



E-Tender No. MUMBAI/N/EN/ROB/LC -118, Date 11.01.2017

**For**

**Construction of one ROB including approaches complete in lieu of existing LC no. 118 at KM 228/30-32 between Vedchcha - Hansapore Railway station of Virar – Surat Section of Mumbai Division of Western Railway.**

**FINANCIAL BID  
(PACKET-B)**

**TENDER DOCUMENT  
January 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**  
**7<sup>th</sup> Floor, New Administrative Building, D.N. Road, Mumbai-400001**  
**NOTICE FOR INVITING BIDS (Online i.e. E-Tender)**

Tender No	<b>MUM/N/EN/ROB/LC – 118, date 11.01.2017</b>
Name of work	<b>Construction of one ROB including approaches complete in lieu of existing LC no. 118 at KM 228/30-32 between Vedchcha - Hansapore Railway station of Virar – Surat Section of Mumbai Division of Western Railway</b>
(a) Type of Tender	Open Tender (Single stage two packet ).
(b) Type of Contract	Works Contract.
(c) Tender Value	<b>Rs. 34,75,10,738.00/-</b>
(d) Completion Period	<b>18 months</b>
(e) Earnest Money	<b>Rs. 50,00,000.00/- (Paid through Demand Draft/ banker's Cheque, FDR payable in favour of “ Dedicated freight Corridor corporation of India Limited, Mumbai”)</b>
(f) Cost of Tender document	<b>Rs 10000/- To be paid by D.D./Banker's Cheque in favour of DFCCIL payable at Mumbai</b>
(g) Tender Processing Fee	<b>Rs 7,500/- plus taxes and duties as applicable (non refundable) through e- payment while uploading of tender</b>
(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:	<b>Chief Project Manager (North), Mumbai Dedicated Freight Corridor Corporation of India Limited/Mumbai, 7<sup>th</sup> Floor, New Administrative Building, D.N. Road, Mumbai-400001</b>
(k) E-Tendering Web Site	<b>E-tendering site- <a href="http://www.tenderwizard.com/DFCCIL">www.tenderwizard.com/DFCCIL</a></b>  Help: Please contact Tender wizard helpdesk at 011-49424365
(L)Pre bidding Conference	<b>On 02.02.2017 at 11.00 AM at office of Chief Project Manager(North) Mumbai, 7<sup>th</sup> Floor, New Administrative Building, DN Road, 400001</b>

<b>DATE &amp; TIME SCHEDULE</b>	
Date of Uploading of NIT & Other Documents (Online Publishing date)	<b>13.01.2017 at 11.00 Hrs.</b>
Documents download/Sell date (Online)	<b>From 16.01.2017 at 11.00 Hrs.</b>
Bid submission Last date (Online)	<b>21.02.2017 up to 15.00 Hrs.</b>
Last date of submission of originals of statutory documents i.e. EMD & Tender Document Charge	<b>01.03.2017 up to 18.00 Hrs.</b>
Bid Opening date & Time (online)	<b>02.03.2017 at 15.00 Hrs.</b>

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

**SUMMARY OF PRICES**

Name of work:- Construction of one ROB including approaches complete in lieu of existing LC no. 118 at KM 228/30-32 between Vedchcha - Hansapore 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 Navsari division.)	Rs. 2,81,82,462.00	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. 13,83,12,588.00	
3.	Execution of all works as per Schedule "C" (Items as per SOR 2015-16 of State Govt. Gujarat R&B Navsari division.)	Rs. 13,60,53,611.00	
4	Execution of all works as per Schedule "D" (NS Items as per Western Railway )	Rs. 4,37,99,750.00	
5	Execution of all works as per Schedule "E" (NS Items as per Western Railway )	Rs. 11,62,327.00	
	<b>Grand Total</b>	Rs. <b>34,75,10,738.00</b>	

Notes:

- (i) The above prices are inclusive of all taxes, duties including Excise duty, Sales Tax, Octroi, Local levies, Works Contract Tax 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.
- (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 one ROB including approaches complete in lieu of existing LC no. 118 at KM 228/30-32 between Vedchcha - Hansapore 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	27007A	11316.00	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 up to 3.0 m	318.15	Cum	3600186.00
1(a)	27007B	710.00	(b) Depth from upto 3.0 m to 6.0 m.	372.69	Cum	264610.00
2	DSR 2.33.2	230.00	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 60cm girth upto & including 120cm girth.	879.81	No.	26394.00
3	27039	5009.00	Empty boring through all sorts of strata for providing 1.20 m dia. RCC bored piles to required depth including providing necessary casing pipe with all plants and equipments as required as per detailed specifications. (Excluding Concrete & Reinforcement)	2450.26	RMT	12273352.00

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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	2.00	Load testing of foundation piles including loading with necessary kentledge or any other suitable method as directed. (Initial load Test).	37865.91	Each	75732.00
4(b)	27044	2.00	Load testing of foundation piles including loading with necessary kentledge or any other suitable method as directed. (Routine load Test).	37865.91	Each	75732.00
5	27001A	194.00	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. (Chipping and dressing of the RCC piles upto 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	112078.00
6	27004AA	235.00	Providing and laying filter media 600mm thick as directed at the back of abutments, returns and wing walls as per detailed specifications.	792.85	Sqm.	186320.00

Signature of tenderer (s)

Date:

For CPM/NORTH/MUMBAI/DFCCIL

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7	26161	558.00	Providing and laying Hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads 250 gm/sq.mt area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC 35 and 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.	166819.00
8	26163	1407.00	Supplying and fixing cat eye (stimsonite) made out from Acrilo beutile sterine injuction high compressed molding 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.	528638.00
9	27050A	235.00	Providing and laying weep hole in abutments, 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	12674.00
10	27072	2419200.00	Providing and Fixing in position fully moulded restrained elastomeric bearings as per detailed drawings.	1.11	cu.cm.	2685312.00
11	27101B	2.00	Providing and fixing marble slab including transporting, engraving and painting all complete. Size 60cm x 60cm x 4cm.	800.93	Each	1602.00
12	27098A	262.00	Providing G.I. 100 mm diameter water spouts including necessary iron gratings as per drawings.	506.01	Each	132575.00
13	M664	1137.00	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.	808.00	RMT	918696.00

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14	26B008	12200.00	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and depositing on the road side slope as directed.	124.23	Cum	1515606.00
15	26B004E	7371.00	Earth work for embankment for SUBGRADE with CBR 7.0 % is including breaking clods, dressing with all lead and lift and including watering, rolling and consolidation of subgrade in layers at O.M.C. to required dry density, including filling the depressing, which occurs during the process using power roller of 8 tonne to 10 tonne all as per specification.	281.79	Cum	2077074.00
16	26054A	2.00	Supplying & fixing road sign board of MS plates and angle iron including painting, lettering, etc. complete including fixing in CC 1:4:8 with necessary excavation etc complete as per IRC Type design - Non-reflective type.	2103.83	Each	4208.00
17	26089AA	2000.00	Supplying and fixing reinforced concrete heavy duty non-pressure pipe with collars for culverts carrying heavy traffic as per IS 458-1991 specifications including setting the pipes in C.M. 1:2 watering and laying (To level of slopes) of class NP3 of following internal diameters. For 300 m Dia. Pipe.	395.92	Rmt	791840.00
18	24008C	82.00	Constructing Manhole with RCC top slab in 1:2:4 mix ( 1 cement 2 course sand 4 graded stone aggregate 20mm nominal size) foundation concrete 1:3:6 ( 1 cement 3 course sand 6 brick bats 40+50 mm size) inside plastering 15mm thick with cement Mortar 1:5 ( 1 cement : 5 coarse sand) finished with a floating coat of neat cement and making channel in	21761.46	Each	1784440.00

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			cement concrete 1:2:4 mix (1-cement : 2-coarse sand : 4-stone aggregate 20 mm nominal size) finished smooth complete including curing and testing (i) inside size 900mm*1200mm and 1.5M deep including CI cover with frame size 560 mm Dia. total weight of cover and frame to be not less than 128 kg (Wt. Of cover 64 kg and Wt. Of frame 64 kg (A) With 230 mm thick wall of brick masonry using brick having crushing strength not less than 35 kg/sq.cm in cement mortar 1:5 (1 cement :5 Coarse sand) (2)C Type depth 2.25 m for 150 mm dia. Sewer.			
19	24013	70.00	Constructing brick masonry road gully chamber 500 mm x 450 mm x 600 mm in cm (1:6) including excavation, refilling & removal of surplus earth within 30mt lead, inside & outside plaster in CM 1:3, marking inside channel in CC, CI steps including 500 mm x 450 mm CI horizontal grating with frame complete as per drawing & standard specification as per direction of engineer in charge.	1665.49	Each	116584.00
20	26093B	2.00	<b>Informatory Sign:-</b> Providing and fixing sign boards made from 2mm aluminium sheet; size 80 x 60cms. 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; 3.1m long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3mm 75x75x6mm as required; painted with best quality epoxy coatings in black and	4099.59	No.	8199.00

			white bends. the 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 etc. complete under the supervision of engineer in charge.			
21	26094B	2.00	<b>Regulatory / Mandatory sign:</b> - Providing and fixing sign boards made from 2mm aluminium sheet; size 60cms. diameter circle 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; 3.1m long stand post and frame fabricated from suitable size iron angle of 35 x 35 x 3mm 75x75x6mm as required; painted with best quality epoxy coatings in black and white bends. the 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 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.	3346.13	No.	6692.00
22	26098B	2.00	<b>Direction sign (Junction board):-</b> Providing and fixing sign boards made out of 2mm aluminium sheet; size 244 x 122cms. rectangle as 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	20032.34	No.	40065.00

			<p>sheeting as per latest MOST Specifications; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 no.) 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>			
23	26099B	2.00	<p><b>Distance information / Destubatuib sign:-</b> Providing and fixing sign boards made out of 2mm aluminium sheet; size 180 x 120cms. rectangle as per the design of IRC-67-1977 pre treated with phosphating process &amp; 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; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 no.) stand post and frame fabricated from suitable size iron angle of 50 x 50 x 5mm 75 x 75 x 6mm 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>	16166.06	No.	32332.00

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24	26109B	2.00	<b>Danger plate sign</b> :- Providing & fixing sign board made out of 2mm aluminium sheet, size 30cms diameter circle, pre-treated with phosphating process and acid etching, painted with one coat of epoxy primer and two coats of best quality epoxy paint reflectorized with retro reflective sheeting as per latest M.O.S.T. specifications (As per attached drawing).	528.23	No.	1056.00
25	14006A	848.00	Providing and laying chequered terrazo 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.	554.49	Sqm	470207.00
26	M942	2051.00	50 mm Dia PVC pipe for entry cable pipe.	133.32	Rmt	273439.00
			<b>Total Amount of Schedule – A</b>			<b>2,81,82,462.00</b>

Signature of tenderer (s)

Date:

For CPM/NORTH/MUMBAI/DFCCIL

<b>Schedule of Approximate quantities</b>						
<b>Sr. No.</b>	<b>Item No.</b>	<b>Total Qty.</b>	<b>Item of work</b>	<b>Rate</b>	<b>UNIT</b>	<b>Amount in Rs.</b>
1	State NS/1	2.00	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	Hectore	64112.00
2	State NS/2	2.00	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	L.S.	25250.00
3.	State NS/3	370.00	Providing & filling in foundation with ordinary cement concrete <b>M 15 mix</b> and providing necessary vertical pin headers including formwork vibrating ramming & curing complete.	2622.97	Cum.	970499.00
4.	State NS/4	5666.00	Providing and casting in situ controlled cement concrete <b>M-35 for RCC bored pile from 1.00 &amp; 1.20 m. dia.</b> 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	4842.95	Cum	27440154.00

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			detailed specifications. (Excluding Reinforcement).			
5.	State NS/5	2849.00	Providing and casting in-situ controlled cement concrete of <b>M35 grade for RCC work for Pile cap ,foundation for pier/abutment/ Stair Case/retaining walls</b> with 20/40mm down coarse aggregate of the required size for any depth 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.	4807.60	Cum.	13696852.00
6	State NS/6	251.00	Providing and casting in-situ controlled cement concrete of M35 grade for RCC work <b>for Retaining walls</b> with 20/40mm down coarse aggregate of the required size for any depth 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.	4687.41	Cum.	1176540.00
7	State NS/7	669.00	Providing and casting in situ controlled cement <b>M35 for RCC work in piers, abutment and return wall</b> as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete.  <b>A) height from 0.0 to 5.0 m</b>	4885.37	Cum.	3268313.00

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8	State NS/8	267.00	Providing and casting in situ controlled cement <b>M35 for RCC work in piers, abutment and return wall</b> as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete. <b>A) height from 5.0 to 10.0 m</b>	4226.85	Cum.	1128569.00
9	State NS/9	837.00	providing and casting in situ controlled cement concrete <b>M35 for RCC works on pier cap, abutment cap and dirt wall</b> including controlled cement concrete or pedestals of required drawings, centering shuttering, scaffolding wherever necessary laying vibrating curing and finishing complete	4951.02	Cum.	4144004.00
10	State NS/10	2932.00	Providing and casting in situ controlled cement concrete M-35 for R.C.C. work <b>in superstructure</b> including centering, shuttering scaffolding, ramming, vibrating curing and finishing complete. (A) T-Beam and Deck slab type of superstructure. (I) Deck slab	4671.25	Cum.	13696106.00
11	State NS/11	10.00	Providing and casting in-situ controlled cement concrete of M-35 grade with minimum cement content 420kg/cum without admixture as per IS-456-2000, reinforcement cement concrete with 20mm downgraded crushed stone aggregates of required size <b>in super structure for approach slab</b> including required formwork, shuttering and supporting arrangement (excluding cost of reinforcement) and transporting concrete from batching plant by transit mixture placing it in position, compacting with needle vibrator including curing with all labour, material, machinery all lead, lift etc. complete as per drawing and	4111.71	Cum.	41117.00

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			technical specification of MORTH & as directed by Engineer incharge.			
12	State NS/12	1079.00	Providing and casting in -situ controlled cement concrete of <b>M 40 grade for RCC crash Barrier</b> with 20 mm down coarse aggregate of the required size including formwork, shuttering, placing in position, consolidation with mechanical vibrators curing finishing, deshuttering carefully, marking good the damages, fixing embedment, inserts, pockets, wherever necessary as directed and as per drawing with F3 type exposed concrete finish and formwork as directed by Engineer - in -charge, etc. complete as per specification.	4050.10	Cum.	4370058.00
13	State NS/13	27790.00	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 <b>system to all concrete surfaces</b> exposed to atmosphere in substructure and superstructure including cost of material labour, transportation, scaffolding and preparing the surface by cleaning, washing, 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).	182.81	Sqm.	5080290.00
14	State NS/14	240.00	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	9065.76	R.mt	2175783.00

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			etc. complete. The rate is finished item complete and will be paid after fixing in all respect. The Contractor shall procure Strip Seal Expansion Joint, confirming to relevant MORTH specification from M/s. Sanfield (India) Ltd. / METCO or from any other reputed manufactures of Strip Seal Expansion Joint with prior approval of Engineer-in-charge.			
15	State NS/15	2.00	Providing Pylon consist of cast-in-situ concrete of M30 grade exposed finish as per drawing and as directed by engineer in charge. Rate includes providing required shuttering and form work but excluding stone slab & carving. (Reinforcement shall be paid in respective item.)	3809.72	No.	7619.00
16	State NS/16	4587.00	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 fascia panel. 2. Fascia 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 fascia elements and laying of the PP Geo-synthetic 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 panel and levelling pad (PCC M 15) at bottom of fascia panel as per approved layout.	5913.83	Sqm	27126738.00

**MUMBAI/N/EN/ROB/LC-118, Date 11.01.2017**

17	State NS/17	4423.00	Construction of Granular Sub Base (GSB) by providing coarse graded material of grading-II, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MORTH specification.	788.81	Cum	3488907.00
18	State NS/18	3686.00	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tripper to site, laying in uniform layers with paver in sub base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	950.41	Cum	3503211.00
19	State NS/19	14742.00	Providing and applying PRIMER COAT with bitumen emulsion using emulsion pressure distributor at the rate of 0.75 kg/sqm on prepared surface of granular base including clearing of road surface using mechanical brooms. 7.5 kg / 10 Sqm.	23.23	Sqm	342457.00
20	State NS/20	1364.00	Providing & laying DENSE GRADED BITUMINOUS MACADAM with batch type Drum Mix Plant (DMP) using 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	4029.90	Cum.	5496784.00

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			compaction complete, including providing & laying tack coat 2.5kg /10sqm all as per MORTH specification.			
21	State NS/21	775.00	Providing & laying BITUMINOUS CONCRETE with batch type Drum Mix Plant (DMP) using crushed aggregates of specified grading, premix with bitumen grade 60/70 bituminous binder @ 5.5 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, all as per MORTH specification.	4583.38	Cum	3552120.00
22	State NS/22	164.00	Providing and laying in-situ controlled cement concrete of M 40 grade for RCC work for <b>RCC pedestals &amp; seismic arrester over piers and abutment</b> including necessary scaffolding formwork, centring, mixing in mechanised batch mix plant, transporting placing compacting by mechanical vibrators, finishing and curing and casting, finishing with decorative panel as per drawing etc. complete excluding reinforcement as directed by engineer and as per specifications.	5071.21	Cum	831678.00
23	State NS/23	3836.00	Providing and laying 25mm thick Mastic asphalt wearing course with paving grade bitumen meeting the requirements given in the table 500-29 prepared by using mastic cooker and laid to required level and slope after with bitumen pre-coated fine	330.27	Sqm	1266916.00

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For CPM/NORTH/MUMBAI/DFCCIL

			grained hard stone chipping and at an approximate spacing of 10cm centre to centre temperature of surface is not less than 1000c , protruding 1mm to 4mm over mastic surface, all complete as per clause 515.Bituminous Wearing Course=50mm Thick B.C + 25mm thick mastic Asphalt.			
24	State NS/24	317.00	Providing and casting in situ reinforced cement concrete M35 grade controlled cement concrete in <b>RCC Chamber, kerb, protection wall around pier</b> etc. using 6mm to 20mm machine crushed well graded stone aggregate, sand of approved quality, OPC 53 grade cement with contractor's own concrete mix design as approved by AMC etc complete as per specification. The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transportation, curing, vibrating, placing in position, shuttering, formwork, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead & lift with contractors labour, tools & plants machineries, as required with F3 type exposed concrete finish and form mark.	3809.72	Cum	1207681.00
25	NS/25	18100.00	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 Technical Specifications or as directed by Engineer. (Providing and filling sand behind abutments and between returns in layers as directed).	708.00	Cum	12814800.00

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26	NS/26	12	Carrying out high strain dynamic test on any working pile/test pile as selected by the engineer in charge. The test shall be carried out by agency approved by engineer in charge as per IRC notification 54 and submitting results / reports in three hard copies with soft copy in CD. Item includes all necessary arrangements required for the test. (with guided frame arrangement)	37491.00	No.	449892.00
27	NS/27	185.00	Providing and casting in situ controlled cement M30 for RCC work in retaining wall as per drawing including centering shuttering scaffolding where necessary laying vibrating cutting and finishing complete.	4765.18	Cum	881558.00
28	NS/28	8.00	Providing Vertical Joints between retaining walls, abutments, etc. with G.I. sheet 300 mm wide & 1.6 mm thick with required holes and holding arrangement & with necessary asphalt pad sealing the joint with filler material.	316.13	Rmt	2529.00
29	NS/29	698.00	J type M20 Anchor bolt as per drawing including threading as shown in the drawing for standard octagonal pole type BOP 7030 all complete.	37.05	Kg	25861.00
30	NS/30	6.00	Structural Steel :- Base plate of 220 x 220 x 12 mm thick with adjustment of hole. MS plate 6mm thick 20mm wide 150mm long including welding to the base plate all complete.	6031.72	Quintl	30159.00
			<b>Total Amount of Schedule – B</b>			<b>13,83,12,588.00</b>

## Schedule- C

## Schedule of Approximate quantities

SN	Item No.	Total Qty.	Item of work	Rate	UNIT	Amount in Rs.
1.	27020A	185.00	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.	55863.10	MT	10334673.00
2.	27043C	1056.00	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories <b>for Pile</b> 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	47043828.00
3.	27047A	358.00	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories <b>for Pile cap, foundation for pier/ abutment /return/retaining wall</b> 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.	38606.24	MT	13821034.00

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4.	27109 & 27111	430.00	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories <b>for piers, abutments, pier cap, abutment cap, pedestal, seismic arrester and retaining wall</b> 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	19597353.00
5.	27119	643.00	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories <b>for super structure</b> 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.	44298.60	MT	28484000.00
6.	27121	295.00	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories <b>for super structure main girders, diaphragm or cross girder</b> 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	44990.45	MT	13272183.00

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			drawing.			
7.	M570	5.00	<p>Fabricating, supply and erecting in position Standard Structural steel sections conforming to IS 2062 for railing or other works using ISMB, ISA, ISMC, MS plate, flat, square bars, pipe, square pipe, etc. including welding, cutting, wastage, etc. complete. The rate is inclusive of welding rod, supply &amp; fixing of correct size nut, bolts, washers, paint, with all contractor's materials, labour, tools &amp; plants, in bolted / welded construction as directed by Engineer-in-Charge.</p> <p>Anticorrosive paint must be applied before applied any paint. The rate shall inclusive of providing and applying Epoxy Coating of approved shade, brand and manufacture on new structural steel work with one coat of 30 micron (DFT) of Epilux 4 Zinc Rich primer of Berger Paint India Ltd or equivalent as primer and Two coat each of 35 micron (DFT) of Epilux 84 High Gloss CR enamel of Berger Paint India Ltd or equivalent at all levels. (Total DFT is 30+35+35=100 microns)</p> <p>The waste cut pieces shall not be included in the paying quantity. The work shall be done as per drawing and specification. The work shall be carried out as per IS:800, IS:816</p>	45419.70	MT	227099.00
8.	27097A	2090.00	<p>Providing and fabricating MS pipe railing on Crash Barrier with NB80 medium class MS pipe, anchor bars, MS plate, MS flat etc. as per drawing including providing and 3 coats of epoxy painting (1 coat of primer and 2 coats of paint as per manufacture's specification)</p>	1073.63	Rmt	2243887.00

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			of approved brand and manufacture to give an even shade of two or more coat as directed by Engineer-in charge. Addition to that anticorrosive paint must be applied before any paint as directed by Engineer - in -charge. Item complete as per specification and drawing.			
9	27105A	32	Providing and placing the reinforcement in designed position, fixing, lowering in position HYSD of TMT bars Fe500 D grade conforming to IS 1786 <b>for kerb, protection wall etc.</b> all categories & depth, at all levels. The rates includes for supply, loading, unloading, transporting to site, cutting, bending, hooking, placing, tying in position with contractor's own black annealed binding wire, welding, forming the cage and lowering it in position in pile bore etc. Welding and supporting in position to ensure lines and levels during concreting, maintaining proper cover / spacing, all leads & lifts, etc. including contractor's own equipment, labour, supervisor, taxes, machineries, etc. complete as per drawings and specification.	32173.55	MT	1029554.00
			<b>Total Amount of Schedule -C</b>			<b>13,60,53,611.00</b>

## 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 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	MT	364.00	94629.73	34445222.00

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		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	5298.00	607.09	3216363.00
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 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				

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		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 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 <b>on running line /Running electrified line / under block period</b> 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	140.00	16825.91	2355627.00
	NS/3 (b)	launching of steel girder spans including its components <b>on non- running line</b> 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	224.00	3181.19	712587.00
4	NS/4	Fabricating, supplying and erecting in position standard structural steel sections manufactured from IS approved 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	MT	20.00	71620.22	1432404.00

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		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.	20.00	53550.00	1071000.00
		Sliding bearing (Capacity up to 250 MT)	No.	20.00	53550.00	1071000.00
		Note: The rate is for finished item complete and paid only after fixing in position below the girder.				
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 contractors 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

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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	162.00	1199.62	194338.00
		<b>Total Amount of Schedule – D</b>				<b>4,37,99,750.00</b>

## 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 if 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	442.00	1179.80	521472.00
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	6.00	2997	17982.00
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
		<b>Total Amount of Schedule – E</b>				<b>11,62,327.00</b>
		<b>Total of Schedule A, B, C, D, &amp; E</b>				<b>Rs 34,75,10,738.00</b>

**END OF TENDER DOCUMENTS**

Signature of tenderer (s)

Date:

For CPM/NORTH/MUMBAI/DFCCIL