to increase workability with minimum possible quantity of cement for all grade of Design Mix Concrete unless it is specifically approved citing reasons for not using plasticiser at the stage of Mix Design and in that case deduction shall be made as per relevant item.				
5	022052	Wing wall and Return wall	cum	600	2600.49	1560294.00
6	022060	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer.	cum	100	2693.74	269374.00
7	022070	Providing and fixing Weep Holes in Abutments, Wing walls and Return walls etc., of new bridges with 110mm dia UPVC pipe Type A ISI marked with all contractor's men, material, transportation, all taxes as per specifications and as directed by Engineer-in-Charge.	Metre	200	244.14	48828.00
8	024020	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete, mixed in Mobile Concrete	cum	100	2070.00	207000.00

		Batching/Mixing Plant at site or RMC from approved plants, of specified grade (cast in-situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in Drop and curtain wall and alike structures below bed level, complete in all respect as per drawings and technical specifications to the satisfaction of Engineer-in-Charge. Note: Payment for cement, reinforcement and shuttering shall be made extra.				
		Centering and shuttering including strutting, propping etc. and removal of form for :				
9	025031	All types of bridge sub-structures, e.g. pier, abutment, wing wall, retaining wall, RCC box type foundations, Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc. up to 5m above ground level	Sqm	3500	329.00	1151500.00
10	025060	Supplying, spreading and compacting well graded hard stone of 63mm average size (maximum up to 80mm size) in the bottom of foundation of box culverts, bridges etc. including all lead, lift, ascent, descent etc. complete job as per directions of Engineer In-charge.	cum	500	1357.12	678560.00
11	051030	Supplying of stone boulders weighing not less than 35 kg each at specified bridge locations.	cum	1000	853.24	853240.00
12	051100	Laying Pitching with Stone Boulders supplied by Railway with voids filled with spalls on slopes, laid over prepared filter media including boulder apron laid dry in front of toe of embankment as per drawings and technical specifications. Note: Filter media to be paid under relevant item.	cum	500	233.23	116615.00
13	052250	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	cum	500	166.97	83485.00

14	083030	Boxing and profiling of ballast as per procedure prescribed in latest edition of IRPWM including cess dressing on both sides of track. The work will include removing excess ballast from track and putting the same in crib and shoulder by leading to a maximum of 50m including crossing of track, deweeding on ballast section etc and as directed by Engineer-In charge.	TRM	20000	27.33	546600.00
		Transportation of Rails, sleepers, switches, crossings, SEJs and Glued Joints by road vehicles for different leads. Note: 1. Lead shall be the shortest motorable road length between the points of loading and unloading. 2. Loading and unloading shall be paid extra under relevant items.				
15	172051	Lead up to 5 Km	MT	3500	57.41	200935.00
16	172052	Lead beyond 5 Km and up to 10 km	MT	3500	98.17	343595.00
17	172053	Lead beyond 10 Km and up to 20 km	MT	3500	152.73	534555.00
18	172054	Lead beyond 20 Km and up to 30 km	MT	1000	218.05	218050.00
		Painting speed breakers with paint of approved quality & colour over the Bituminous/Concrete surface near approaches to level crossing.				
19	184021	With enamel paint (two coats)	Sqm	100	113.97	11397.00
20	184022	With luminous paint (two coats)	Sqm	100	149.75	14975.00
21	211120	Fixing vertically the unserviceable PSC sleepers at locations of tress-passing, railway boundary or to make temporary store by excavating trench, fixing PSC sleeper in trench and filling back open trench.	Each	500	156.47	78235.00
		Hiring of machinery for minor miscellaneous works for short duration including operator/driver, fuel, lubricants and consumable. The contractor shall arrange all statutory permits as required by rules and regulations prevailing in the area of work. Payment shall be made for actual working hours at site.				
22	211201		Hour	500	752.64	376320.00

		JCB Backhoe Loaders 3DX Plus or similar with minimum 1.10 cum bucket capacity				
23	211202	Hydra or similar tyre mounted Pick-n-Carry crane of 12T capacity for misc. works of handling of material	Hour	500	889.42	444710.00
					Total	10293126.50
Schedule	D-CPWD DSR-2021 Items					
Item - 5	Part-V: Road work Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	15.0	DISMANTLING AND DEMOLISHING				
2	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	cum	50	2007.10	100355.00
3	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge.	cum	50	2928.10	146405.00
4	15.7.4	In cement mortar	cum	50	1698.45	84922.50
5	15.17.1	R.S. Joists	Kg	500	2.80	1400.00
6	15.17.2	Channels, angles, tees and flats	Kg	500	1.90	950.00
7	15.60	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	cum	1000	219.35	219350.00
8	16.0	ROAD WORK				
9	16.1S	ROADS				
10	16.3.1	90 mm to 45 mm size stone aggregate	cum	500	1937.60	968800.00
11	16.3.2	63 mm to 45 mm size stone aggregate	cum	500	1624.50	812250.00
12	16.3.3	53 mm to 22.4 mm size stone aggregate	cum	500	1837.25	918625.00
13	16.3.6	Stone screening 13.2 mm nominal size (Type A)	cum	1000	1865.00	1865000.00

14	16.3.7	Stone screening 11.2 mm nominal size (Type B)	cum	500	2065.70	1032850.00
15	16.4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road/vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	cum	3000	865.80	2597400.00
16	16.6.1	With road roller/ hand roller	Sqm	10000	21.80	218000.00
17	16.11	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	Sqm	500	821.95	410975.00
18	16.30S	PREMIX CARPET				
19	16.30.1	On W.B.M. @ 0.75 Kg / sqm	Sqm	10000	45.20	452000.00
20	16.31	Providing and applying tack coat using bitumen emulsion conforming to IS:8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.				
21	16.33.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	Sqm	5000	227.00	1135000.00
22	16.36.1	For 50mm compacted thickness using coarse aggregate of size 50-20 mm graded @ 0.60 cum per 10 sqm key aggregate of size 12.5 mm graded @ 0.15 cum per 10 sqm. With paving asphalt grade VG - 10 @ 50 kg/ 10 sqm.	Sqm	5000	414.20	2071000.00
23	16.39.1	With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt	Sqm	5000	427.75	2138750.00
24	16.42S	CONCRETE PAVEMENTS				
25	16.43.1	Cement concrete prepared with batch mixing machine	cum	300	9492.90	2847870.00

					Total	18021902.50
Schedule	E-Construction of Major Bridges					
Item - 1	Part-I: Earthwork Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, platforms etc. with contractor's own earth conforming to Soil Quality Class SQ1/SQ2/SQ3, after preparation of foundations as applicable, benching in existing banks wherever required, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as per RDSO Specifications: RDSO/2020/GE: IRS-0004 with latest correction slips. Note: 1) Foundation preparation, Benching including additional earthwork on account of this, wherever required, shall be paid extra under relevant schedule item for benching. 2) Payment for Earthwork under this item shall be made based on the cross section measurements calculated (i) with original ground profile of existing bank based on initial ground levels before doing benching and (ii) final profile of the bank worked out with final levels as per prevailing guidelines.				
1	011033	Using Soil Class SQ3	cum	187500	306.16	57405000.00
		Earthwork in cutting in formation, trolley refuges, side drains, level crossing approaches, platforms, catch water drains, diversion of nallah & finishing to required dimension and slopes to obtain a neat appearance to standard profile inclusive of all labour, materials, plant & machinery, leading all cut spoils either to make spoil dumps or for filling in embankment with leads within 2 km on either side of edge of the cutting(s) including all lifts, ascent, descent, loading, unloading, bailing & pumping out water, if required, clearance of site and all other works incidental thereto for				

		completing the work as per RDSO Specification No. RDSO/2020/GE: IRS-0004 with latest updated correction slips and to the satisfaction of the Engineer-in-Charge. Note: (i) All usable earth arising from cut spoils shall be led into bank formation and Unusable spoils shall be dumped / stacked away from toe of embankment. (ii) All hard rock /and boulders not fit for filling will be stacked by the contractor and will be property of the Railways. (iii) Cut trees shall be property of Railways and to be deposited in the railway godown unless specified otherwise in the Conditions of Contract.				
2	012011	In all conditions and classifications of soil except rock	cum	19610	98.70	1935507.00
					Total	59340507.00
Item - 2	Part-II: Steel Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Supply of steel reinforcement of approved brands/makes for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
1	025082	Thermo-Mechanically Treated bars of grade Fe-500D or more of approved brands/makes.	Kg	755000	88.90	67119500.00
2	041370	Supplying fabricating and erecting welded and/or bolted and/or riveted steel work in built up sections, trusses and framed work, staging, racks, Height Gauge etc. for Steel Structures other than bridge girders, using RSJ, tees, angles and channels/flats, plates, gussets, round or square bars, cleats, bolts etc., with contractors own steel including cutting, bending, straightening, drilling, riveting, hoisting, fixing, erecting, welding, bolting etc., with Providing stiffeners wherever required as per approved drawing including applying a priming coat of a approved steel primer with all contractor's materials, labour, tools & plants, lead & lift including crossing of tracks if required etc., complete as per specification and as directed by Engineer-in-charge. Note: The	MT	5.5	102894.99	565922.45

		payment shall be made on the theoretical weight of main components and gusset plates only.				
					Total	67685422.45
Item - 3	Part-III: Cement Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Supply and using Cement at Worksite				
1	025071	Ordinary Portland Cement 43 grade approved brands/makes	MT	67	7978.98	534591.66
2	025072	Ordinary Portland Cement 53 grade of approved brands/makes	MT	3800	8100.61	30782318.00
					Total	31316909.66
Item - 4	Part-IV: Retaining wall & Miscellaneous Items					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		Conducting in-situ full size Plate Load Test (PLT) at selected location as per IS:1888 including making loading arrangements & casting of RCC/cast in-situ concrete footing as per codal provisions including excavation and refilling of trial pit.				
1	021061	Plate size 30cm x 30cm	Each	15	21711.08	325666.20
		Earthwork in excavation by mechanical means (Hydraulic Excavator)/Manual Means for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil up to a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge. Note: This item will be used for excavation work in connection with other miscellaneous works also like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines.				
2	022011	All kinds of soils	cum	5410	199.78	1080809.80

3	022014	Hard rock (blasting prohibited)	cum	900	636.00	572400.00
4	022040	Providing and laying in position machine batched, machine mixed and machine vibrated Cement Concrete of specified grade as per approved Design Mix (mixed in Mobile Concrete Batching/Mixing Plant at site or RMC from approved plants) using 20mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, using Plasticiser in approved proportions (as per IS:9103), to modify workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Note: 1. Payment for cement, reinforcement and shuttering shall be made extra under relevant item. 2. Plasticiser shall invariably be used in approved proportion to increase workability with minimum possible quantity of cement for all grade of Design Mix Concrete unless it is specifically approved citing reasons for not using plasticiser at the stage of Mix Design and in that case deduction shall be made as per relevant item.	cum	7200	2536.39	18262008.00
		Providing and laying in position machine batched, machine mixed and machine vibrated Cement Concrete of specified grade as per approved Design Mix (mixed in Mobile Concrete Batching/Mixing Plant at site or RMC from approved plants) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 9.0 m from foundation top level, including finishing, using Plasticiser in approved proportions (as per IS:9103), to modify workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Note: 1. Payment for cement, reinforcement and shuttering shall be made extra under relevant item. 2. Plasticiser shall invariably be used in				

		approved proportion to increase workability with minimum possible quantity of cement for all grade of Design Mix Concrete unless it is specifically approved citing reasons for not using plasticiser at the stage of Mix Design and in that case deduction shall be made as per relevant item.				
5	022051	Abutment & Pier	cum	2400	2600.49	6241176.00
6	022052	Wing wall and Return wall	cum	1120	2600.49	2912548.80
7	022053	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	cum	1560	2632.55	4106778.00
8	022054	Approach slab at formation level, Dirt wall/ ballast wall at formation level	cum	25	2568.45	64211.25
9	022060	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer.	cum	94	2693.74	253211.56
10	022070	Providing and fixing Weep Holes in Abutments, Wing walls and Return walls etc., of new bridges with 110mm dia UPVC pipe Type A ISI marked with all contractor's men, material, transportation, all taxes as per specifications and as directed by Engineer-in-Charge.	Metre	1200	244.14	292968.00
11	022100	Providing, fabricating and installing permanent casing pipe for bored piles for all diameters with specified thickness of steel plate including all labour, materials, tools & complete as per approved drawing & specifications complete in all respect as per the direction of Engineer in charge. Note: Payment shall be made as per the weight of circular plate of casing pipe only.	MT	25	85000.00	2125000.00
12	024020	Providing and laying in position machine batched, machine	cum	100	2070.00	207000.00

		mixed and machine vibrated Design Mix Cement Concrete, mixed in Mobile Concrete Batching/Mixing Plant at site or RMC from approved plants, of specified grade (cast in-situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in Drop and curtain wall and alike structures below bed level, complete in all respect as per drawings and technical specifications to the satisfaction of Engineer-in-Charge. Note: Payment for cement, reinforcement and shuttering shall be made extra.				
		Centering and shuttering including strutting, propping etc. and removal of form for :				
13	025031	All types of bridge sub-structures, e.g. pier, abutment, wing wall, retaining wall, RCC box type foundations, Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc. up to 5m above ground level	Sqm	9020	329.00	2967580.00
14	031020	Providing and launching in position machine batched, machine mixed and machine vibrated Cement Concrete of specified grade as per approved Design Mix (mixed in Mobile Concrete Batching/Mixing Plant at site or RMC from approved plants) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Post-tensioned) Concrete Girder/Box Girders/Slabs in contractor's casting yard in the vicinity of worksite, including finishing, using Plasticiser in approved proportions (as per IS:9103), to modify workability without impairing strength and durability, complete as per drawings, specifications and direction of the Engineer. Note: 1. Payment for Shuttering, Cement, Reinforcement, HTS cables, Sheathing, Anchorage Cones, stressing of cables, grouting of the ducts and launching of girder/slab in position shall be made extra under relevant items. However, deduction shall be made in case of slab as per relevant	cum	930	2536.39	2358842.70

		item. 2. For pre-cast item, loading in transport vehicle in casting yard is included and shall not be paid extra. 3. Plasticiser shall invariably be used in approved proportion to increase workability with minimum possible quantity of cement for all grade of Design Mix Concrete unless it is specifically approved citing reasons at the stage of Mix Design and in that case deduction shall be made as per relevant item.				
15	031050	Providing, fabricating & fixing in position to exact design profiles, H.T.S. cables of all classification made from Low Relaxation strands conforming to IS:14268- latest version in Pretensioned Prestressed Concrete girders/slabs etc. including supplying, cutting, making into cables with necessary spacers, colour coding, protecting with water soluble oil at all time, placing, bending, routing, fixing, stressing including all lead and lift with contractor's own materials, labour, equipments etc. complete as per drawings & specifications. Payment shall be made in terms of weight of HTS cables as per drawing.	MT	45	115497.16	5197372.20
16	031060	Extra for using HDPE sheathing in place of CRCA sheathing	Metre	3700	34.96	129352.00
17	031080	Supplying and laying in position specified grade precast prestressed cement concrete ballast retainers of size, as directed by Engineer In-charge. Payment for Shuttering, Cement, reinforcement, HTS cables, anchorage cones, stressing of cables and grouting of the ducts will be done extra.	cum	310	2536.39	786280.90
		Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recording and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder				

		is cleared of the kentledges/loading material etc. The load shall be 1.25 times the stipulated design load.				
18	031111	For Span design load up to 100 MT	Each	3	88279.13	264837.39
19	031112	Extra for every increase of 1 MT or part thereof over 100 MT in the span design load capacity up to 800 MT	MT	3	318.73	956.19
20	051030	Supplying of stone boulders weighing not less than 35 kg each at specified bridge locations.	cum	2500	853.24	2133100.00
21	051070	Providing and laying Pitching with Stone Boulders, weighing not less than 35kg each with voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical Specifications (filter media to be paid separately under the relevant item). Rate is excluding cost of cement which shall be paid extra under relevant item.	cum	900	2508.64	2257776.00
22	051080	Providing and laying Filter Material as per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical Specification.	cum	2000	2463.29	4926580.00
23	052250	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	cum	2500	166.97	417425.00
					Total	57883879.99