

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

CGM/DFCCIL/Kolkata acting for and on behalf of The President of India invites E-Tenders against Tender No **KKK-EN-ROB-CON-07LC** Closing Date/Time 04/12/2024 15:00 Hrs. Bidders will be able to submit their original/revised bids upto closing date and time only. Manual offers are not allowed against this tender, and any such manual offer received shall be ignored.

1. NIT HEADER

Name of Work	Construction of Road Over Bridge (ROB) and other ancillary works in lieu of LC gate no. 1C/E at Km 226/5-7, LC gate no. 3B/T at Km 231/9-11,LC gate no. 4B/E at Km 233/25-27, LC gate no. 5AB/T at Km 236/23-25, LC gate no. 6B/E at Km 238/29-31, LC gate no. 7AB/E/T at Km 241/19-21 and LC gate no. 125A/T at Km 189/28-30 in GC Section of Asansol Division of Eastern Railway under Chief General Manager /DFCCIL/Kolkata		
Bidding type	Normal Tender		
Tender Type	Open	Bidding System	Two Packet System
Tender Closing Date Time	04/12/2024 15:00	Date Time Of Uploading Tender	29/10/2024 19:17
Pre-Bid Conference Required	Yes	Pre-Bid Conference Date Time	18/11/2024 11:30
Advertised Value	2607577480.37	Tendering Section	JHARKHAND
Bidding Style	Single Rate for Each Schedule	Bidding Unit	
Earnest Money (Rs.)	26075800.00	Validity of Offer (Days)	120
Tender Doc. Cost (Rs.)	29500.00	Period of Completion	30 Months
Contract Type	Works	Contract Category	Expenditure
Bidding Start Date	20/11/2024	Are Joint Venture (JV) firms allowed to bid	Yes
Ranking Order For Bids	Lowest to Highest	Expenditure Type	Deposit Work

2. SCHEDULE

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule A-For Road Bridge Work: Items as per ER USSOR 2021							373018939.76	Above/ Below/Par
1	Please see Item Breakup for details.				374592227.11	(-) 0.42	373018939.76	
	Description:- Schedule A-Schedule A (Items as per ER USSOR 2021) for Road Bridge Work							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule B-for Structural Steel Work: Items as per ER USSOR 2021							708400744.07	Above/ Below/Par
1	Please see Item Breakup for details.				718677837.14	(-) 1.43	708400744.07	
	Description:- Schedule B-Schedule B (Items as per ER USSOR 2021) for Structural Steel Work							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule C-Items as per CPWD DSR-2021							169083808.11	Above/ Below/Par
1	Please see Item Breakup for details.				181810546.36	(-) 7.00	169083808.11	
	Description:- Items as per CPWD DSR-2021							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule D-Non Scheduled Items							367301613.79	Above/ Below/Par
1	Please see Item Breakup for details.				367301613.79	AT Par	367301613.79	
	Description:- Schedule D (NS Items) (Item Directory - Not Applicable)							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule E-For Supply & use of Cement: Item as per ER USSOR 2021							168081624.85	Above/ Below/Par
1	Please see Item Breakup for details.				167829880.03	0.15	168081624.85	
	Description:- Schedule E-Schedule E (Item as per ER USSOR 2021) for Supply & use of Cement							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule F-Schedule F (Item as per ER USSOR 2021) for Reinforcement Steel FE-500 D							786065088.44	Above/ Below/Par
1	Please see Item Breakup for details.				784887756.80	0.15	786065088.44	
	Description:- Schedule F-Schedule F (Item as per ER USSOR 2021) for Reinforcement Steel FE-500 D							

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule G -Electrical (General) work							15329861.35	Above/ Below/Par
1	Please see Item Breakup for details.				15329861.35	AT Par	15329861.35	
	Description:- Electrical (General) work							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule H -Unforeseen items from those chapters of USSOR 2021 of ER which are not included of this tender schedule-A							5974800.00	Above/ Below/Par
1	Lump Sum				6000000.00	(-) 0.42	5974800.00	
	Description :- Unforeseen items from those chapters of USSOR 2021 of ER which are not included of this tender schedule-A							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule I -Unforeseen items from those chapters of USSOR 2021 of ER which are not included of this tender schedule-B							9857000.00	Above/ Below/Par
1	Lump Sum				10000000.00	(-) 1.43	9857000.00	
	Description :- Unforeseen items from those chapters of USSOR 2021 of ER which are not included of this tender schedule-B							
S.No.	Item Code	Item Qty	Qty Unit	Unit Rate	Basic Value	Escl.(%)	Amount	Bidding Unit
Schedule J -Unforeseen items from those chapters of CPWD DSR-2021 which are not included of this tender schedule-C.							4464000.00	Above/ Below/Par
1	Lump Sum				4800000.00	(-) 7.00	4464000.00	
	Description :- Unforeseen items from those chapters of CPWD DSR-2021 which are not included of this tender schedule-C							

3. ITEM BREAKUP

Schedule	Schedule A-For Road Bridge Work: Items as per ER USSOR 2021						
Item- 1	Schedule A-Schedule A (Items as per ER USSOR 2021) for Road Bridge Work						
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount	
		Providing portable fencing along running track where work is to be done in close vicinity of track, maintaining during execution of work and removing after completion of the work as per direction of the Engineer. Fencing shall consist of self supporting steel angles of size 50mm x 50mm x 6mm, 1.5m long provided with hooks etc. and embedded in CC 1:2:4 block of size 0.23m x 0.23m x 0.23m placed at c/c distance of 2m along track. 12mm dia rods in three horizontal layers shall be tack welded with angle posts. Note : Released material will be property of the contractor after completion of work. Cost of cement required for CC blocks shall be paid separately.					
1	013041	With provision of one 50mm wide retro-reflective tape in horizontal direction, duly secured/tight with vertical posts.	Metre	2100.00	227.15	477015.00	
2	013060	Supplying, driving and erecting in all types of soils, hard wood pile 5m to 7m long without joint, 125mm average dia. for protection of bank slope including two coats of coal tar paint complete, as directed. Note: Payment will be made as per actual driven length of pile.	Metre	10500.00	199.70	2096850.00	
3	013080	Shoring with 'Z' section MS sheet piles side by side in all kinds of soil mechanically or manually as per approved drawing with contractor's own arrangement complete in all respects and removal of sheet piles after completion of the work as directed by engineer in-charge Note: Payment will be made as per actual driven length of pile.	Sqm	7368.00	1062.78	7830563.04	

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

		Exploratory drilling of boreholes down to required depth, drilling of 150mm dia. boreholes in all type of soils except hard rock & large boulders (boulder core more than 30cm) including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion/chiselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area.				
4	021011	0m to 10m	Metre	105.00	1441.73	151381.65
5	021012	10m to 20m	Metre	30.00	1585.91	47577.30
		Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30cm), including refilling, reinstating surface and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chiselling tool for advancing through occasional seams of hard strata to be employed where necessary in River bed area including standing/flowing water with all necessary arrangements except making of platform under water which shall be paid under relevant item of SOR.				
6	021021	0m to 10m	Metre	20.00	1730.08	34601.60
7	021022	10m to 20m	Metre	10.00	1903.09	19030.90
8	021030	Extra for 150mm dia. bore in hard Rock/large Boulder at all levels	Metre	10.00	1940.01	19400.10
9	021040	Erection of temporary working platform to drill bore hole through flowing/standing water through river bed up to water depth of 1.5m, and dismantling after completing work and removing from the site to clear the water way.	cum	20.00	2972.80	59456.00
		Drilling of NX size borehole (75mm dia.) in all types of hard rock and collection of rock core samples from boreholes and preserving in boxes.				
10	021051	0m to 10m	Metre	210.00	4325.20	908292.00
11	021052	10m to 20m	Metre	28.00	4613.54	129179.12
12	021110	Taking out 100mm dia. & 450mm long undisturbed samples of soil from bore holes, including provision of air tight containers for packing and, labeling incl. transporting the samples to laboratory. Piston sampler shall be used for extracting undisturbed samples where necessary. Samples shall be collected as per IS:2720.	Each	21.00	130.80	2746.80
13	021120	Taking out 100mm dia. & 450mm long disturbed samples of soil from bore holes, including provision of air tight containers for packing, labeling and transporting the samples to laboratory. Samples shall be collected as per IS:2720.	Each	21.00	144.18	3027.78
14	021130	Conducting standard penetration test as per IS:2131 at approximate 1.5m intervals in bore holes, as directed by the Engineer in charge	Each	42.00	751.44	31560.48
15	021140	Collection of water samples at required intervals	Each	21.00	216.26	4541.46
		Conducting laboratory Tests on collected soil samples as per relevant IS code				
16	021151	Moisture Content/Dry Density	Each	21.00	360.44	7569.24
17	021152	Atterberg Limits	Each	42.00	865.04	36331.68
18	021153	Specific Gravity	Each	42.00	384.46	16147.32
19	021154	Grain size analysis including Hydrometer analysis	Each	42.00	706.46	29671.32
20	021155	Direct Shear Test	Each	21.00	2847.43	59796.03
21	021157	Consolidation Test	Each	21.00	2883.47	60552.87
22	021158	Unconfined Compression Test	Each	21.00	2214.50	46504.50
23	021159	Tri-axial Test	Each	21.00	2214.50	46504.50
		Conducting Laboratory tests on collected ROCK SAMPLES as per relevant IS code				
24	021161	Density Test	Each	21.00	480.59	10092.39

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

25	021162	Water Absorption & Porosity	Each	21.00	360.44	7569.24
26	021163	Hardness	Each	21.00	432.52	9082.92
27	021164	Unconfined Compression Test	Each	21.00	2306.78	48442.38
28	021165	Point Load Test	Each	21.00	1311.98	27551.58
29	021166	Modulus of Elasticity	Each	21.00	6694.25	140579.25
30	021167	Abrasion Testing	Each	21.00	1545.53	32456.13
31	021170	Conducting chemical analysis of ground water samples to determine suitability for concreting and aggressiveness in relation to attack on concrete / reinforcement including determination of pH value.	Each	21.00	3604.34	75691.14
32	021180	Conducting chemical analysis of soil samples to determine aggressiveness in relation to attack on concrete / reinforcement including determination of pH value	Each	21.00	4829.81	101426.01
		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.				
33	022011	All kinds of soils	cum	20027.43	210.35	4212769.90
34	022012	Soft rock (not requiring blasting)	cum	10013.72	452.44	4530607.48
35	022013	Hard rock (requiring blasting)	cum	3337.91	804.84	2686483.48
		Providing and laying in position Plain cement concrete of specified Nominal Mix for miscellaneous works like side drains, foundation for OHE masts and other miscellaneous structures excluding the cost of Cement, centering and shuttering - All work up to plinth level :				
36	022032	1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)	cum	1751.80	2773.90	4859318.02
37	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	16062.61	2783.22	44705777.40

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

		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.				
38	022051	Abutment & Pier	cum	4864.80	2866.05	13942760.04
39	022052	Wing wall and Return wall	cum	92.40	2866.05	264823.02
40	022053	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	cum	5028.27	2907.46	14619493.89
41	022054	Approach slab at formation level, Dirt wall/ ballast wall at formation level	cum	223.13	2824.63	630259.69
		Boring, providing and installation of bored cast in-situ Reinforced Cement Concrete piles using Hydraulic piling Rig of specified diameter and length below pile cap of specified grade with Design Mix Cement Concrete, using 20mm graded crushed stone aggregate and coarse sand of approved quality, to carry a safe working load not less than specified, concreting by machine batching, machine mixing, scaffolding, using Admixture in approved proportion (as per IS:9103), placing with tremie pipe, chipping off of pile top to remove laitance concrete above cut off level etc., pumping and bailing out water complete in all respect as per approved drawing, specification and direction of the Engineer in charge. Note: 1. Payment for only cement, reinforcement shall be made extra. 2. Length of the pile for payment shall be measured up to the bottom of RCC pile Cap. 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 for not using plasticiser at the stage of Mix Design and in that case deduction shall be made as per relevant item.				
42	022092	1200mm diameter	Metre	3019.50	8669.15	26176498.43
		Extra for chiselling in addition to boring of piles, if chiselling is required to be resorted to in hard rock or big stone boulders larger than 30cm, manually or by any other means.				
43	022111	1200mm diameter pile	Metre	613.80	5747.52	3527827.78
		Conducting load test of a single pile up to specified capacity in accordance with IS:2911 (Part-IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. with all labour, material, tool & plants, equipment, machinery, etc. complete as per drawing and specification, as directed by the Engineer.				
44	022123	Initial load test above 100 ton and up to 250 T capacity pile	Each	5.00	92414.86	462074.30
45	022124	Extra for every increase of 50 ton in pile capacity or part thereof over 250 ton	Each	100.00	6023.69	602369.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

46	022127	Routine Load Test above 100 ton capacity up to 250 ton capacity pile	Each	10.00	46207.43	462074.30
		Lateral load testing of single pile in accordance with "IS Code of practice IS:2911 (Part-IV) for determining safe allowable lateral load of pile" with all labour, material, tool & plants, equipment, machinery, etc complete as per drawing and specification as directed by the Engineer.				
47	022131	Piles with lateral load capacity of up to 50 ton	Each	10.00	23924.11	239241.10
48	022140	Pulse Echo Test (PET) for integrity testing of piles with contractor's men, materials and machines. The rate includes cost of Inspection of site, preparation of pile head and any other unforeseen cost required for the test, submission of reports in triplicate as per satisfaction of the Engineer in Charge.	Each	180.00	2843.56	511840.80
49	024010	Providing and casting 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, (Cast in-Situ/Pre-cast) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls, thrust bed or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of RCC box of any size including finishing, Plasticiser in approved proportions (as per IS:9103), to modify workability without impairing strength and durability, complete as per drawings and technical specifications as directed by 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 at the stage of Mix Design and in that case deduction shall be made as per relevant item.	cum	154.00	3061.54	471477.16
		Centering and shuttering including strutting, propping etc. and removal of form for :				
50	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	29249.81	756.62	22130991.24
51	025032	All types of bridge super-structures, e.g. slabs, I-girders, T-girders, Box girders etc. up to 5m above ground level.	Sqm	67661.38	963.11	65165351.69
52	025033	Extra for additional height over item no. 025031 & 025032 wherever required with adequate bracing, propping etc. over initial height of 5 metres for every additional height of 1 metre or part thereof.	Sqm	47663.26	117.68	5609012.44

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

53	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 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.	cum	5881.88	2783.22	16370566.05
54	031040	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 Prestressed (Post-tensioned) Concrete girders/slabs etc. including supplying, cutting, making into cables with necessary spacers, colour coding, protecting with water soluble oil at all time, anchoring of cables, supplying and placing spiral corrugated type galvanized metal steel ducts sheathing made up of Cold Rolled Cold Annealed (CRCA) mild steel conforming to IS:513 of required diameter/ thickness, vent pipe, placing, bending, routing, fixing, stressing & grouting of cable ducts with cement grout, Anchorage sets in required number with provision for future prestressing if any including all lead and lift with contractor's own materials, labour, equipments etc. complete as per drawings & specifications. Rate also includes covering anchorage pads with epoxy mortar of approved quality to avoid corrosion. Cement for grouting to be paid separately. Payment shall be made in terms of weight of HTS cables as per drawing.	MT	328.03	196533.92	64469021.78
55	031090	Design, manufacturing, supplying and fixing in position elastomeric bearing true to line and level conforming to IS:3400, IS:226, BS-5400 under prestressed concrete girders/ Steel Girders, for Pre-cast as well as cast-in-situ girders as per approved drawing. The rate shall include cost of load test of one no. bearing from Railway approved firms and all fixing materials, equipments, machineries, labour, taxes, loading, unloading, leading, lifting etc. complete. Rates include getting the drawing approved from Railway and cost of inspection during manufacturing from railway approved organization. Note : 1. The rate is for finished item complete and paid only after fixing in position below the girder. 2. The volume shall be as given in the drawing and no deduction shall be made for inserted steel plates etc.	Cubic Centimetre	8040000.00	1.26	10130400.00
		Providing and fixing in position of standard preformed sealed and slab type or strip seal elastomeric type expansion joints for Railway bridge or Road Over Bridges as per approved drawings and latest MORTH/IRC specifications complete in all respect as directed by Engineer in-charge.				

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

56	031102	For 80mm expansion	Metre	986.40	8802.21	8682499.94
		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.				
57	031111	For Span design load up to 100 MT	Each	104.00	84279.59	8765077.36
58	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	23700.00	365.90	8671830.00
		Loading, transportation of Precast RCC Girders / Slabs / Ballast retainers / Steel Girders etc. from Casting Yard to Site of Work, unloading and stacking at site of work at prescribed location as directed by Engineer-in-Charge up to 60 kms.				
59	031161	Up to 5.00 Km	MT	4362.64	126.23	550696.05
60	031162	Above 5 km up to 10 km	MT	4362.64	164.36	717043.51
61	031163	Above 10 km up to 15 km	MT	4362.64	198.07	864108.10
		Providing and fixing in position GI Drainage Spouts of required length with Grating in RCC slab and filling bitumen along kerb as shown in drawing with contractor's pipes, bitumen, tools, equipment, lead, lifts etc. complete as per specifications and as directed by Engineer in-charge.				
62	031192	100mm dia. Drainage Spouts	Metre	730.37	1042.46	761381.51
		Launching in position, by any approved method, pre-fabricated Steel Girders, precast PSC girders/slabs, casted at casting bed developed at site, to correct alignment and level over the bed block / pedestal with all required arrangements, complete in all respect.				
63	041321	PSC girders / slabs	MT	14396.70	1307.78	18827716.33
64	051030	Supplying of stone boulders weighing not less than 35 kg each at specified bridge locations.	cum	350.00	1137.25	398037.50
65	052030	Supply and laying of quarry dust including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or laying the filtering media.	cum	700.00	1278.23	894761.00
66	052140	Providing and fixing of Drainage Spouts of 110mm UPVC Type A ISI marked (Working pressure 4 kg/sqcm) using suitable clamps and adhesive etc., complete.	Metre	5826.00	384.18	2238232.68
67	052150	Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498 (latest) in required profile behind boulder filling of abutments, wing walls / return walls etc. above bed level with all labour and material complete job as per drawing and technical specification of RDSO Guidelines.	cum	350.00	2232.71	781448.50
68	052240	Supplying, spreading and filling coarse sand (no cohesive materials to be used) of approved quality including watering and ramming in foundation, behind the abutment, wing wall, retaining wall in layers not exceeding 150mm thick including its compaction as per direction of Engineer-in-charge. The rate includes all lead, lift, ascent, descent, crossing of Railway line etc. complete with contractor's labour, materials, tools and plant.	cum	1100.00	1200.32	1320352.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

69	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	350.00	457.58	160153.00
70	052260	Dewatering of natural or accumulated water from any location. Payment to be done for Horse power of pump multiplied by pumping hours.	HP Hour	7000.00	44.97	314790.00
71	181030	Dismantling exiting Rail Height Gauge carefully and stacking the released material in countable manner, free from any infringements as directed by Engineer in-Charge including removal of cement concrete foundation and making surface clean.	Each	14.00	4309.05	60326.70
72	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	14.00	22382.36	313353.04
73	181070	Dismantling existing swing gate consisting of two leaves with gate posts, meeting post and stopper post etc. without causing any damage to material and stacking the same near LC gate as directed by Engineer in-charge.	MT	4.00	2142.13	8568.52
74	185010	Dismantling of existing rail fencing, fixed adjoining running lines of track, duly excavating and levelling the foundation by hand compaction, removing connections and carting the released material up to a lead of 250m by suitable means and stacking the same, as directed by engineer in-charge. Note: The released materials shall be handed over duly stacking the same in measurable fashion.	MT	70.00	1692.49	118474.30
75	185020	Dismantling existing whistle boards along with post including demolishing base concrete and levelling of ground, stacking released materials at the level crossing concerned including clearing of debris, with contractor's labour, tools, vehicles, consumables, all lead and lift etc., complete without damage as directed by the Engineer-in-charge.	Each	14.00	211.48	2960.72
76	186040	Removal of RCC slab in existing level crossing portion and in between tracks along with stacking them in countable manner, as directed.	Sqm	280.00	62.08	17382.40
77	186210	Providing Rail Barricading with rails supplied by Railways with verticals provided at every 1.5m interval, height of barricade being up to 1.5m above ground / termination level and one or more row of horizontal rail, duly cutting rails and drilling holes as required, assembling necessary accessories to required length, including earthwork excavation for foundation, fixing posts in cement concrete 1:3:6 base of size 0.45m x 0.45m x 0.60m and one coat of red oxide painting of steel work. Note: 1. Excavation and concrete work will be paid separately. 2. Rail shall be made available within 250 metres	MT	21.00	1909.58	40101.18

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

		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.				
78	211201	JCB Backhoe Loaders 3DX Plus or similar with minimum 1.10 cum bucket capacity	Hour	250.00	808.64	202160.00
79	211202	Hydra or similar tyre mounted Pick-n-Carry crane of 12T capacity for misc. works of handling of material	Hour	250.00	940.74	235185.00
80	211203	Tractor with Trolley for local transportation or other misc. works.	Hour	350.00	230.79	80776.50
		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.				
81	022011(022020)	Extra over item nos. 022011 to 022014 for executing the work under water and/or liquid mud to compensate all additional arrangements including pumping out water as required. Note: The extra percentage rate is applicable only for the quantity of work executed under water. [RATE = 20%]	cum	5053.02	42.07	212580.55
					Total	374592227.11
Schedule	Schedule B-for Structural Steel Work: Items as per ER USSOR 2021					
Item- 1	Schedule B-Schedule B (Items as per ER USSOR 2021) for Structural Steel Work					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
		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%				
1	041011	Plate Girder/Semi Through Girder/Composite Girder (Steel Work)	MT	1555.14	130558.37	203036543.52
2	041012	Open web Girder	MT	2470.00	159937.97	395046785.90
3	041013	Extra for using steel conforming to Grade Designation E350 instead of Grade Designation E250 of Quality "B0" as per IS: 2062	MT	4025.14	4388.84	17665695.44

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

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	42151.33	229.03	9653919.11
		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	On new girder during fabrication	Sqm	49171.36	787.40	38717528.86
6	041050	Providing and fixing railing used in rows for footpath or anti-crash barrier railing with B class G.I. pipe 65/50 mm nominal dia including cost of M.S. angle and channels in vertical posts, welding / bolting, priming painting with one coat ready mix Zinc Chromate conforming to IS:104 with DFT of 25-30Microns, followed by one coat of Zinc Chrome red oxide conforming to IS:2074 with DFT of 25 Microns with all material, labour, T&P as a complete job. Note: Cost of painting shall be paid extra under relevant item.	Kg	40108.79	107.80	4323727.56
		Providing and fixing various size HTS holding down bolts conforming to relevant Codes/Specification in concrete column or in other structures with proper nuts, bolts, washers/plates, grouting of holes with cement or epoxy concrete with all material, labour, T&P as a complete job.				
7	041072	With epoxy concrete grouting.	Kg	2700.00	135.37	365499.00
8	041080	Supplying, Fabricating and fixing access ladders, inspection platforms, Trolley refuges etc., on bridges with structural steel conforming to IS:2062 including welding / bolting, priming painting with one coat of ready mixed paint of Zinc Chromate (IS:104) with DFT of 25-30 microns followed by one coat of Zinc Chrome Red Oxide (IS:2074) with DFT of 25 microns with all material, labour, T&P as a complete job. Note: Painting shall be paid separately under relevant item.	MT	23.00	108086.64	2485992.72
		Design, supply, fitting and fixing in position true to line and level POT-PTFE bearing of 300MT Capacity, consisting of a metal piston supported by a disc or un reinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel / fabricated structural steel, metal and elastomer elements complete as per IS:2062, IS:1030, AISI:304, AISI:316, IS:6911, BS:3784, IS:3400, IS:226, BS-5400, Bridge Code and as per approved drawing and Technical Specifications. The design of the bearings shall be submitted by the manufacturers / contractor and got approved from Railway before fixing. Test report after inspection of the bearings shall be submitted and got approved before the materials are lifted from the manufacturer premises.				
9	041121	POT-cum -PTFE Bearing (Free end)	Each	5.00	113399.56	566997.80
10	041122	POT Bearing-Fixed Type	Each	5.00	109305.47	546527.35
11	041123	POT-cum -PTFE Guided (L)Bearing	Each	5.00	153658.10	768290.50
12	041124	POT-cum -PTFE Guided (T)Bearing	Each	5.00	146152.27	730761.35

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

13	041190	Supply & applying two coats of bitumen emulsion of Grade RS-1, conforming to IS:8887 on the top surface of concrete deck slab (New bridges) @ 1.70 kg/sqm after cleaning surface with all materials, labour, tools and plants, equipment etc. complete.	Sqm	21657.75	84.17	1822932.82
14	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	353.91	121349.03	42946635.21
					Total	718677837.14
Schedule	Schedule C-Items as per CPWD DSR-2021					
Item- 1	Items as per CPWD DSR-2021					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	0030	Generator(Diesel/Petrol oe Electric)250KVA with fuel electricity cost	Day	30.00	3000.00	90000.00
2	0040	Air compressor 250cfm with two leads for pneumatic cutters jack /hammers	Day	30.00	1600.00	48000.00
3	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road rollerincluding making good the undulations etc. and re-rolling the sub grade and disposal of surplus earthwith lead upto 50 metres.	Sqm	6150.00	180.50	1110075.00
4	16.2	"Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density)."	cum	12500.00	20.55	256875.00
5	16.9	Scarifying metallad (water-bound) road surface including disposal of rubbish, lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.	Sqm	22800.00	27.55	628140.00
6	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	6000.00	253.95	1523700.00
7	2.27	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	1400.00	2161.20	3025680.00
8	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood,trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.	Sqm	2100.00	14.50	30450.00
9	15.31	Dismantling tiled roofing with battens,boarding etc. complete including of serviceable material and disposal of unserviceable material with in 50 metres lead.	Sqm	200.00	173.15	34630.00
10	15.58	Demolishing R.C.C. work by mechanical means and stockpiling at designated locations and disposal of dismantled materials up to a lead of 1 kilometre, stacking serviceable and unserviceable material separately including cutting reinforcement bars.	cum	700.00	2328.55	1629985.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

11	15.59	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.	cum	175.00	347.90	60882.50
12	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	1050.00	219.35	230317.50
13	16.25	Surface dressing on new surface with paving bitumen of grade VG -10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity etc. complete:	Sqm	17507.10	178.15	3118889.86
14	16.27	"Surface dressing on old surface with hot bitumen of grade VG - 10 of approved quality using 1.95 kg of bitumen per sqm with 1.50 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity, etc. complete."	Sqm	2450.00	137.85	337732.50
15	16.50	Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact polystyrene) or ABS having electronically welded micro- prismatic lens with abrasion resistant coating as approved by Engineer in charge. The glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 (+/-5) degrees to base .The reflective panels on both sides with at least 12 cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4 : 1973. The studs shall be fixed to the Road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge.	Each	16648.44	175.50	2921801.22
16	16.54	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge. 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	1923.96	10013.30	19265188.67
17	16.69	"Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge)."	cum	212.63	8613.55	1831499.14

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

18	16.75	"Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator , vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-incharge. (The panel shuttering work shall be paid for separately). (Note:- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/ recoverable separately)."	cum	210.00	8277.55	1738285.50
19	16.77	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material within all lifts and lead upto 1km (by mechanical means).	Sqm	2625.00	5.85	15356.25
20	16.79	Providing, laying ,spreading and compacting graded stone aggregate(size range 53mm to 0.075mm) to wet mix macadam (WMM) specification including premixing the material with water in OMC in for all leads & lifts,laying in uniform layers with mechanical paverfinisher in sub-base/base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in -charge.	cum	4509.42	2803.65	12642835.38
21	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 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. (Note :- One time payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the work)."	Metre	2200.00	2827.40	6220280.00
22	2.2.1	Earth work in rough excavation,banking excavated earth in layers not exceeding 20 cm in depth, breaking ciods,watering, rolling each layer with 1/2tonne roller or wooden or steel rammers, and rolling every 3rd and top most layer with power roller of minimum 8 tonnes and dressing up in embankments in roads, food banks, marginal banks and guide banks or filling up ground depression, lead up to 50 m and lift up to 1.5 m; All kinds of soil.	cum	9847.80	862.70	8495697.06

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

23	2.3.1	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with 1/2 tonne roller or wooden or steel rammers, and rolling every 3rd and top most layer with power roller of minimum 8 tonnes and dressing up in embankments in roads, flood banks, marginal banks and guide banks or filling up ground depression, lead up to 50 m and lift up to 1.5 m; All kinds of soil.	cum	3500.00	543.40	1901900.00
24	2.8.1	"Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m."	cum	6700.30	286.85	1921981.06
25	4.1.3	providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering-all works up to plinth level. 1:2:4(1Cement:2 coarse sand(zone-III) derived from natural sources:4 graded stone aggregate 20mm nominal size derived from natural sources)	cum	1220.53	7365.15	8989386.53
26	5.1.2	1:1.5:3(1Cement:1.5 coarse sand(zone-III) derived from natural sources:3 graded stone aggregate 20mm nominal size derived from natural sources)	cum	326.03	8364.20	2726980.13
27	5.9.1	Centering and shuttering including strutting, propping etc. and removal of form for. Foundations, footing, bases of columns, etc for mass concrete.	Sqm	1489.60	307.95	458722.32
28	5.9.2	Centering and shuttering including strutting, propping etc. and removal of form for. Walls(any thickness) including attached pilaster, buutteresses etc.	Sqm	2436.00	669.55	1631023.80
29	5.9.3	Centering and shuttering including strutting, propping etc. and removal of form for. Suspended floors, roofs landings, balconies and access platform.	Sqm	831.60	765.55	636631.38
30	5.9.5	Centering and shuttering including strutting, propping etc. and removal of form for. Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sqm	862.68	608.35	524811.38
31	5.9.6	Centering and shuttering including strutting, propping etc. and removal of form for. Columns, Pillars, Piers, Abutments, Posts and Struts.	Sqm	1834.56	804.25	1475444.88
32	5.9.7	Centering and shuttering including strutting, propping etc. and removal of form for. Stairs (excluding landing) except spiral staircases.	Sqm	1731.08	657.75	1138617.87
33	6.1.2	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	35.00	6658.25	233038.75
34	13.1.2	CEMENT PLASTER (IN FINE SAND) 12 mm cement plaster of mix : 1:6 (1 cement: 6 fine sand)	Sqm	4200.00	282.00	1184400.00
35	15.7.3	Demolishing Brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge In Lime mortar	cum	175.00	701.95	122841.25
36	15.7.4	Demolishing Brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge In cement mortar	cum	525.00	1698.45	891686.25
37	2.28.1	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. All kinds of soil	Sqm	7000.00	28.15	197050.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

38	2.33.1	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material Beyond 30 cm girth upto and including 60 cm girth	Each	63.00	439.25	27672.75
39	2.33.2	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material Beyond 60 cm girth upto and including 120 cm girth	Each	38.00	1957.15	74371.70
40	2.33.3	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material Beyond 120 cm girth upto and including 240 cm girth	Each	22.00	9084.05	199849.10
41	2.33.4	Felling trees of the girth (measured at a height of 1 m above ground level), including cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material Above 240 cm girth	Each	6.00	18198.70	109192.20
42	10.25.2	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	Kg	15624.00	142.30	2223295.20
43	10.26.3	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer. G.I. pipes	Kg	19958.40	180.20	3596503.68
44	11.19.3	Chequered terrazo tiles 22 mm thick with graded marble chips of size up to 6 mm in floors, jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete, on 20 mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) : Dark shade pigment using ordinary cement	Sqm	2740.20	1240.75	3399903.15
45	12.12.2	Providing fixing ridge etc	Metre	250.00	444.75	111187.50
46	12.64.2	Alluminium Alloy steel roofing etc 0.71mm th.	Sqm	1000.00	1158.80	1158800.00
47	13.44.1	Finishing walls with water proofing cement paint of required shade. New work(two or more quotesapplied@ 3.84kg/10 sqm)	Sqm	81421.99	97.60	7946786.22
48	13.62.1	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade : Two or more coats on new work	Sqm	1305.18	191.40	249811.45
49	13.63.1	Painting with Aluminium paint of approved brand and manufacture to give an even shade : Two or more coats on new work	Sqm	4200.00	121.45	510090.00
50	15.12.1	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead : Of area 3 sq. metres and below	Each	350.00	302.70	105945.00
51	15.12.2	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead : Of area beyond 3 sq. Metres	Each	175.00	414.55	72546.25
52	15.17.1	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in: R.S. Joists	Kg	3500.00	2.80	9800.00
53	15.17.2	Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in: Channels, angles, tees and flats	Kg	3500.00	1.90	6650.00
54	15.28.1	Dismantling roofing including ridges,hips valleys and gutter etc. And stacking the material with in 50 metres leadof: G. S .Sheet.	Sqm	200.00	136.00	27200.00
55	15.28.2	Dismantling roofing including ridges,hips valleys and gutter etc. And stacking the material with in 50 metres leadof: Asbestos cement sheet.	Sqm	200.00	63.75	12750.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

56	16.30.1	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications : On W.B.M. @ 0.75 Kg / sqm	Sqm	6800.00	45.20	307360.00
57	16.32.1	2 cm premix carpet surfacing with 1.8 cum and 0.90 cum of stone chippings of 13.2 mm size and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately). "With paving Asphalt grade VG - 10 heated and then mixed with solvent at the rate of 70 grams per kg of asphalt"	Sqm	6107.50	189.25	1155844.38
58	16.37.1	Providing and laying bitumen mastic wearing course (as per specification) with industrial bitumen grade 85/25 conforming to IS: 702, preoared by using mastic cooker and laid to required level and slope, including providing anti skid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10cm centre to centre in both directions. pressed into surface prutruding imm to 4mm over mastic surface, including cleaning the surface, removal of debris etc. all complete.(considering bitumen using 10.2% as per MORTH specification). 25 mm thick. (Bridge and viaduct portion)	Sqm	15917.25	726.95	11571044.89
59	16.48.1	Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete. New work (Two or more coats)	Sqm	1797.42	239.95	431290.93
60	16.57.1	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge. 40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	cum	1816.47	10870.75	19746391.25

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

61	16.59.1	Manufacturing, supplying and fixing retro reflective sign boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bilingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm along with theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up to M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size, steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours).Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing , specification and direction of Engineer-in-charge. Mandatory/ Regulatory sign boards of 900 mm diametre with support length of 3750 mm	Each	175.00	5745.95	1005541.25
62	16.60.1	"Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-incharge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment)." Overhead inforamatory road signage	Sqm	210.00	5609.55	1178005.50
63	16.74.1	75 mm thick back filling for pitching including supplying of required materials and consolidation etc. complete with: Moorum	Sqm	1476.00	82.00	121032.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

64	16.78.1	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	cum	5319.56	2658.10	14139922.44
65	19.35.2	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. Complete 600 mm dia RCC pipes.	Metre	230.00	3051.55	701856.50
66	19.35.4	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. Complete 1000 mm dia RCC pipes	Metre	115.00	5980.10	687711.50
67	2.25(a)	Excavating supplying and filling of local earth(including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20cm in trenches,plinth ,side of foundation etc.complete.	cum	5500.00	368.65	2027575.00
68	16.30.2	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications : On bituminous surface @ 0.50 Kg / sqm	Sqm	22800.00	36.60	834480.00
69	5.33.1.1	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced concrete work; using coarse aggregate and fine aggregate derived from natural sources. Portland pozzolana/Ordinary Portland Slag cement, admixures in recomended proportions as per IS:9103 to accelerate/retard setting of concrete, to improve durability and workability without imparing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cosr of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the grades of concrete. Note ; extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 10% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. All works up to plinth level. Concrete of M25 grade with minimum cement content of 330kg/cum	cum	568.26	7997.30	4544545.70

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

70	5.33.2.1	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced concrete work; using coarse aggregate and fine aggregate derived from natural sources. Portland pozzolana/Ordinary Portland Slag cement, admixures in recomended proportions as per IS:9103 to accelerate/retard setting of concrete, to improve durability and workability without imparing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cosr of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the grades of concrete. Note ; extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. All works above plinth level up to floor V level. Concrete of M25 grade with minimum cement content of 330kg/cum	cum	814.91	10080.15	8214415.04
71	5.33.2.3	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced concrete work; using coarse aggregate and fine aggregate derived from natural sources. Portland pozzolana/Ordinary Portland Slag cement, admixures in recomended proportions as per IS:9103 to accelerate/retard setting of concrete, to improve durability and workability without imparing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cosr of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge; for the grades of concrete. Note ; extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement. All works above plinth level up to floor V level. Concrete of M35 grade with minimum cement content of 350kg/cum (Retaining wall)	cum	588.00	10221.70	6010359.60
					Total	181810546.36
Schedule	Schedule D-Non Scheduled Items					
Item- 1	Schedule D (NS Items) (Item Directory - Not Applicable)					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

1	NS-1	<p>Providing and laying in position machine batched, machine mixed and machine vibrated design Mix reinforced Cement concrete M-35 / M-40 /M-45 grade (cast in situ) Using 20 mm graded Crushed stone aggregate and coarse sand of approved quality in RCC deck slab laid to required camber including end cantilever, RCC crash barrier, RCC railing etc. including pumping of concrete to site of laying, finishing, using admixtures in recommended proportions (as per IS: 9103), if approved in mix design to accelerate or retard setting of concrete, improve Workability without impairing strength and durability with all contractor's labor, tools & plants material (excluding cost of cement reinforcement and shuttering) Fuel consumables machinery, loading unloading, lead and lift complete in all respect as a complete jobs per specifications & as directed by engineer. "Notes- (i) Payment for cement & reinforcement shall be paid extra as per relevant schedules. (ii) The concrete is to be poured at the approved safe height and maintaining safe distance from live OHE wires carrying 25KV AC traction (on IR Track) to cast monolithically to the required level as per approved drawing over already launched main steel girder with proper joining arrangement through shear connector. (iii) The necessary shuttering arrangement has to be planned using already launched main steel girder. No support from ground will be allowed for this purpose .The rates includes for working under running traffic condition, all leads, lifts, ascents, descents, all other obstructions etc. (iv) The contractor shall make adequate arrangement below the girder to avoid falling of anything over the track on OHE during concreting of the slab. The rate includes design and provision of all temporary works and to ensure safety of running traffic at all times."</p>	cum	1381.22	10504.56	14509108.36
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**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

2	NS-2	<p>"Reinforced Earth Structures Providing and laying M-35 grade (using 43/53 grade ordinary Portland Cement) precast concrete facia wall (Area of each facia panel shall not be less than 1.5 sqm. Height shall not be less than 900mm, min 180mm thick) including design and getting the approval for reinforced soil wall system,excavation,providing its""levelling pad"" using M-15 grade concrete,TMT reinforcing steel in precast facia panels with form liner finishes as per the design requirements. PVC drainage pipes, 200mm precast cover facia for drainage pipes, joint filler, as per approved drawings, logo panels, , geo-textile filter fabric for warpping pipes etc. including filter media (500mm thick) behind the facia wall, drain sleeve in lower panels as per drawings and design, supplying and laying in position the specified and approved Geo-Grid soil reinforcement including cutting in required length, placing in position and connecting with the precast facia panels as per the design and drawings and direction of the Engineer-in-Charge all complete with all materials, labour, lead and lift ,plants,machinery, taxes royalty etc. complete. Item to include all incidental work required to complete the job as per drawing and specifications. The coping beam is not permitted and the top panels shall be casted in the inclined profile as per approved shop drawings.The cost of backfill between reinforced soil wall panels (except filter media) is not included in this item and shall be paid for separately , any ground improvement works for bearing capacity enhancement of ground (if required) shall also be included in the quoted rates. reinforcement used in precast facia panels is also included in the rates of this item." "NOTES: (A) The scope of work in the above item includes: (a) All initial layout and alignment of reinforced soil wall after site clearance and excavation in all type of soils, existing road pavement including BM, AC, WMM, WBM etc. for the construction of Reinforced Soil wall structure including all componenets like reinforcing element, Precast panel, etc. dismantling of footpath, planters, etc. as per the directions of Engineer-in-Charge and preparing designs and shop drawings giving levels etc. The work shall be started only after approval of the design and shop drawings by Engineer-in-Charge. (b) Approval of the facia patterns on panels including name of clients etc. from the Engineer-in-Charge. Nothing extra shall be payable for mock ups and trials of the facia panels . The approved mock up facia shall be protected from any damage during execution of the work, this will form part of landscaping works. (c) Filter media min. 500mm thick with stone crushed aggregates as per approved drawings from the bed level to the top level of the embankment of reinforced earth structure and behind the facia panels for proper drainage as per approved drawings and particular specifications. (d) Providing and placing 200 mm dia HDPE perforated Pipe (perforation at top half only) wrapped in non woven geotextile and filled with filter media, as per drawings for the drainage of seepage water from the fill between RS walls. (e) All transportation, erection in position alignment and all incidental works as per approved shop drawings to the satisfaction of Engineer-in-Charge."</p>	Sqm	14845.75	7561.97	112263116.13
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**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

3	NS-3	"Providing, placing and compacting approved backfill material With Sand in layers as per approved methodology for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) Wall panels as per approved drawings and particular specifications. Item to include 500 mm thick sub-grade construction as per specifications with CBR under soaked conditions not less than 6%. All incidental work required to complete the job shall be included in the quoted rates. The item shall be measured and paid for the finished volume of backfill and subgrade placed in position excluding the volume of filter media at behind the RS walls. Notes. 1.The specification and construction details to be adopted shall be as per section 3100 of MoRTH Specification."	cum	34924.15	2639.75	92191024.96
4	NS-4	Providing and laying in position machine batched, machine mixed and machine vibrated design Mix Cement concrete M-40 /M-45 grade (cast in situ / Precast including hoisting and fixing in place as per drawings and specifications) Using 20 mm graded Crushed stone aggregate and coarse sand of approved quality in RCC deck slab laid to required camber including end cantilever, RCC crash barrier,Friction slab, RCC railing etc. including pumping of concrete to site of laying, finishing, using admixtures in recommended proportions (as per IS: 9103), if approved in mix design to accelerate or retard setting of concrete, improve Workability without impairing strength and durability with all contractor's labor, tools & plants material (excluding cost of shutering, cement & reinforcement which will be paid separatly under relevant Schedule), Fuel consumables machinery, loading unloading, lead and lift complete in all respect as a complete jobs as per specification & as directed by engineer.	cum	13636.11	5385.58	73438361.29
5	NS-5	Painting Two Coats on New Concrete surfaces (crash barrier and curb stone) after finishing the surface with synthetic enamel paint in all shades on new concrete surfaces.	Sqrm	20766.66	93.73	1946459.04

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

6	NS-6	<p>"Providing and fixing 70 mm thick precast reinforced cement concrete panels of required size with design mixed concrete of grade M40 using 20mm graded crushed stone aggregate and coarse sand of approved quality on bottom cross beam of bow string girder as shuttering of deck slab including pumping of concrete to site of laying finishing, using admixtures in recommended proportions(as per IS:9103), if approved in mix design to accelerate or retard setting of concrete, to improve workability with out impairing strength and durability with all contractors labour,tools and plants material (excluding cement & reinforcement) shuttering,fuel consumables.machinery,loading,unloading,lead and lift complete in all respects as a complete job as per drawings, specification and as directed by Engineer in-charge.. Notes:- (i) Payment for cement and reinforcement shall be paid extra as per relevant USSOR Item included in the relevant schedule.(ii) The precast reinforced cement concrete panels are to be fixed at the approved safe height and distance from the OHE wires carrying 25 KV AC traction (on IR Track) on already launched main steel girder.No support from ground will be allowed for this purpose.The rates includes for working under running condition,all leads lifts ,ascends,descends all other obstructions etc.(iii)The contractor shall make adequate arrangement below the girders to avoid falling of anything/precast panels over the track during fixing of precast reinforced cement concrete panels. The rate also includes design and provisions of all temporary arrangement and submission of detailed design and drawing for temporary works for approval and to ensure safety of running traffic at all times."</p>	Sqm	175.00	617.18	108006.50
7	NS-7	<p>Supplying, fabrication & fixing in position BRC protection screen with MS angle frame, expanded metal (XPM), GI Sheet of 16 gauge, J Bolts etc of approved Railway design with two coats of aluminium paints of approved manufacturer as per drawing no. RDSO/ETI/C/0068 with all contractor's labour, tools & plants, material, fuel, consumables,machinery, loading, unloading, lead & lift complete in all respect as a complete job as per specification & as directed by Engineer</p>	Kg	21754.08	127.89	2782129.29
8	NS-8	<p>Providing and fixing hand rail over the crash barrier consisting of 16 mm MS base plate, embedded with 16 mm dia welded lugs,16 mm MS vertical plates etc. as per specifications and drawing enclosed with the tender document. All the railing components as mentioned above shall be painted with approved colour shade as per direction of Engineer-in-Charge including all primers and paints as per specifications. The thickness of plates are shown in the drawing. Pipe to be 65mm diameter (NB) (class B) G I pipe with a weight not less than 6.5 kg/m and conforming to IS: 1161-1979. Item to include all incidental works required to complete the work as per drawings and as directed by the Engineer-in-Charge. Measurement shall be made for all the material in term of length of Pipe.</p>	Metre	9455.66	2154.30	20370328.34

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

9	NS-9	Supplying and fixing 25mm dia. And 200mm long Stud shear connector with all contractor's labour,tools and plants, material, fuel, consumables, machinery, loading unloading,lead &lift complete in all respect as acomplete job asper specifications&as directed by Engineer,Stud shear connectors and ceramic ferrules shall confirm to TYPESD1/UF as per BS EN ISO13918-2008 and its Mechanical properties shall be as per ISO 6892/BS EN ISO 13918-D7 as per BS EN ISO 13918-2008.Welding shall be done by "Drawn Arc Stud welding with ceramic Ferrule"technique.	Each	89280.00	295.65	26395632.00
10	NS-10	"Deployment of adequate traffic marshals for day and night to guide and to control road traffic at intersection and traffic diversions to the entire satisfaction of local traffic police till the completion of work.Note:- The Traffic marshals should be familiar with traffic rules and regulations. Payment for this item shall be made monthly in proportion to the quantum of viaduct work executed and deploying adequate resources for the traffic management to the entire satisfaction of Engineer and local traffic police."	Man-Days	8400.00	815.49	6850116.00
11	NS-11	Extra over item no 041010/041012/041011 of Sch B if Launching and Erection of Steel girder spans, including its components on running line /Running electrified line / under block period with the help of road crane of required capacity as per Railway's approved drawings with other ancillary steel structures fixed to the girder where necessary in proper level and alignment and as per technical specifications.	MT	2854.33	3556.00	10149997.48
12	NS-12	Empty boring measured from working platform level to cut-off level for 1200 mm dia bored piles for which guide casing may be required for driving and withdrawal and casting complete inall respect.	Metre	455.00	1902.64	865701.20
13	NS-13	" Monthly Basis Cab & Taxi Hiring Services- 1(a) Vehicle Type :AC SUV (b) Type of Car: (Please select at least 03 options): AC-SUV (Maruti Suzuki Ertiga, Mahindra XUV 500, Mahindra Scorpio, Mahindra Balero, Tavera, Sumo Grand or similiar type). 2. Usage Variient: 2500 Km X 320 Hours 3. KM Travelled: Upto 25,000 Kms 4. Type of Service: Outstation 5. Year of Vehicle Model: 2022,2023,2024"	Vehicle-Month	36.00	75559.47	2720140.92
14	NS-14	"Under Ground Mapping by GPR Survey: Existing utiliy structures information by using Ground Penetrating Radar (GPR) Survey and other Sub-surface Utility Engineering Methods in various locations as instructed by engineer site incharge along the ROB alignment to detect all buried structures and buried utilities like water pipeline, other pipe lines, sewerage line, electric cable (both HT & LT), telecom cables, fuel pipe lines etc. with depth to the top of various utilities detected underground within 6m depth or below and for an width of 50 m to 100m as required with all men and machineries complete. Report shall be submitted in PDF, JPEG, AutoCAD, KMZ and GIS Route Map as per requirement as specified by the Engineer-in -charge. Works to be done as per relevant code of Subsurface Utility suiting Indian conditions and as per special conditions at Annexure-B. Rate should be inclusive of GST and ali other applicable taxes."	Kilometre	7.00	158086.04	1106602.28
15	NS-15	Design,supply and execution of Hand painted works (Code:HP), both internal and external, with approved makes of paint, including preperation of surface like putty, plaster,cleaning, trowel etc.And also including all accessories, scaffolding,saftey harnesses etc. complete all respect as per direction of Engineer-in-charge.	Sqm	270.00	3744.00	1010880.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

16	NS-16	Supply of labour/Khalasi for any kind of work as per direction of Engineer - in - Charge. All safety equipments/tools/plants etc. necessary for the work will be made available at site including First Aid box by the contr	Day	1000.00	594.01	594010.00
					Total	367301613.79
Schedule	Schedule E-For Supply & use of Cement: Item as per ER USSOR 2021					
Item- 1	Schedule E-Schedule E (Item as per ER USSOR 2021) for Supply & use of Cement					
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	11530.21	7177.47	82757736.37
2	025072	Ordinary Portland Cement 53 grade of approved brands/makes	MT	11068.21	7686.17	85072143.66
					Total	167829880.03
Schedule	Schedule F-Schedule F (Item as per ER USSOR 2021) for Reinforcement Steel FE-500 D					
Item- 1	Schedule F-Schedule F (Item as per ER USSOR 2021) for Reinforcement Steel FE-500 D					
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	8003342.07	98.07	784887756.80
					Total	784887756.80
Schedule	Schedule G-Electrical (General) work					
Item- 1	Electrical (General) work					
S No.	Item No	Description of Item	Unit	Qty	Rate	Amount
1	1	Supply of outdoor type 90 Watt LED street light luminaries with BIS certified driver and luminare, operating voltage of 140-270 Volt having industrial grade constant current driver (minimum driver efficiency of 85%), ingress protection of IP66 (or better), impact protection of IK07 (or better), minimum system lumen efficacy of 100Lm/W (or higher), LED life of 50000 burning hours (or greater), pressure die cast aluminium housing, color temperature of 5700K, CRI>=70, THD<=20%, PF>=0.95, SPD>=4KV with all accessories.	Numbers	270.00	5313.19	1434561.30
2	2	Fixing, connection, testing and commissioning of outdoor type 90 Watt LED street light luminaries with BIS certified driver and luminare, operating voltage of 140-270 Volt having industrial grade constant current driver (minimum driver efficiency of 85%), ingress protection of IP66 (or better), impact protection of IK07 (or better), minimum system lumen efficacy of 100Lm/W (or higher), LED life of 50000 burning hours (or greater), pressure die cast aluminium housing, color temperature of 5700K, CRI>=70, THD<=20%, PF>=0.95, SPD>=4KV with all accessories for erection of the same.	Numbers	270.00	711.37	192069.90
3	3	Supply of Schematic Diagram in original along with 06 copies on A-0 papers of different locations showing super imposition of cable route, HT/ LT panels, transformers, location of tubular poles and all other electrical items and works.	Set	5.00	6645.64	33228.20
4	4	HT/ LT cable trenching in underground by Digging earth, protection of the cable with sand and brick and filling with earth as per CEE/E.Rly's Drg. No.: E4 GPST/033/87.	Metre	500.00	206.06	103030.00
5	5	Supply of 50 mm dia ISI marked heavy duty rigid PVC pipe in wall/ underground by cutting trench/ in wall.	Metre	7500.00	146.73	1100475.00
6	6	Laying of 50 mm dia ISI marked heavy duty rigid PVC pipe in wall/ underground by cutting trench/ in wall.	Metre	7500.00	15.92	119400.00
7	7	Supply of 50mm dia medium duty GI pipe conforming to IS:1239 (Part-I) underground by cutting trench.	Metre	500.00	334.16	167080.00

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

8	8	Laying of 50mm dia medium duty GI pipe confirming to IS:1239 (Part-I) underground by cutting trench.	Metre	500.00	35.04	17520.00
9	9	Supply of HDPE pipe 75mm PN-60 (6.0 kgf/sq.cm.) thickness as per IS: 4984:1995	Metre	500.00	252.61	126305.00
10	10	Laying by boring method, under the Railway track HDPE pipe 75mm PN-60 (6.0 kgf/sq.cm.) thickness as per IS: 4984:1995: Erection	Metre	500.00	320.21	160105.00
11	11	Laying of cable through trench, GI & HDPE pipe, PVC pipe, (FRP) cable tray, cable duct and on wall surface with necessary clamping arrangements etc.	Metre	9500.00	16.78	159410.00
12	12	Drawing of cable through structure, shed etc. with suitable clamping arrangement.	Metre	1000.00	54.02	54020.00
13	13	Supply and installation of cable route marker slab of size 1.2mtr. x 0.45mtr. x 0.075mtr. with RCC 1:1.5:3 along with reinforcement 8 mm. dia. (Tor) rod @ 100 mm. center to center in both direction along with lettering inscribed on RCC as directed by the site in-charge complete in all respect.	Numbers	50.00	368.25	18412.50
14	14	Supply and fixing of GI fabricated 4-way cable terminal box of size 250 mm. x 200 mm. x 100 mm., 2 mm. thick.	Numbers	320.00	791.28	253209.60
15	15	"Supply and erection of LT cable gland with alluminium socket jointing of following sizes: 4 core (16-35) sq.mm."	Numbers	540.00	271.93	146842.20
16	16	"Supply and erection of LT cable gland with alluminium socket jointing of following sizes: 4 core (50-95) sq.mm"	Numbers	40.00	361.55	14462.00
17	17	Supply and erection of heat shrink straight through LT cable jointing kits of following sizes: 4 core (16-35) sq.mm.	Numbers	40.00	1261.85	50474.00
18	18	Supply and erection of heat shrink straight through LT cable jointing kits of following sizes: 4 core (50-95) sq.mm.	Numbers	20.00	1572.42	31448.40
19	19	Supply, installation of medium duty GI earth pipe 50mm dia, 3 mtr. Long, 3.65 mm thick (9 SWG) as per IS: 1239 (Part-I) including connection with 8 SWG G.I. wire	Numbers	60.00	1210.26	72615.60
20	20	Supply of G.I. strip of size 40 mm x 6mm (thick) and fixing the same with the walls of building by grouting of suitable size bolts with nuts at 450 mm interval for earthing with necessary connection. G.I. strip to be separated from the wall with provision of suitable size insulator with the bolts..	Metre	9000.00	258.24	2324160.00
21	21	Supply of GI tubular pole of 7 mtr. High 85 Kg. weight with single/double arm bracket, Base Plate (225x225x12mm, with hole for foundation bolts), 4nos. foundation bolts (25mm dia, 700mm length) complete including wiring of light point with 2 Nos. PVC single core copper wire 2.5 sq mm 1100V along with 4 pole (copper) junction box at the top/ inbuilt as per site condition.	Numbers	270.00	11713.26	3162580.20
22	22	Erection of GI tubular pole of 7 mtr. High 85 Kg. weight with single/double arm bracket, Base Plate (225x225x12mm, with hole for foundation bolts), 4nos. foundation bolts (25mm dia, 700mm length) complete including wiring of light point with 2 Nos. PVC single core copper wire 2.5 sq mm 1100V along with 4 pole (copper) junction box at the top/ inbuilt as per site condition. Erection cost is excluding cost of foundation of pole.	Numbers	270.00	1704.78	460290.60
23	23	Concrete foundation & erection of GI octagonal pole along with grouting of supplied 04 nos. foundation bolts as per Sr.DEE/G/SDAH's Drg. No.: SDAH/G/SS/115, dated: 23.10.2009. Concrete used should be 1:1:2 (M-25 type).	Numbers	20.00	5403.41	108068.20
24	24	Dismantling of pole including light fitting etc. and handing over the same to the custody of concerned department as per advice of the competent authority.	Numbers	20.00	1518.02	30360.40

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

25	25	Supply and installation of GI standard Earth Pipe, 40mm dia, 2000 mm long (Make- Jindal/Bansal/Nezone), medium gauge complete with provision of Earth pit and there connection with 4 SWG GI wire as per Sr.DEE (G)/SDAH's Drg no. SDAH/G/MISC/47 dt: 21.11.2018 (Alt-I)	Numbers	20.00	1068.11	21362.20
26	26	"Supply of indoor/ outdoor type, IEC 61439-1&2 compliant fully type tested LT MS Panel with production of type test and design verification certificate from OEM (ABB, L&T, Legrand, Schneider, Siemens) consisting of the following. i) MCCB 125A, 4Pole, 36KA, 415V, 50Hz - 3Nos as incomer/ bus coupler. ii) MCCB 63A, 4Pole, 36KA, 415V, 50Hz - 6Nos as outgoing feeder. iii) Timer with contactor of 40A, 4 pole with by pass arrangement - 2Sets. iv) 4Pole copper busbar as per IEC 61439 design - 1Set v) Digital type multi-functional metering system such as energy meter, trivector meter, Voltmeter, Ammeter etc. with individual ON/ OFF LED indication and all other accessories - 2Sets "	Set	5.00	245517.48	1227587.40
27	27	"Installation, connection, testing & commissioning of indoor/ outdoor type, IEC 61439-1&2 compliant fully type tested LT MS Panel with production of type test and design verification certificate from OEM (ABB, L&T, Legrand, Schneider, Siemens) consisting of the following. i) MCCB 125A, 4Pole, 36KA, 415V, 50Hz - 3Nos as incomer/ bus coupler. ii) MCCB 63A, 4Pole, 36KA, 415V, 50Hz - 6Nos as outgoing feeder. iii) Timer with contactor of 40A, 4 pole with by pass arrangement - 2Sets. iv) 4Pole copper busbar as per IEC 61439 design - 1Set v) Digital type multi-functional metering system such as energy meter, trivector meter, Voltmeter, Ammeter etc. with individual ON/ OFF LED indication and all other accessories - 2Sets "	Set	5.00	22156.73	110783.65
28	28	Supply and delivery at site 4 Core x 70 Sq. mm cable with Aluminium Conductor 650/1100V conforming to IS : 7098 pt.I 1988 .	Metre	1250.00	400.00	500000.00
29	29	Supply and delivery at site 4 Core x 35 Sq. mm cable with Aluminium Conductor 650/1100V conforming to IS : 7098 pt.I 1988 .	Metre	10000.00	313.00	3130000.00
					Total	15329861.35

4. ELIGIBILITY CONDITIONS

Important : All documents uploaded and remarks / confirmation entered by the bidders against any eligibility condition shall be opened as part of technical bid only

Standard Financial Criteria

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	The tenderer must have minimum average annual contractual turnover of V/N or V whichever is less; where, V= Advertised value of the tender in crores of Rupees N= Number of years prescribed for completion of work for which bids have been invited. The average annual contractual turnover shall be calculated as an average of "total contractual payments" in the previous three financial years, as per the audited balance sheet. However, in case balance sheet of the previous year is yet to be prepared/ audited, the audited balance sheet of the fourth previous year shall be considered for calculating average annual contractual turnover. The tenderers shall submit requisite information as per Form 2B, along with copies of Audited Balance Sheets duly certified by the Chartered Accountant/ Certificate from Chartered Accountant duly supported by Audited Balance Sheet.	No	No	Allowed (Mandatory)

Special Financial Criteria

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
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**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

1	Bid Capacity For tenders having advertised value more than Rs 20 crore wherein eligibility criteria includes bid capacity also, the tenderer will be qualified only if its available bid capacity is equal to or more than the total bid value of the present tender. The available bid capacity shall be calculated as under: Available Bid Capacity = [A x N x 2] - 0.33xNx B Where, A = Maximum value of construction works executed and payment received in any one of the previous three financial years or the current financial year (up to date of inviting tender), taking into account the completed as well as works in progress. N= Number of years prescribed for completion of work for which bids has been invited. B = Existing commitments and balance amount of ongoing works with tenderer as per Form No. 2C for statement of all works in progress and also the works which are awarded to tenderer but yet not started up to the date of inviting of tender.	No	No	Allowed (Mandatory)
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Standard Technical Criteria

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	The tenderer /JV firm or Lead Member of JV firm must have satisfactorily completed or substantially completed any one of the following categories of work(s) during last 07 (seven) years, ending last day of month previous to the one in which tender is invited: (i) Three similar works each costing not less than the amount equal to 30% of advertised value of the tender excluding structural steel component of the advertised tender value i.e. Rs.56,67,95,921/-, or (ii) Two similar works each costing not less than the amount equal to 40% of advertised value of the tender excluding structural steel component of the advertised tender i.e. Rs.75,57,27,895/-, or (iii) One similar work costing not less than the amount equal to 60% of advertised value of the tender excluding structural steel component of the advertised tender i.e. Rs.1,13,35,91,843/- and The tenderer /JV firm or any Member of JV firm must have satisfactorily completed work of component of supply, fabrication and erection of open web/ Plate steel girder/ Camel Back girder for Railway / Metro Railway/ Road Bridge/FOB over Railway lines in any one of the following categories of works during last 07 (seven) years, ending last day of month previous to the one in which tender is invited: (i) Three similar works each costing not less than the amount equal to 30% value of structural steel component value of the advertised tender i.e. Rs.21,54,77,323/-, or (ii) Two similar works each costing not less than the amount equal to 40% value of structural steel component value of the advertised tender i.e. Rs.28,73,03,098/-, or (iii) One similar work costing not less than the amount equal to 60% value of structural steel component value of the advertised tender i.e. Rs.43,09,54,646/-	No	No	Allowed (Mandatory)
1.1	Defination of Similar Work :- 1. Railway Bridge having superstructure of PSC and Steel on at least one span, OR 2. Viaduct of Railway having superstructure of PSC and Steel on at least one span, OR 3. Viaduct of Metro Railway having superstructure of PSC and Steel on at least one span, OR 4. Bridge of Metro Railway having superstructure of PSC and Steel on at least one span, OR 5. ROB of Railway Portion having superstructure of PSC and Steel on at least one span, OR 6. Approach Portion of ROB having superstructure of PSC and Steel on at least one span, OR 7. Flyover on Roads having superstructure of PSC and Steel on at least one span, OR 8. Foot Over Bridge over Railway Track.	No	No	Not Allowed

5. COMPLIANCE

Important : All documents uploaded and remarks / confirmation entered by the bidders against any compliance condition shall be opened as part of technical bid only.

Check Lst

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	Bid Security Document (in case of Bid Security submitted in the form of Bank Guarantee): Original instruments of BID SECURITY (Bank Guarantee) in sealed envelope to be dropped in Tender Box at Employer's office.	No	No	Not Allowed

Commercial-Compliance

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	Please enter the percentage of local content in the material being offered. Please enter 0 for fully imported items, and 100 for fully indigenous items. The definition and calculation of local content shall be in accordance with the Make in India policy as incorporated in the tender conditions.	No	Yes	Allowed (Optional)

Custom

S.No.	Description	Confirmation Required	Remarks Allowed	Documents Uploading
1	Documents to be enclosed with the TECHNICAL BID as per Clause1.3.2(b) of Part-I of Chapter-III of Tender Document	No	No	Not Allowed
1.1	Offer letter complete as per Form-1 of Tender Document	No	Yes	Allowed (Mandatory)
1.2	Tenderer's Technical credentials in accordance with Para 1.3.13 (i)(A)of Part-I, Chapter-III (Preamble & General Instructions to Tenderers): As per Form No. 2A of Tender Document	Yes	Yes	Allowed (Mandatory)

**EDFC FIELD UNIT-KOLKATA-CIVIL/EDFC
TENDER DOCUMENT**

Tender No: KKK-EN-ROB-CON-07LC

Closing Date/Time: 04/12/2024 15:00

1.3	Tenderer's Financial credentials in accordance with Para 1.3.13 (i)(B) of Part-I, Chapter-III (Preamble & General Instructions to Tenderers): As per Form No. 2B of Tender Document	Yes	Yes	Allowed (Mandatory)
1.4	Applicant's Party Information Form: As per Form 2D of tender Document	No	Yes	Allowed (Mandatory)
1.5	Certificates for authenticity of documents/ Format for Affidavit: As per Form 22 of Tender Document	Yes	Yes	Allowed (Mandatory)
1.6	Format of Integrity pact: As per Form 20 of Tender Document	Yes	Yes	Allowed (Mandatory)
1.7	Details of Earnest money in accordance with Para 1.3.8 of Part-I, Chapter-III (Preamble & General Instructions to Tenderers)	Yes	Yes	Allowed (Mandatory)
1.8	An undertaking that he is not blacklisted or debarred by Railways or any other Ministry or Department of Govt. of India from participation in tender on the date of opening of bids, either in individual capacity or as a member of the partnership firm or JV in which he was or is a partner/member. Concealment or wrong information in regard to above shall make the contract liable for determination under Clause 62 of the General Conditions of Contract.: As per Clause 1.3.6 of Part-I, Chapter-III (Preamble & General Instructions to Tenderers)	Yes	Yes	Allowed (Mandatory)
1.9	Documents to be Submitted Along with Tender as per Clause 1.3.6.2 of Part-I, Chapter-III (Preamble & General Instructions to Tenderers)	Yes	Yes	Allowed (Mandatory)
1.10	A copy of the tender papers including amendments duly signed and scanned or digitally signed by the tenderer on each and every page in token of his having studied the tender papers carefully shall be attached with the tender	Yes	Yes	Allowed (Mandatory)

6. Documents attached with tender

S.No.	Document Name	Document Description
1	TenderDocumentforConstructionof07ROBs.pdf	Tender Document
2	GADpfROBinLieuofLC1.pdf	GAD of ROB in lieu of LC 1
3	GADofROBinLieuofLC3.pdf	GAD of ROB in lieu of LC 3
4	GADofROBinLieuofLC4.pdf	GAD of ROB in lieu of LC 4
5	GADofROBinLieuofLC5.pdf	GAD of ROB in lieu of LC 5
6	GADofROBinLieuofLC6.pdf	GAD of ROB in lieu of LC 6
7	GADofROBinLieuofLC7.pdf	GAD of ROB in lieu of LC 7
8	GADofROBinLieuofLC125.pdf	GAD of ROB in lieu of LC 125

This tender complies with Public Procurement Policy (Make in India) Order 2017, dated 15/06/2017, issued by Department of Industrial Promotion and Policy, Ministry of Commerce, circulated vide Railway Board letter no. 2015/RS(G)/779/5 dated 03/08/2017 and 27/12/2017 and amendments/ revisions thereof.

As a Tender Inviting Authority, the undersigned has ensured that the issue of this tender does not violate provisions of GFR regarding procurement through GeM.

Signed By: JOY KARMAKAR

Designation : DYPM/Civil/Kolkata