



E-Tender No. MUMBAI/N/EN/ROB/LC -92, Date 23.09.2017

For

Construction of one ROB including approaches complete in lieu of existing LC no. 92 at KM 189/24-26 between Pardi - Atul Railway station of Virar – Surat Section of Mumbai Division of Western Railway.

**FINANCIAL BID
(PACKET-B)**

**TENDER DOCUMENT
September 2017**

**Employer:
DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED
CPM/NORTH/MUMBAI UNIT
(A GOVERNMENT OF INDIA ENTERPRISE)
Under
MINISTRY OF RAILWAYS**



DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD
A Govt. of India (Ministry of Railways) Enterprises
7th Floor, New Administrative Building, D.N. Road, Mumbai-400001
NOTICE FOR INVITING BIDS (Online i.e. E-Tender)

Tender No	MUM/N/EN/ROB/LC – 92, date 23.09.2017
Name of work	Construction of one ROB including approaches complete in lieu of existing LC no. 92 at KM 189/24-26 between Pardi - Atul Railway station of Virar – Surat Section of Mumbai Division of Western Railway
(a) Type of Tender	Open Tender (Single stage two packet).
(b) Type of Contract	Works Contract.
(c) Tender Value	Rs. 31,78,85,862.00/-
(d) Completion Period	18 months
(e) Earnest Money	Rs. 47,68,288.00/- (Paid through Demand Draft/ banker's Cheque, FDR payable in favour of "Dedicated freight Corridor corporation of India Limited, Mumbai")
(f) Cost of Tender document	Rs 10000/- plus GST (18%) To be paid by D.D./Banker's Cheque in favour of DFCCIL payable at Mumbai
(g) Tender Processing Fee	Rs 7,500/- plus GST (18%), taxes and duties as applicable (non refundable) through e- payment while uploading of tender
(h) 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
(i) Retention Money / Security Deposit	5% of Contract Value
(j) Officer:	Chief Project Manager (North), Mumbai Dedicated Freight Corridor Corporation of India Limited/Mumbai, 7th Floor, New Administrative Building, D.N. Road, Mumbai-400001
(k) E-Tendering Web Site	E-tendering site- www.tenderwizard.com/DFCCIL Help: Please contact Tender wizard helpdesk at 011-49424365
(L) Pre bidding Conference	On 10.10.2017 at 11.00 AM at office of Chief Project Manager(North) Mumbai, 7th Floor, New Administrative Building, DN Road, 400001

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DATE & TIME SCHEDULE	
Date of Uploading of NIT & Other Documents (Online Publishing date)	26.09.2017 at 11.00 Hrs.
Documents download/Sell date (Online)	From 27.09.2017 at 11.00 Hrs.
Bid submission Last date (Online)	30.10.2017 up to 15.00 Hrs.
Last date of submission of originals of statutory documents i.e. EMD & Tender Document Charge	07.11.2017 up to 17.30 Hrs.
Bid Opening date & Time (online)	08.11.2017 at 15.00 Hrs.

Chief Project Manager (North), Mumbai Dedicated Freight Corridor Corporation of India Limited/Mumbai, 7th Floor, New Administrative Building, D.N. Road, Mumbai-400001

SUMMARY OF PRICES

Name of work:- Construction of ROB including approaches complete in lieu of existing LC no. 92 at KM 189/24-26 between Pardi - Atul Railway station of Virar – Surat Section of Mumbai Division of Western Railway

Sl. No.	Description of works	Cost as per Schedules	Rates to be quoted in figures & words (Clearly mention above / below / at par on Schedules/Items updated DFCCIL Rate / cost given in column 3)
1	2	3	4
1.	Execution of all works as per Schedule "A" (Items as per SOR 2015-16 of State Govt. Gujarat R&B Valsad division.)	Rs. 2,43,31,103.00	Rates above / below / at par as per schedules shall be filled separately in Microsoft Excel File.
2.	Execution of all works as per Schedule "B" (NS Items as per State Govt of Gujarat)	Rs. 12,01,07,540.00	
3.	Execution of all works as per Schedule "C" (Items as per SOR 2015-16 of State Govt. Gujarat R&B Valsad division.)	Rs. 12,52,06,518.00	
4	Execution of all works as per Schedule "D" (NS Items as per Western Railway)	Rs. 4,55,04,142.00	
5	Execution of all works as per Schedule "E" (NS Items as per Western Railway)	Rs. 12,36,559.00	
6	Execution of all works as per Schedule "F" (USSOR Items as per Western Railway)	Rs. 15,00,000.00	
	Grand Total	Rs. 31,78,85,862.00	

Notes:

- (i) The above prices are inclusive of all taxes, duties, levies, etc. Except GST.
 - a. GST as applicable from time to time on taxable value of each running account bill shall be paid by DFCCIL.
 - b. The contractor should adhere to anti profiteering provisions as per section 171 of the CGST Act. Where due to change in the rates of GST / Change in law, the contractor gets any credits / benefits, the same shall be passed on to DFCCIL by way of reduction in prices.
- (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.
- (iv) Rate of item payable to contractor shall be as per above/below/at par on rates of schedule.

SCHEDULE -1
SCHEDULE OF PRICES & TOTAL PRICES

NAME OF WORK :- Construction of ROB including approaches complete in lieu of existing LC no. 92 at KM 189/24-26 between Pardi - Atul Railway station of Virar – Surat Section of Mumbai Division of Western Railway

Schedule- A**Schedule of Approximate quantities**

SN	Item No.	Total Qty.	Item of work	Rate	UNIT	Amount in Rs.
1	26117C	1	Clearing and grubbing site/road/land including uprooting all vegetation, grass, bush shrubs, saplings and trees with girth, removal of stumps of trees of girth of all sizes including removing stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable materials as directed by Engineer with all leads and lifts etc. complete as per specification. before commencement and after completion of the work.	32056.39	Hectare	32056.00
2	27007A	8543	Excavation for foundation in sand, gravel, clay soft soils and murrum etc. Including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed .(a) Depth upto 3.0m.	318.15	Cum	2717955.00
3	27039	3921	Empty boring through all sorts of strata for providing 1.20m dia RCC bored piles to required depth including flushing necessary casting pipe with all plants and equipments as required as per detailed specifications for	3360.27	Rmt	13175619.00

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			Abutment and Piers (Excluding Concrete & Reinforcement).			
4			Carrying out load test on any pile as per standard procedure laid down in the IS:2911 specification including construction of test cap, dismantling the cap after test and cleaning the site and maintaining complete records of load settlement as directed by Engineer and as per specification, and submission of records.			
4(a)	27044	2	Load testing of foundation piles including loading with necessary kentledge of any other suitable method as per details (Initial load Test).	39654.62	Each	79309.00
4(b)	27044	2	Load testing of foundation piles including loading with necessary kentledge of any other suitable method as per details (Routine load Test).	39654.62	Each	79309.00
5	27001A	254	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed (Chipping and dressing of the RCC piles up to cut-off level (Min. 1 D) including cleaning of reinforcement and removal of dismantled materials, etc. for providing pile caps as directed by Engineer and as per specification. for 1000 & 1200 mm dia. pile.	577.72	Cum	146741.00
6	27004AA	3341	Providing and laying filter media 600mm thick as directed at the back of abutments, returns and wing walls as per detailed	792.85	Sqm	2648912.00

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			specifications.			
7	26161	375	Providing and laying Road marking with hot applied thermoplastic compound reflecting glass bends on bituminous surface. Providing and laying Hot applied thermoplastic compound 2.5 cm thick including reflectorizing glass bends 250 gms/sqmt area, thickness of surface applied glass bends as per IRC 35 the finished surface to be level uniform and free from streaks & holes. (As per Government letter no. SOR 102003/94/S-1, dated 20.07.2004)	298.96	Sqm	112110.00
8	26163	1933	Supplying and fixing cat eye (stimsonite) made out from Acrilo beautilite sterine injection high compressed moulding with reflector made of MMC (prismatic type of size 12cm*6cm*2.5cm) providing with bituminous adhesive 100 g. with each unit for fixing. (High intensity grade).	375.72	No.	726267.00
9	27050A	3341	Providing and laying weep holes in abutment, and returns by using AC pipe of 100 mm dia. including laying in proper grade and jointing the completed as per detailed specification.	53.93	Each	180180.00
10	27072	3360000	Providing and Fixing in position fully moulded restrained elastomeric bearings as per detailed drawings.	1.11	Cu.cm	3729600.00
11	27101A	2	Providing and fixing marble slab including transporting, engraving and painting all complete. Size 75cm x 60cm x 4cm	955.46	Each	1911.00

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12	27100A	200	Providing PVC 100 mm diameter water spouts including necessary iron gratings as per drawings.	187.86	Each	37572.00
13	26093A	12	Providing and fixing sign boards made out of 2mm aluminium sheet; size 80 x 60cms. rectangle as per the design of IRC-67-1977 pre treated with phosphating process & acid teching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorized with retro reflective sheeting as per latest MOST Specifications; 3.1m long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3mm75x75x6mm as required; painted with best quality epoxy coatings in black and white bends. the details of symbol for each board shall details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x45 x 60cms. for each leg. including excavation curing tec. complete under the supervision of engineer in charge. (A) Engineer grade	3214.83	No.	38578.00
14	26098A	12	Direction sign (Junction board) :- Providing and fixing sing boards made out of 2mm aluminium sheet; size 244 x 122cms. rectangle as per the design of IRC-67-1977 pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorized with retro reflective sheeting as per latest MOST Specifications;	12273.52	No.	147282.00

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			<p>Letters and numerals should be as per IRC-30-1968, 3.1m long (2 nos) stand post and frame fabricated from suitable size iron angle of 50 x 50 x 5mm 75x75x6mm as required; painted with best quality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.</p>			
15	26102A	12	<p>Providing and fixing Hazard marker sign made out of 2mm aluminium sheet, size 100 x 100 cms rectangle, as per the design of IRC 67-1977 Pre treated with phosphating process and acid etching coated with one coat of epoxy primer and two coat of best quality epoxy paint, reflectorized with retro reflective sheeting as per the latest M.O.S.T. specification, 3.1 Mt. long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3 mm & 50 x 50 x 5 mm, painted with best quality epoxy coatings. The fixing at site shall be in 1 : 2 : 4 CC block of size 45 x 45 x 60 cms for each leg including excavation curing etc. complete under the supervision of Engineer in charge.</p>	2022.02	No.	24264.00

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16	14006A	443	Providing and laying chequered terrazzo tiles 22mm thick for R.C.C Staircase with marble chips of size up to 6mm in floors on 25mm thick bed of lime mortar 1:1.5 (1 - lime putty : 1.5 coarse sand) or C.M. 1:6 jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing & polishing complete. (A) Light shades using white cement.	474.7	Sqm	210292.00
17	NH-SOR 16.2	182	Removal of existing asphaltic wearing coat comprising of 50 mm thick asphaltic concrete laid over 12mm thick asphalt including disposal with all lift and lead	67.67	Cum	12316.00
18	27097A	215	Providing and fixing post and pipe railing as per detailed drawing including 3 coats of painting to steel works complete	1073.63	MT	230830.00
			Total Amount of Schedule – A			2,43,31,103.00

Schedule- B

Schedule of Approximate quantities						
Sr. No.	Item No.	Total Qty.	Item of work	Rate	UNIT	Amount in Rs.
1	State NS/01	1	Marking out the centre line of the Bridge and various other component structures and complete lining out and levelling with theodolite, levels, including constructing necessary masonry pillars for lines and levels and establishing necessary bench marks etc. complete as directed.	12625.00	LS	12625.00
2	State NS/02	819	Providing & filling in foundation with ordinary cement concrete M 15 mix and providing necessary vertical pin headers including formwork vibrating ramming & curing complete.	2622.57	Cum	2147885.00
3	State NS/03	4088	Providing and casting in situ controlled cement concrete M-35 for RCC bored pile from 1.00 & 1.20 m. dia. using Tremie Pipe including necessary flushing, dewatering, formwork, mixing in mechanised batch mix plant, transporting, compacting, and finishing including all leads & lifts complete as per detailed specifications. (Excluding Reinforcement).	4210.89	Cum	17214118.00
4	State NS/04	2453	Providing and casting in-situ controlled cement concrete of M35 grade for RCC work for Pile cap ,foundation for pier, abutment, RCC Stair Case & return walls with 20/40mm down coarse aggregate of the required size for any depth	3942.64	Cum	9671296.00

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			including dewatering, scaffolding centring, shuttering, mixing, placing in position, consolidating with mechanical vibrators, curing, de-shuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary as per specification and drawing.			
5	State NS/05		Providing and casting in situ controlled cement M35 for RCC work in piers and abutment return wall as per drawing including centring shuttering scaffolding where necessary laying vibrating curing and finishing complete.			
5a	State NS/05a	4767	a) height from 0.0 to 5.0 m	4004.25	Cum	19088260.00
5b	State NS/05b	75	b) height from 5 to 10.0 m	4226.45	Cum	316984.00
6	State NS/06	1101	providing and casting in situ controlled cement concrete M35 for RCC works on pier cap, abutment cap, dirt wall and M40 for pedestals including controlled cement concrete or pedestals of required drawings, centring shuttering, scaffolding wherever necessary laying vibrating curing and finishing complete.	4056.77	Cum	4466504.00
7	State NS/07	3264	Providing and casting in situ controlled cement concrete M-35 for R.C.C. work in superstructure including centring, shuttering scaffolding, ramming, vibrating curing and finishing complete. (A) T-Beam and Deck slab type of superstructure. (II) Main and cross	4153.73	Cum	13557775.00

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			Girder			
8	State NS/08	97	Providing and casting in-situ controlled cement concrete of M-35 grade with minimum cement content 420kg/cumt without admixture as per IS-456-2000 cement concrete for wearing coat with 10mm & 20mm downgraded crushed stone aggregates of required size in super structure including required formwork, shuttering and supporting arrangement (excluding cost of reinforcement) and transporting concrete from batching plant by transit mixture, placing it in position etc. compacting with needle vibrator including curing with all labour, material, machinery all lead, lift etc. complete as per drawing and technical specification of MORTH 2702 (P. No. 492 MORTH 2702)	4153.73	Cum	402912.00
9	State NS/09	18	Providing and casting in-situ controlled cement concrete of M-30 for approach slab including required formwork, curing and finishing complete	3991.22	Cum	71842.00
10	State NS/10	31224	Providing and applying one coat of Epoxy phenolic primer of DFT 50 microns and two coats of Epoxy phenolic coating of DFT 100 microns each for RCC Element or any other equivalent epoxy coating system to all concrete surfaces exposed to atmosphere in substructure and superstructure including cost of material labour, transportation, scaffolding and preparing the surface by cleaning, washing,	182.81	Sqm	5708059.00

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			brushing, sand/grit blasting etc complete and as directed by engineer and as per specification. (Paint shall be approved from Engineer and tested from approved Laboratory) (Total DFT = 50+100+100 = 250 microns).			
11	State NS/11	275	Providing and fixing in position Strip Seal Type Expansion Joint (for movement up to 60mm) as per detailed drawing MORTH specification. The rate is inclusive of supplying, fixing with contractor's own materials, equipments, machineries, labour, transport, testing, bolts, socket tubes, neoprene sheet/cap etc. complete. The rate is finished item complete and will be paid after fixing in all respect.	9063.74	Rmt	2492529.00
12	State NS/12	2221	Reinforced Earth Retaining Wall (Reinforced Earth retaining wall is having following main component 1. Excavation for foundation, foundation concrete (CC grade M15) with cement concrete grooved seating in foundation for facia panel. 2. Facia panel in concrete grade M 35 and reinforcement FE 500D with hooks, tackles and placement thereof. 3. Assembling & joining with non-oven geotextile at facial panel joints with facia elements and laying of the PP Geosynthetic reinforcement element along with 600mm thick filter media conforming to the specifications and in accordance to the design as approved. 4. RCC coping (M 35) at top of facial	5913.84	Sqm	13134639.00

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			panel and levelling pad (PCC M15) at bottom fascia panel as per approved layout.			
13	State NS/13	2999	Construction of 300 mm thick Granular Coarse Sub Base (GSB) (Grade - I crushed B.T materials of 53mm to 9.5mm @ 50% 9.5mm to 2.36mm @ 20%, below 2.36mm @ 30%) by providing coarse graded material mixing in a mechanical mix plant at OMC, carriage of a mix material to work site spreading in uniform layers with motor grader on prepared surface, and compacting with vibratory rollers to achieve the desired density, complete as per MORTH specification	749.42	Cum	2247511.00
14	State NS/14	2999	Providing and laying wet mix base course macadam(WMM) 300 mm in Two layer using machine crushed chips as per required gradation mixing with required optimum quantity of water conveying the mix to site and spreading to grade and camber with mechanical paver consolidation by vibratory roller including material, labour, plant and machinery and equipment etc complete.as per MORT&H Specifications	801.94	Cum	2405018.00
15	State NS/15	9995	Providing and applying priming coat with emulsion (SS1) at the rate of 7.50 kg/ 10 Sq.mt. including cost of emulsion and preparing the surface and applying etc. complete.	21.21	Sqm	211994.00
16	State NS/16	900	Providing & laying DENSE GRADED BITUMINOUS MACADAM with batch type Drum Mix Plant (DMP) using	4253.11	Cum	3827799.00

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			crushed aggregates of specified grading, premix with bitumen grade 60/70 , bituminous binder @ 5.0 per cent by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction complete, including providing & laying tack coat 2.5kg /10sqm all as per MORTH specification.			
17	State NS/17	538	Providing and laying 40 mm Bitumen concrete using crushed stone aggregate BT chips as per required gradation and using emulsion asphalt as a tack coat @ 2.5 kg / 10 sqmt and the VG 30 grade asphalt at 55 kg/MT)by total weight of mix hot laid process using drum mix plant including heating and mixing asphalt & materials by drum mix process transporting the mix and laying by paver finisher including consolidation with vibratory roller including cost of material, labour, machinery equipment and fuel , oil , lubricant for plant and machinery using contractor's own plant and machineries etc. complete as per MORTH Specifications	4554.09	Cum	2450100.00
18	State NS/18	14069	Backfilling, grading and compaction with selected backfill soil in layers in soil Reinforced works with peak internal angle of friction as per adopted design parameters, complete as per drawings and	699.93	Cum	9847315.00

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			Technical Specifications or as directed by Engineer.			
19	State NS/19	6375	Providing and laying 6 mm thick in two layer mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen pre-coated fine grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm centre to centre in both directions, pressed into surface when the temperature of surfaces is not less than 1000C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 515.	198.45	Sqm	1265119.00
20	State NS/20	860	Reinforced Cement Concrete Crash Barrier (Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-40 grade concrete with TMT reinforcement conforming to IRC:21 and dowel bars 25 mm dia. 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified) & Provide 150 mm dia. PVC pipe for utility services etc	3479.35	Rmt	2992241.00

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			complete (A) Only crash barrier			
21	State NS/21	696	Reinforced Cement Concrete Crash Barrier (Provision of an Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with M-40 grade concrete with TMT reinforcement conforming to IRC:21 and dowel bars 25 mm dia. 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design given in the enclosure to MOST circular No. RW/NH - 33022/1/94-DO III dated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified) & Provide 150 mm dia. PVC pipe for utility services etc complete (A) crash barrier with Friction slab	7336.44	Rmt	5106162.00
22	State NS/22	1672	providing and fixing 100 dia. runners and down take GI pipe to drain water from drainage spout with necessary fixtures including cost of all materials, labours, bends, fixtures, specials etc. Complete as per drawing and as per direction of engineer.	878.5	RMT	1468852.00
			Total Amount of Schedule – B			12,01,07,540.00

Schedule- C

Schedule of Approximate quantities

SN	Item No.	Total Qty.	Item of work	Rate	UNIT	Amount in Rs.
1	27020A	131	Providing and installing 6 mm MS liner for bored-cast-in-situ concrete piles including applying protective coating as per drawing and specification and as directed by Engineer.	44690.48	MT	5854453.00
2	27043C	614	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for Pile including cutting, bending, hooking and tying with 18 gauge mild steel binding wires, supporting in position to ensure lines and levels during concreting, maintaining proper cover / spacing etc. complete as per specification and detailed drawing.	44549.08	MT	27353135.00
3	27047A	359	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for Pile cap, foundation for pier/ abutment/ return wall including cutting, bending, hooking and tying with 18 gauge mild steel binding wires, supporting in position to ensure lines and levels during concreting, maintaining proper cover /	42446.26	MT	15238207.00

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			spacing etc. complete as per specification and detailed drawing.			
4	27109 & 27111	1046	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for pier, abutment, pier cap, abutment cap, returns, pedestal, seismic arrester & retaining wall including cutting, bending, hooking and tying with 18 gauge mild steel binding wires, supporting in position to ensure lines and levels during concreting, maintaining proper cover / spacing etc. complete as per specification and detailed drawing.	45575.24	MT	47671701.00
5	27121	637	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for superstructure including cutting, bending, hooking and tying with 18-gauge mild steel binding wires, supporting in position to ensure lines and levels during concreting, maintaining proper cover / spacing etc. complete as per specification and detailed drawing.	44990.45	MT	28658916.00
6	27123	1.8	Providing and fixing in position steel bar reinforcement of steel grade Fe-500 (TMT) including cutting ,bending, hooking, tying, welding etc, complete as per detailed drawing and	44298.6	MT	79737.00

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			specification (A) R.C.C. Approach slab			
7	NH SOR 8.23B	100	Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 810	3503.69	Rmt	350369.00
			Total Amount of Schedule -C			12,52,06,518.00

Schedule of Approximate quantities

SN	Item No.	Description	UNIT	Quantity	Rate	Amount in Rs.
1	NS/1	Supply & Fabrication of steel girder spans including its components (Stiffeners, Bracings, Splices, Studs etc.) as per the approved drawings for composite construction of superstructure of the Road Over Bridge with contractor's own Steel confirming to IS: 2062 Grade 250(B) with all welds, HSFG Bolts, nuts bolts, rivets etc. with contractor's own materials, fabrication, machinery, templates, fixtures, equipments tools and plants transportation, skilled/unskilled labour, excise duty., Octroi, sales tax and other taxes, all leads lifts, descent, loading, unloading, crossing one or more Railway track if required etc. complete and as per technical specifications. The rate is inclusive of transportation of fabricated girder parts to site by contractor's own means at his cost. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before their assembly. (The Structural Steel to be used Should be manufactured by SAIL/RINL/TISCO /ESSAR/JINDAL Only.) Work has to be done as per drawings and specifications approved by Railway. High quality superior brand of paint should only be used. For Painting, prior approval for superior brand / make of the paint should be taken from engineer in charge. Note:1. The fabrication of girders must be got done from RDSO approved firms only. 2. The rate is inclusive of assembly of girder with service bolts as per approved drawing in shop for checking by Engineer's	MT	363.00	94629.73	34350592.00

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Date:

For CPM/NORTH/MUMBAI/DFCCIL

		representative and dismantling the same after checking for transportation to the site. 3. Weight of HSFG bolts, Rivets, Welds shall not be considered for payment. Nominal weight of the girder spans including its components (Stiffeners, Bracings, Splices, Studs etc.) as per drawing will only be considered for payment.				
2	NS/2	Metalizing girder/girder components such as cross girders, top chord channels, bracing etc. of Steel Girder as directed by Engineer with aluminium spray not less than two layers after preparing surface by sand/grit blasting as per provision laid in Appendix VI of IRS B 1179 code (latest alteration) including one coat wash primer (IS-5666) one coat zinc chrome primer (IS-104) and two coats of aluminium paint (IS-2339) with approved paint conforming to IS specification for fabrication & erection of steel girder bridge (RS B 1-79) as corrected up to date with contractor's own materials, tools, plants labour, loading/unloading, transportation, handling, re-handling if any including all lead, lifts, crossing of track/ obstruction etc. complete in all respect and as per direction of Engineer.	Sq.m	2974.00	607.09	1805486.00
3	NS/3	Assembling, Welding, Erecting, Bolting by HSFG bolts, riveting if any as per approved drawings and Launching of girder spans including its components on running line / Non- Running line /Running electrified line / under block period with the help of road crane of required capacity as per Railway's approved drawings & Scheme with other ancillary steel structures fixed to the girder, where necessary, in proper level				

Signature of tenderer (s)

Date:

For CPM/NORTH/MUMBAI/DFCCIL

		and alignment and as per technical specifications. The rate shall be inclusive of supply, erection and dismantling of staging and scaffolding and other temporary arrangements required for assembly, erection and launching of girders. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before/after their assembly. Work has to be done as per drawings and specifications approved by Railway.				
		Note: Weight of HSFG bolts, Rivets, Welds shall not be considered for payment. Nominal weight of the girder spans including its components (Stiffeners, Bracings, Splices, Studs etc.) as per drawing will only be considered for payment. Launching of Steel girder spans Launching 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.				
	NS/3 (a)	Launching 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	363.00	16825.91	6107805.00
4	NS/4	Fabricating, supplying and erecting in position standard structural steel sections manufactured from IS approved	MT	20.00	71620.22	1432404.00

		manufacturers only ,conforming to IS :2062 - 1992 (including latest amendments) including welding with approved quality welding rods, supply and fixing of correct size turn bolts including one primer coat of red lead paint conforming to IS:102 or Zinc chromate paint conforming to IS:104 followed by two coats of Aluminium paint as per IS : 2339 with all contractor's materials, labour, tools and plants etc in bolted/welded construction as directed by Engineer in charge. Work shall be carried out as per IS:800-1984 (with latest amendments), IRS specification No. B3-61 part 2 and IS 816 for welding.				
5	NS/5	Providing and fixing POT -PTFE bearing as per IRC 83 in position true to line and level including cost of all materials fixtures surface for receiving bearing, grouting of sleeves with non-shrink high strength grout, load testing of bearing, transporting and fixing in position including all lead and lift etc. complete as per approved designs and drawing and as directed by Engineer.				
		Fixed bearing (Capacity up to 250 MT)	No.	12.00	53550.00	642600.00
		Sliding bearing (Capacity up to 250 MT)	No.	12.00	53550.00	642600.00
		Note: The rate is for finished item complete and paid only after fixing in position below the girder.				

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6	NS/6	Load testing of one composite steel /Span Designing and Load testing of one composite girder/ Span as selected by the Engineer confirming to Rly. Standard's with loads to be applied and removed incrementally etc. complete as per special condition and specification of contract, as per relevant IS/IRC codes with all contactors labour supervisor, T & P's all taxes, equipment, leading materials instruction of load test jacks etc., dial gauges, including all lead and lift.	Each	1.00	256339.2	256339.00
7	NS/7	Conducting Pile low strain integrity test as per ASTM D 5882- 96 code of American Society for Testing on cast -in situ RCC pile of 1200 mm diameter inclusive of analysis with all contractor's equipment, manpower, site preparation, lead and lifts etc. complete as per standard procedure, and as directed by the Engineer in charge. Note: - Rate is inclusive All equipment, all labour and consumable required & Mobilization of equipment.	Each	222.00	1199.62	266316.00
		Total Amount of Schedule – D				4,55,04,142.00

Schedule of Approximate quantities

Sr. No.	Item No.	Description	UNIT	Quantity	Rate	Amount in Rs.
1	NS/1	AutoCAD Drawings: Preparation / Alternation and submission of drawings such as general arrangement drawings, phase drawings, scheme plan, structural drawings etc. On Auto Cad as per details and directions given by the Engineer in charge including plotting and submitting in standard inkjet film of 50 micron and CD, submitting check prints on A3/A2/A0 size papers and final print complete and as per instructions of Engineer in charge.	Per Sqcm	100000.00	0.4	40000.00
2	NS/2	Site Office Providing, arranging, managing and maintaining 500 sq.ft. well furnished AC office and well equipped Laboratory with 3 tables, 10 chairs, 2 steel almirah, one computer with printer & operator, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has rented /constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension is provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	LM	1.00	500000	500000.00

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3	NS/3	Providing & fixing Safety Screen as per RDSO Drg. No. EL / C / 0068 MOD " E " , on the Parapet with necessary fixtures etc. as per detailed drawing including contractor's own materials, labours, tools and plants, etc. complete.	Sqm	510.00	1179.80	601698.00
4	NS/4	Making and supplying of check rails of 52 kg/ 60 kg rails of various lengths for level crossing as per approval drawings.	Each LC	4.00	2997	11988.00
5	NS/5	Providing, fixing and maintaining MS fabricated traffic barricading of 2.50m height on either side of the carriage way / portion of the carriage way closed to the traffic including provision of all sign boards/ bollards and warning lights etc. as per the Engineer in charge.	Meter	250.00	331.49	82873.00
		Total Amount of Schedule – E				12,36,559.00

Schedule- F**Schedule of Approximate quantities**

Sr. No.	Item No.	Item of work	UNIT	Quantity	Rate	Amount in Rs.
1	USSOR	USSOR of W. Rly. items requiring for successful completion of the work as advised by in-charge of the work.		LS		1500000.00
Total Amount of Schedule – F						15,00,000.00

Total of Schedule A, B, C, D, E & F	Rs. 31,78,85,862.00
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END OF TENDER DOCUMENTS