



Tender No. MTC-EN-LC43-EDFC-ROB

For

Construction of 2 Lane ROB including approaches and LHS in lieu of level crossings for LC No. 43 at IR chainage 97/26-27 on Meerut City – Saharanpur section of Northern Railway near Khatauli Railway Station for Eastern Dedicated Freight Corridor.

**E-TENDER DOCUMENT
FINANCIAL BID
(PACKET-B)
August- 2020**


**Employer:
DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
Under
MINISTRY OF RAILWAYS**

**Office of General Manager/Co/Meerut /DFCCIL,
3rd Floor, Shree Balaji Complex, Plot No. C-2, Pocket-B, Sector -1,
Ved Vyas Puri, Meerut -250002**

**CORPORATE OFFICE: -
DFCCIL, 5th Floor, Pragati Maidan Metro Station Building Complex,
New Delhi-110001.**

GENERAL INFORMATION/DATA SHEET

TENDER NOTICE NO	MTC-EN-LC43-EDFC-ROB, DATE 25.08.2020
Name of the work	Construction of 2 Lane ROB including approaches and LHS in lieu of level crossings for LC No. 43 at IR chainage 97/26-27 on Meerut City – Saharanpur section of Northern Railway near Khatauli Railway Station for Eastern Dedicated Freight Corridor.
(a) Tender Value	Rs. 32,66,73,020/- (Rupees Thirty-two Crores Sixty-six Lakhs Seventy three Thousand twenty only)
(b) Completion Period	18 months
(c) Earnest Money Deposit	Rs 50,00,000/- (Rupees Fifty Lakhs only)
(d) Date of uploading of NIT & Bid documents (online publishing date)	On Date 25.08.2020
(e) Last date and Time of submission of Tender	On 25.09.2020 upto 15:00 hrs.
(f) Date & Time of Pre-Bid Meeting	N.A.
(g) Date and Time of Opening of Tender (Technical bid -Packet A)	On 25.09.2020 at 15:30 hrs.
(h) Validity of offer	120 days
(i) Retention Money / Security Deposit	5 % of Contract Value
(j) Performance Bank Guarantee	Performance Guarantee (PG) have to be submitted within 30(thirty) days from the date of issue of Letter of Acceptance (LOA), amounting to 5% of the contract value in the form as give in clause 16. (4) of GCC


 (S.K. Singh)
 Sr Dy GM/C/RCED.



SUMMARY OF PRICES

Sl. No.	Description of works	DFCCIL Updated Cost (Rs.)	Rates to be quoted in figures & words (Clearly mention above / below / at par on Total cost of each schedule given in column 3)
1	2	3	4
A.	USSOR Items as per NC Rly (As per Schedule -1)	20,94,53,542 % age (in figures) (In words)
B.	Non Schedule Items (As per Schedule -1)	11,72,19,478 % age (in figures) (In words)
	Total of Schedule (Rs.) :	32,66,73,020	

Notes:

- (i) The above prices are inclusive of all taxes, duties including GST etc.
- (ii) The tenderer should quote single percentage above/par/below for each schedule.
- (iii) If the uniform percentage quoted by the Tenderer does not clearly indicate whether the rates are above/at par/below the estimated rates then through sign convention it will be considered to be on plus side and evaluated accordingly.



SCHEDULE- X

(Schedule wise summation of Railway, Approach & LHS portion)

SUMMARY OF SCHEDULE OF PRICES

CONSTRUCTION OF RAILWAY PORTIONS OF ROB IN LIEU OF LC NOS. 43

Sl. No.	Description of works	Cost as per USSOR 2010 of NC Rly (Rs.)	DFCCIL updated %	DFCCIL updated cost (in ₹)	
				USSOR Items	NS Items
1	2	3	4	5	6
1.	Items as per Bridge Chapter No. 19, 20, 21 & 22 of USSOR 2010 of NC Rly				
(a).	Execution of all works as per Schedule-1(A) : Items 192011, 192030, 192040, 192072, 192091, 192061, 192063, 192064, 192065, 192080, 192103, 192104, 194010, 192107, 192112, 195020, 195031, 195032, 195033, 195034, 195038, 201011, 201014, 201051, 201061, 201062, 211071, 201072, 222160, 222170, 222180, 22290, 222280, 222290	4,90,03,257	45.21%	7,11,57,630	-
2.	Items other than Bridge Chapters				
(a).	Execution of all works as per Schedule-1(B) : Items 014110, 033061, 033130, 041011, 041012, 046010, 041015, 042010, 042011, 042013, 042014, 042015, 042016, 045016, 051018, 094042, 108162, 111042, 115090, 121061, 154010, 222170, 231041, 233012, 236071, 237010, 238021	1,36,10,782	133.94%	3,18,41,063	-
(b).	Execution of all works as per Schedule-1(E) : Items 033061_ Supply of Cement	2,38,60,200	28.50%	3,06,60,357	-
(c).	Execution of all works as per Schedule-1(F) : Items 33061_ Supply of Reinforcement	5,85,10,493	29.54%	7,57,94,492	-
3.	Non Schedule Item				
(a).	Execution of all works as per Schedule-1(C)	5,57,23,623	0.00%	-	5,57,23,623
(b).	Execution of all works as per Schedule-1(D) : Supply of structural steel	6,14,95,852	0.00%	-	6,14,95,852
	Total of Schedule (Rs.)			20,94,53,542	11,72,19,478
	Grand Total (Rs.)				32,66,73,020



Notes:

Rate of item payable to contractor shall be as per following example: -

For Schedule A1 (Updating factor is 1.4521, since 45.21% is above the rates of USSOR2010 of NC Railway), if the rate of any item of USSOR - 2010 of NC Railway / Schedule A is "X" and

- (a) If percentage quoted by the contractor for Schedule 1 is 5 % above (+5%), Rate payable to contractor = $(X) \times 1.4521 \times 1.05$
- (b) If percentage quoted by the contractor for Schedule 1 is 5 % below (-5%), Rate payable to contractor = $(X) \times 1.4521 \times 0.95$
- (c) If percentage quoted by the contractor for Schedule 1 is at par, Rate payable to contractor = $(X) \times 1.4521 \times 1.0$
- (d) Similarly Updating factor for Schedule B1, E1 and F1 is 2.3394, 1.285 and 1.2954.
- (e) In case of NS items i.e. Schedule C1 and D1, Updation factor shall be 1.



SCHEDULE- 1
DETAILS OF SCHEDULE OF PRICES

S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
SCHEDULE 'A' - (ITEMS AS PER USSOR 2010 OF NC RLY FOR BRIDGE CHAPTER)						
1	192010	Earthwork in excavation 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 upto 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				
(a)	192011	All kinds of soils	cum	24980.00	165.50	41,34,190.00
2	192030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer	cum	650.00	1,782.20	11,58,430.00
3	192040	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability without impairing strength and durability complete as per specifications and direction of the Engineer. Payment for cement, reinforcement and shuttering shall be paid extra.	cum	1920.00	1,694.28	32,53,017.60
4	192070	Providing, driving and installing Bored cast in-situ Reinforced Cement Concrete piles of specified diameter and length below pile cap in M-35 grade 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, excluding the cost of casing pipe but including the cost of shoe and length of pile to be embedded in pile cap etc. complete, concreting by machine batching, machine mixing, scaffolding, using Admixture in recommended proportion (as per IS:9103), if approved in design Mix, placing with tremie pipe, chipping off of pile top to remove laitance concrete above cut off level etc., pumping and bailing out water with all labour material complete including crossing of tracks if required, as per approved drawing, specification and direction of the Engineer. Length of the pile for payment shall be measured upto the bottom of pile cap excluding the mud mat. Payment for cement, casing pipe & reinforcement shall be paid extra.				
(a)	192072	1200mm diameter	meter	830	7,874.24	65,35,619.20
5	192090	Extra for chieselling in addition to boring of piles, if chieselling is resorted to in hard rock or big stone boulders larger than 30cm depth by any means, i.e. by chiesel or manual chiesel and hammer method.				
(a)	192091	1200mm diameter	meter	130	1,339.39	1,74,120.70



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
6	192060	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 10m from foundation top level, including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability without impairing strength and durability complete as per specifications and direction of the Engineer. Payment for cement, reinforcement & shuttering shall be paid extra.	cum			
(a)	192061	Abutment & Pier	cum	430.00	1,779.00	7,64,970.00
(b)	192063	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	cum	790.00	1,948.42	15,39,251.80
(c)	192064	Dirt wall/ ballast wall/Approach Slab at formation level	cum	50.00	2033.14	1,01,657.00
(d)	192065	Extra for every increase of 1m or part thereof in the height above 10m & 20m	cum / m height	60	28.17	1,690.20
7	194010	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of cast in-situ RCC box of size upto 5m (bigger inside dimension) including finishing, Admixtures in recommended proportions (as per IS:9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability, complete as per drawings and technical specifications as directed by Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra.	cum	2690	1,694.28	45,57,613.20
8	195020	Providing and applying two coats of coal tar or bitumen conforming to IS:3117-1965 on the top and sides of RCC box/slabs @ 1.70 kg/sqm after cleaning the surface with all labour and materials complete job as directed by the Engineer	sqm	1500	112.62	1,68,930.00
9	195030	Centring and shuttering including strutting, propping etc. and removal of form for :				
(a)	195031	RCC Raft Foundation & Pile cap	sqm	790.00	127.80	1,00,962.00
(b)	195032	Abutment, pier, wing walls and return walls	sqm	2490.00	214.70	5,34,603.00
(c)	195033	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	sqm	1480.00	213.09	3,15,373.20
(d)	195034	Approach slab at formation level, Dirt wall / ballast wall at formation level	sqm	3870.00	127.80	4,94,586.00
(e)	195038	In Bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component	sqm	8190.00	214.70	17,58,393.00
10	192080	Providing, fabricating and installing casing pipe for bored piles for all diameters with specified thickness of steel plate including all labour, materials, pumping and bailing out water wherever required, complete as per technical specifications as directed by Engineer. This will include the weight of plate only and no cognizance will be given for the fittings, i.e. rivets and welding etc.	MT	20	50,505.25	10,10,105.00
11	192100	Conducting load testing of a single pile upto following 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				
(a)	192103	Initial load test above 100 ton capacity upto 250 ton capacity pile	each	1		81,014.63



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
(b)	192104	Extra for every increase of 50 T in pile capacity or part thereof over 250 T	each	1	13,676.66	13,676.66
(c)	192107	Routine Load Test above 100 ton capacity upto 250 ton capacity pile	each	1	1,25,285.20	1,25,285.20
12	192110	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				
(a)	192112	Piles with lateral load capacity of above 10 ton & upto 20 ton	each	1	33,149.21	33,149.21
13	201010	Providing and laying in position Design Mix Cement Concrete M-40 grade machine mixed, machine vibrated and machine batched using 20mm graded crushed stone aggregate and coarse sand of approved quality for the Cast in-situ Prestressed (Post tensioned) concrete girder / Box girders for spans upto 18.3m (centre to centre) Including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate, retard setting of concrete, improve workability without impairing strength and durability complete as per specifications and direction of the Engineer incharge. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra.				
(a)	201011	With Soffit level upto 9m above Bed level	cum	2060.00	2117.31	43,61,658.60
(b)	201014	Extra for increase in span by every 1m or part thereof for span above 18.3m & upto 30.5m	metre/cum or part thereof	2060.00	30.73	63,303.80
14	201050	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 MOST/IRC specifications. The rates are inclusive of supplying, fixing with contractor's own materials, e.g. inserts, bolts, socket tubes, Neoprene sheet/cap etc., equipments, machineries, labour, all taxes, royalty, all lead & lifts, transport, testing, surface preparations, complete				
(a)	201051	For 80mm expansion	meter	134	23,136.28	31,00,261.52
15	201060	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, recoding 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, based on design load & not span				
(a)	201061	For Span design load upto 100 MT	Each	2	66,772.64	1,33,545.28
(b)	201062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	each MT	2	65,548.13	1,310.96



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
16	201070	Providing, fabricating & fixing in position to exact design profiles, prestressing H.T.S. cables of all classification made from Low Relaxation strands conforming to IS:14268-1995 in Prestressed 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.	MT	40.00	1,40,567.44	56,22,697.60
(a)	201071	Deduct for not using CRCA sheathing & other related items for pretensioned members from item 201070	MT	40.00	- 34,920.24	- 1,396,809.60
(b)	201072	Extra for using HDPE sheathing instead of CRCA sheathing	MT	40.00	148.67	5,946.80
17	211070	Supplying and fixing anti-slip M.S. Angles/nosing 65mmx 65mmx 8mm or any other size confirming to IS:2062 fixing 10mm dia, anchor bar 600mm c/c and fixing with main girder with M.S. flat on top of step of stair case , making anti-slip grooves 7 nos. arrangement for keeping and maintaining in position as per approved plan with all labour and material as a complete job	kg	2870	50.93	1,46,169.10
18	222160	Providing weep holes by making suitable opening or drilling in existing Brick Masonry / Plain / Reinforced Concrete abutment, wing wall/return wall with 100 mm dia AC pipe, extending through the full width of the structure complete	metre	300	287.29	86,187.00
19	222170	Providing and fixing Drainage Spouts of 100 mm UPVC complete as per drawing & Technical Specification	meter	230	268.10	61,663.00
20	222180	Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498-1970 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	3180.00	1,505.65	47,87,967.00
21	222280	Supplying, spreading and filling coarse sand (no cohesive materials to be used) of approved quality including watering and ramming in foundation, plinth, 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	5980	824.18	49,28,596.40
22	222290	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	1740	140.30	2,44,122.00
TOTAL OF SCHEDULE 'A'						4,90,03,257.06



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
SCHEDULE 'B' - SOR ITEMS - ITEMS OTHER THAN BRIDGE CHAPTERS AND ITEMS OF SCHEDULE "E" & "F"						
23	033130	Supplying & mixing high range poly carboxylate ether base water reducing admixture Plast Super-C700 conforming to IS:9103-1999 (to be added @ 1% by weight of cement) for CC & RCC work for controlling water cement ratio and for gaining early strength	Kg	7360.00	86.65	637,744.00
24	041010	Providing and laying in position M-20 Grade concrete for reinforced concrete structural elements, but excluding cost of centering, shuttering, reinforcement and Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge				
(a)	041011	All work upto plinth level, including raft foundation of washable aprons,	cum	60	2,100.13	126,007.80
(b)	041012	All works in buildings above plinth level upto floor two level	cum	120	2,309.58	277,149.60
(c)	046010	All works in buildings above Floor 2 level (3.6m) upto floor three level (7.2m)	cum	120	296.02	35,522.40
(d)	041015	In kerbs, steps and the likes etc.	cum	20	2,175.58	43,511.60
25	042010	Centering and shuttering including strutting, propping etc. and removal of form for :				
(a)	042011	Foundations, footings, bases of columns, raft foundation of washable aprons, Pile caps, Footings of FOB etc.	sqm	80	127.80	10,224.00
(b)	042013	Suspended floors, roofs, landings, balconies, FOB slabs, walkway slabs and access platform	sqm	120	213.09	25,570.80
(c)	042014	Lintels, beams, plinth beams, bed blocks, girders, bressumers and	sqm	240	184.72	44,332.80
(d)	042015	Columns, pillars, posts and struts	sqm	380	270.20	102,676.00
(e)	042016	Stairs (excluding landings) except spiral-staircases	sqm	60	247.30	14,838.00
26	014110	Providing and removing barricading with the help of portable fencing along the running track where the work is to be done in close vicinity of the track. Fencing shall consist of self supporting steel angles of size 50 x50x6mm, 1.5m long provided with hooks etc. and embedded in CC 1:2:4 block of size 0.23x0.23x0.23m placed at c/c distance of 2m along the track. 12mm dia rods in three horizontal layers tack welded with the angle posts including providing retro-reflective tapes in Horizontal & vertical direction. Note : Released material will be the property of the contractor after the completion of work. Cost of cement to be paid separately.	metre	730	105.95	77,343.50
27	094040	Precast Chequered factory made terrazzo tiles 22mm thick with graded marble chips size upto 6mm in floors jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing of cement slurry complete on 20mm thick bed of cement mortar 1:4 (1 cement : 4 coarse sand)				
(a)	094042	with ordinary cement with pigment	sqm	50	596.56	29,828.00
28	051010	Brick work with non-modular (FPS) bricks of class designation 7.5 in foundation and plinth in :				
(a)	051018	Cement mortar 1:6 (1 cement : 6 coarse sand) -wall	cum	20	2,835.40	56,708.00
29	111040	12 mm cement plaster of mix -				
(a)	111042	1:6 (1cement: 6coarse sand)	sqm	40	62.37	2,494.80
30	115090	Wall painting on new work with two or more coats of plastic emulsion paint of approved brand and manufacture to give an even shade	sqm	80	52.74	4,219.20
31	121060	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade				
(a)	121061	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	sqm	50	66.08	3,304.00
32	154010	Providing and fixing 110mm dia PVC soil, waste and vent pipes including jointing and cost of spun yarn and sand etc. complete	meter	160		35,449.60



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
33	222170	Providing and fixing of Drainage Spouts of 100mm UPVC complete as per drawing and Technical specification	metre	270	268.10	72,387.00
34	231010	Providing and applying tack coat using bitumen emulsion (Rapid setting) complying with IS:8887-1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specification				
(a)	233012	On bituminous surface @ 0.25kg/sqm	sqm	6490	13.81	89,626.90
35	231040	Providing and laying water bound macadam with specified stone aggregate, stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete				
(a)	231041	Sub-base with stone aggregate 90mm to 45mm including stone screening 13.2mm size	cum	2710	1003.48	2,719,430.80
36	236070	Painting road surface marking with adequate number 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				
(a)	236071	New work (minimum two coats)	sqm	1970	80.90	159,373.00
37	237010	Providing and fixing Cat's Eye (Glow studs) heavy integral stem, reflective, aluminium die cast with elegant finish of size 100mmx100mm and 20mm high having a stem of 50mm (or 12mm dia. 90mm long) screwed and nailed to fix into the road surface or at the nosing of the central verge. The road studs should have reflectors fitted on one side of the studs (3 nos. 7 element or 1 no. 29 element reflector) complete	each	510	536.96	2,73,849.60
38	238020	Providing and laying Dense Bituminous concrete on prepared surface with specified graded stone aggregate for wearing course, mixing of bitumen, filler & stone aggregate in hot mix plant, transporting the mixed material and laying with mechanical paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per specification to achieve the desired density and compaction, but excluding cost of primer / tack coat				
(a)	238021	40mm/50mm compacted thickness with bitumen of grade 60/70 @ 6.5% and lime @ 3% by weight of total mix	cum	1050	8351.61	8,769,190.50
TOTAL OF SCHEDULE 'B'						1,36,10,781.90
SCHEDULE 'E' - SUPPLY OF CEMENT						
39	033060	Supply and using cement at worksite:				
(a)	033061	OPC 43 Grade	MT	3990	5,980.00	2,38,60,200.00
TOTAL OF SCHEDULE 'E'						2,38,60,200.00
SCHEDULE 'F' - SUPPLY OF REINFORCEMENT						
40	045010	Supplying reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete -				
(a)	045016	Thermo-Mechanically Treated bars	kg	1076550	54.35	5,85,10,492.50
		NOTES - (I) The contractor shall quote the rate for Thermo-Mechanically Treated bars of Grade Fe 500D.				
TOTAL OF SCHEDULE 'F'						5,85,10,492.50
SCHEDULE 'C' - NON-SCHEDULE ITEMS						



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
41	NS-1	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete M-40 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 labour, tools & plants, material, fuel, consumables, machinery, loading, unloading, lead and lift complete in all respect as a complete job as per specification & as directed by Engineer.	cum	250	9,211.85	23,02,962.50
		NOTES - (i) Payment for cement, reinforcement and shuttering shall be paid extra.				
		(ii) The concrete is to be poured at the approved safe height and distance from live OHE wires carrying 25KV AC traction 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.				
		(iv) The contractor shall make adequate arrangement below the girders to avoid falling of anything over the track during working for the slab. The rate also includes design and provision of all temporary arrangement for casting, erection, scaffolding and submission of detailed design and drawing for temporary works and to ensure safety of running traffic at all times.				
42	NS-2	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete M-40 grade (Cast in situ) using 20 mm crushed stone aggregate and coarse sand of approved quality in wearing coat and crash barrier 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 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.	cum	90	4,944.85	4,45,036.50
	Notes:-					
	(i)	Payment for cement, reinforcement and shuttering shall be paid extra as per relevant USSOR item included in the relevant schedule.				
43	NS-3	Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, 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.	per test	40	827.80	33,112.00



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
44	NS-4	Providing and fixing handrail made up of 5 rows of 50 mm nominal bore m s pipe of medium class passing through steel ISMC 100 fixed @ 1.5m c/c as vertical support including providing, fixing and welding hard drawn steel wire fabric 75 x 25 mm mesh of weight not less than 7.75 kg per sq m welded to ISMC 100 with steel base plate at the bottom, providing and fixing ms flat 25 mm x 6 mm over edges of hard drawn steel wire fabric welded to ISMC and providing and fixing m s holding down bolts for fixing the base plate in required place including two or more coats of synthetic enamel paint of required shade over a priming coat of zinc chromate primer with all contractor's materials, labour, tools and plants, machinery, loading, unloading and stacking material at site as per specification, drawing and as directed by engineer as a complete job.	sqm	150	2,958.70	4,43,805.00
45	NS-5	Providing and laying of 70mm thick Precast concrete panels for shuttering purpose with grade of concrete M40 using 20 mm graded crushed stone aggregate and coarse sand of approved quality in 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 labour, tools & plants, material, fuel, consumables, machinery, loading, unloading, lead and lift complete in all respect as a complete job as per specification & as directed by Engineer.	sqm	920	518.20	4,76,744.00
	Notes:					
	(i)	Payment for cement and reinforcement shall be paid extras per relevant USSOR item included in the relevant schedule.				
	(ii)	The pre cast reinforced cement concrete panels are to be fixed at the approved safe height and distance from live OHE wires carrying 25KV AC traction (on IR Track) on already launched main steel girder. No support from ground will be allowed for this purpose. The rates include for working under running traffic condition, all leads, lifts, ascents, descents, 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 provision of all temporary arrangement and submission of detailed design and drawing for temporary works and to ensure safety of running traffic at all times.				
46	NS-6	Providing and fixing 65mm dia GI Pipe of medium class on the top of RCC crash barrier as a railing with vertical supports of 12 mm thick m s plate cut to shape along with 50 x 10mm thick m s plate all round welded to vertical including 25 mm wide and 3 mm thick collar plate, verticals welded on base plate of size 120 x 120 x 16 mm, 4 nos 10 dia galvanized m s holding down bolts with nuts and washers, 4 nos 10 dia MS rod of 48mm long welded to m s holding down bolts, verticals shall be @ 1.50 m C / C including two or more coats of synthetic enamel paint of required shade over one coat of zinc chromate primer with all contractor's materials, labour, tools and plants, loading, unloading and stacking at site as per specification/drawing and as directed by engineer as a complete job.	m	160	1,199.80	1,91,968.00



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
47	NS-7	Providing and laying M-35 grade (using 43/53 grade ordinary Portland Cement) precast concrete fascia wall (Area of each fascia 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 ` liner finishes as per the design requirements. PVC drainage pipes, 200mm precast cover fascia for drainage pipes, joint filler, as per approved drawings, logo panels, geo-textile filter fabric for wrapping pipes etc. including filter media (500mm thick) behind the fascia 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 fascia 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.	sqm	2400.00	7251.28	1,74,03,072.00
		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 fascia 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 fascia 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 fascia panels . The approved mock up fascia 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 fascia 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.				
	(B)	MEASUREMENT				



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
		The reinforced Soil wall area shall be measured from top of concrete levelling pad at base to top of RCC fascia wall panel for payment. No separate payment shall be made for any type of reinforcement, filter media, non woven geotextile wrappers filter, perforated pipe, Geo - Grid, levelling pad/ course for any of the item/ incidental work required to complete the item as per direction of Engineer-in-Charge.				
48	NS-8	Providing, placing and compacting approved backfill material 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.	cum	9700.00	2174.25	2,10,90,225.00
	(A)	With Sand				
		NOTES:				
	(a)	The specification and construction details to be adopted shall be as per section 3100 of MoRTH Specification.				
	(b)	For compaction of Earthwork, attention is invited to clause 3105.5 of MORTH Specification.				
		The earth fill material shall be clean, free draining, granular with high friction and low cohesion, non-corrosive, coarse grained with not 10 per cent of particles passing 75 micron sieve, free of any deleterious matter, chlorides, salts, acids, alkalies, mineral oil, fungus and microbes and shall be of specified PH value.				
49	NS-9	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in subbase / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	cum	2710.00	2,572.03	69,70,201.30
50	NS-10	Erection of Prestressed Girder on bearings with crane at site on sub-structure with labour, equipment, T&P and all temporary arrangements, scaffolding etc. complete with contractors design and scheme for longitudinal launching/side slewing (not requiring traffic block) approved by Engineer in charge.	cum	750.00	1,822.00	13,66,500.00
51	NS-11	Box pushing	meter	25	2,00,000.00	50,00,000.00
TOTAL OF SCHEDULE 'C'						5,57,23,626.30
SCHEDULE 'D' - SUPPLY OF STRUCTURAL STEEL (Non-Schedule Item)						



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
52	NS-12	Supply, fabrication and erection of Welded type Bow String girders of required span for IRC loading at site as per RDSO drawings, Indian Railway Unified Standard Specifications (W&M) - 2010 (amended up to date) and Indian Railways standard specification for fabrication and erection of steel girder bridges and locomotive turntables (Fabrication Specifications) Serial No B1-2001 (amended up to date) including all incidental works etc., supplying and fixing in position of shop welding / shop bolting with nuts and washers, field bolts, etc. required for complete fabrication of the girders and transportation of the fabricated materials at site and stacking of the same at places as directed by Engineer including metalizing as per clause No 39.2.1 of B1-2001 over the structural members with all contractor's labour, fuel, consumables, machinery, loading, unloading, tools & plants, material, load and lift complete in all respect, as a complete job as per specification and as directed by Engineer.				
	(a)	Grade E250 with sub quality B0	MT	60	117258.95	70,35,537.00
	(b)	Grade E350 with sub quality B0	MT	420	121652.75	5,10,94,155.00
	Notes: -					
	(i)	Steel (Plates and Rolled sections) should conform to IS: 2062-2011. It shall have Sub quality 'B0'. 12mm thick & above plates shall be fully killed and fully normalized /controlled cooled.				
	(ii)	The steel shall be procured only from those firms, which are Established, Reliable, Indigenous & Primary Producers of Steel, having Integrated Steel Plants (ISP), using iron ore as the basic raw material and having in house iron rolling facilities, followed by production of liquid steel & crude steel.				
	(iii)	40 % of rate payment shall be made after steel material required for fabrication (as per drawing) is received at site.				
	(iv)	15 % of rate payment shall be made on acceptance of fabricated components at site.				
	(v)	20 % of rate payment shall be made after erection & launching				
	(vi)	25 % of rate payment shall be made after final approval office and successful completion of all works (ROB wise) included in this item including metalizing and finishing complete.				
	(vii)	No deduction for holes and no addition for rivets/ bolts/welds etc. shall be made				
	(viii)	The contractor shall submit the detailed erection drawing and Launching scheme along with necessary design calculations for approval from RITES Ltd before mentioned and launching of girder.				
	(ix)	Temporary supports if any required for the erection /launching shall be erected after the approval of Engineer. Nothing extra shall be payable on this account.				
	(x)	The contractor shall take all safety precautions that will be necessary in consultation with Engineer as per extant rules / guidelines. Nothing extra shall be payable on this account.				
	(xi)	Notwithstanding above, the contractor shall be fully responsible for any mishap that may occur as a result of negligent working.				
	(xii)	Contractor has to take every precautionary measure for safety of running train during and after launching of girder				
	(xiii)	The rate includes launching under traffic blocks wherever required. However, the rate does not include the cost of possession of traffic / OHE block.				
	(xiv)	The Block required shall be arranged by DFCCIL. The duration of the block shall be as approved by Engineer. If the Block granted is not made available due to unavoidable reasons, nothing extra / no compensation shall be paid.				



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
	(xv)	However, penalties, if any, levied by Indian Railways caused due to any careless working or otherwise of violation of the Terms and Conditions of the track /OH block, shall be payable by the contractor.				
	(xvi)	The cost of all test as per prevailing code for acceptance shall be borne by contractor.				
53	NS-13	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				
	(a)	In gratings, frames, guard bar, ladders, railings, brackets, gates and similar works	kg	880	133.8	117744
54	NS-14	Providing and fixing hand rail by welding etc. to steel ladders railing, balcony railing and staircase railing including applying a priming coat of approved steel primer				
	(a)	G.I. pipes 40mm nominal bore (class B)	kg	1090	180.65	196908.50
55	NS-15	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.	kg	2480	133.35	330708.0
56	NS-16	Design, Manufacturing and Supplying of POT / POT-PTFE bearings for the following spans as per RDSO bearing drawing No RDSO/B-10412/8 for 72m Bow String Girder and RDSO/B-10411/8/R1 for 60m Bow String Girder at site including fitting and fixing in position true to line and level with all contractor's materials, labour, tools and plants, loading unloading and stacking at site as per specification and as directed by engineer as a complete job.				
	(a)	For 72.00 m Bow String Girder	set	1	432219	432219
	Notes: -					
	(i)	The drawing upto last alteration / revision/amendment shall be followed.				
	(ii)	(ii) Cast steel of grade 280 - 520 W or 340 - 570 W of IS 1030 shall be used.				
	(iii)	(iii) Each set of bearing shall include 4 nos of bearings (1 POT bearings and 3 POT - PTFE bearings) and all bolts and all other components connected with bearings as shown in respective drawings.				
	(iv)	(iv) The supply of POT / POT-PTFE bearing shall include all materials shown in the drawings. The supply also includes supply of all holding down bolts to fix the bearings at the bottom on pedestal and all bolts to fix the bearings to the bottom of girder.				
	(v)	75% payment shall be made after supply of each set at site on submission of indemnity bond and balance 25% shall be made after fixing of bearings.				



S. No.	Item no. of NCR USSOR- 2010	BRIEF DESCRIPTION OF ITEM	Unit	Qty	Rate as per NCR USSOR- 2010 (Rs.)	Amount (Rs.)
57	NS-17	Design, Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined with in a metal cylinder, sealing rings, dustseals, 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 drawing and approved Technical Specifications. The design of the bearings shall be submitted by the manufacturers / contractor and got approved from Railway before fixing. Test report of the bearings should be got approved before the materials are lifted from the manufacturer premises. Payment is based on 250 MT capacity of Bearing.				
	(a)	Bearing for 24m span PSC Girder	set	14.00	1,63,470.00	22,88,580.00
TOTAL OF SCHEDULE 'D'						6,14,95,851.50
Explanatory Notes for BOQ:						
	(i)	Contractor shall quote rates of shuttering and curing for all heights.				
	(ii)	The rates of reinforcement item mentioned in the above schedule includes placing of reinforcement under running traffic conditions				
	(iii)	All NCR USSOR items contain item nos., if any discrepancy is found in nomenclature, schedule nomenclature will prevail.				
	(iv)	Tenderer must quote their rates for supply and erection of fabricated girders with their own material including loading, transportation and unloading at site. DFCCIL shall not provide any assistance for procurement of raw material for manufacturing the girders tendered for.				
	(v)	The rates shall also be inclusive of all taxes legally leviable and / or any other taxes, license fee and royalty charges etc. if any.				
	(vi)	The above quantity is approximate: -The DFCCIL reserve the right to increase / decrease the same.				
	(vii)	The contractor has to submit launching scheme and detailed drawing of each component of the Railway safety and nothing extra shall be paid for this activity.				

