



E-Tender No. MUMBAI/N/EN/ROB/LC - 68

For

NAME OF WORK :- Construction of one ROB including approaches in lieu of level crossing No. 68 at IR chainage 149/22-24 between Sanjan and Bhilad stations of Vaitarna - 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 – 68 Dated 28.09.2017	
Name of work	NAME OF WORK:- Construction of one ROB including approaches in lieu of level crossing No. 68 at IR chainage 149/22-24 between Sanjan and Bhilad stations of Vaitarna - 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	₹ 43,32,91,111.00	
(d) Completion Period	18 months	
(e) Earnest Money	₹ 50,00,000/- (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 10,000/- plus GST (18%) i.e. 11800/- To be paid by D.D./Banker's Cheque in favour of DFCCIL payable at Mumbai	
(g) Tender Processing Fee	Rs7,500/- plus GST (18%), plus 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 13.10.2017 at 11.00 AM at office of Chief Project Manager(North) Mumbai, 7th Floor, New Administrative Building, DN Road, 400001	
DATE & TIME SCHEDULE		
Date of Uploading of NIT & Other Documents (Online Publishing date)	29.09.2017 at 11.00 Hrs.	

Signature of tenderer (s)
Date:

For CPM/NORTH/MUMBAI/DFCCIL

MUMBAI/N/EN/ROB/LC-68

Documents download/Sell date (Online)	From 30.09.2017 at 11.00 Hrs.
Bid submission Last date (Online)	01.11.2017 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 one ROB including approaches in lieu of level crossing No. 68 at IR chainage 149/22-24 between Sanjan and Bhilad stations of Vaitarna - 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 & WR.)	₹ 3,01,99,533.39	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.)	₹ 14,86,33,444.72	
3.	Execution of all works as per Schedule "C" (Items as per SOR 2015-16 of State Govt. Gujarat R&B Valsad division.)	₹ 11,26,92,512.16	
4	Execution of all works as per Schedule "D" (NS Items as per Western Railway)	₹ 13,93,00,415.45	
5	Execution of all works as per Schedule "E" (NS Items as per Western Railway etc.)	₹ 9,65,205.00	
6	Execution of all works as per Schedule "F" (USSOR Items as per Western Railway)	₹ 15,00,000.00	
	Grand Total	₹ 43,32,91,110.72	
		₹ 43,32,91,111.00	

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

SCHEDULE OF PRICES & TOTAL PRICES

Name of work:- Construction of Road Over Bridge in lieu of existing LC No.68 at KM 149/22-24 between Sanjan - Bhilad Railway station of Mumbai-Delhi - Trunk route of Western Railway.

SCHEDULE -A

Schedule of Approximate quantities

SN.	Item No.	Total Qty.	Item of work	UNIT	Total Rate	Amount in Rs.
1	26117C	4.75	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.	Ha	32056.39	152267.85
2	DSR-2014 Item No. 2.33.2, Pg. 75	15.00	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	No.	879.81	13197.17
3	27007A	15500.00	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 upto 3.0 m and lead upto 100 m for 10 cum	Cum	318.15	4931325.00
4	27009	2609.50	Excavated in large boulders and soft rock by welding including shoring, strutting and dewatering as necessary and disposing of the excavated stuff as directed.	Cum	445.41	1162297.40

5	27010B	1016.70	Earth work in Excavation by mechanical means (Hydraulic excavator/manual means) over areas (exceeding 30 cm in depth. 1.5 m in width as well as 10 sqm on plan) including shoring, dewatering, disposal of excavated earth,etc. all complete, lead up to 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. Hard rock (blasting prohibited)	Cum	1041.31	1058699.88
6	27004AA	646.20	Providing and laying filter media 600mm thick as directed at the back of abutments, returns and wing walls as per detailed specifications.	Sq.m.	792.85	512339.67
7	26161	886.00	Road marking with hot applied thermoplastic compound with reflectorising glass beads on road surface providing and laying hot applied thermoplastic compound 2.5 CM thick including reflectorising glass bends @ 250 gms /sq mt area thickness of surface applied glassbend as per IRC .35 the finished surface to be level uniform and free from streaks and holes.	SQM	298.96	264878.56
8	26163	365.00	Make out acrylic strene acrylonitrile or high impact polysteren fitted with molded of methacrylate (MMC Prismatic type) reflector cube cornors reflection design filled with tightly adhering potting compound as per ASTM D 788 size 11.5 x 7.0 x 1.6 cms or 10 x 10 x 1.75 cms provided with bitumenous adhesive in sufficient quality with each unit for fixing . no nail shall allow	Nos	375.72	137137.80

			for fixing . Reflection on both side, min reflection on both side, min reflective area 12.90 sq cms on each face . coefficient of lumination as per specification and compressive strength 13 tonnes at 23 degree centigrade (B) double side lenses			
9	27050A	646.00	Providing Weep holes in RCC abutment,Return wall and retaining wall with 100 mm dia AC pipe and non-corrodible grating and geotextile, extending through the full width of the structure with slope of 1V:20H etc. complete as per drawing and technical specification.	Nos.	53.93	34841.36
10	27072	3922330.00	Providing and Fixing in position fully moulded restrained elastometric bearings as per detailed drawings.	cu.cm.	1.11	4357708.63
11	27101B	2.00	Providing and fixing marble slab including transporting ,engraving and painting all complete. (ii) Size 60cm x 60cm x 4cm	Nos.	827.19	1654.38
12	27087	15.00	Providing Vertical Joints between retaining walls, abutments, etc. (providing Pre-moulded asphalt filler joints as per drawings 12mm)	Sqm	733.26	10998.90
13	27098A	304.00	Providing, fabricating and fixing in position GI Drainage Spout arrangements having 100 mm dia. Pipe B class with necessary bend, fixing to GI chamber, GI grating, providing and applying one coat of primer & two coat of anticorrosive paint, etc. complete as per drawing and as per specifications.	Nos.	506.01	153827.04

14	M664	1844.00	providing and fixing 100 dia runner and downtake GI pipe to drain water from drainage spout with necessary fixtures including cost of all materials, labours, bends, fixtures, specials ec. Complete as per drawing and Sp. And as per direction of engineer.	RMT	819.58	1511313.50
15	14034	269.55	Providing and fixing pre-cast Rubber Dye inter locking concrete block 60mm thick with grade of concrete M250 pneumatic compressed by mechanically pressed and as per approved design including 75mm Sand layer for levelling and filling the joint with sand in proper line and level etc complete.	Sqm	680.74	183493.47
16	11003	867.00	J type M20 Anchor bolt as per drawing including threading as shown in the drawing for standard octagonal pole type BOP 7030 all complete	Kg	37.05	32119.58
17	11001A	8.00	Structural Steel :- Base plate of 225 x 225 x 16 mm thick with adujstment of hole. MS plate 6mm thick 20mm wide 150mm long including welding to the base plate all complete	Quintal	6026.67	48213.36
18	M942	183.00	50 mm Dia PVC pipe for entry cable pipe	Rmt	133.32	24397.56
19	M942	1218.00	50 mm Dia PVC pipe for crash barrier	Rmt	133.32	162383.76
20	27005, 27006	23873.00	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.	Cu.m.	515.61	12309038.17

21	26008	7900.00	Box cutting the road surface to proper slope and chamber for making a base for road work including removing the excavated stuff and depositing on the road side slope as directed up to 50m lead .	Cu.m.	66.05	521826.60
22	26004EA	7759.00	Earth work for embankment for SUBGRADE with CBR 7 % 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. (E)From borrow area 3km lead	Cum	191.90	1488952.10
23	26095B	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 A) Non reflective type.	Nos.	5615.60	11231.20

24	26093B	2.00	<p>Providing and fixing sing 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 itching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest MOST Specifications; 3.1m long stand postand frame fabricated from suitable sizeiron angle of 35 x 35 x 3mm75x75x6mm as required; painted with best qualityepoxy coatings in black and whitebends. the details of symbol for eachboard shall details of symbol for eachboard shall be as per the instruction ofengineer 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.</p>	Nos.	3338.05	6676.10
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25	26094B	2.00	<p>Providing and fixing sing boards made out of 2mm aluminium sheet; size 60cms. diameter circle as per the design of IRC-67-1977 pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised 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.</p>	Nos.	2967.38	5934.76
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26	26098B	2.00	<p>Providing and fixing sing boards made out of 2mm aluminium sheet; size 244 x 122cms. rectangle as as per the design of IRC-67-1977 pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest MOST Specifications; 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>	Nos.	18047.69	36095.38
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27	26099B	2.00	<p>Providing and fixing sing boards made out of 2mm aluminium sheet; size 180 x 120cms. rectangle as as per the design of IRC-67-1977 pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro reflective sheeting as per latest MOST Specifications; 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 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>	Nos.	15538.85	31077.70
28	26109B	2.00	<p>Providing & fixing sign board made out of 2mm aluminium sheet, size 30cms diameter circle, pretreated with phospheting process and acid etching, painted with one coat of epoxy primer and two coats of best quality epoxy paint reflectorised with retro</p>	Nos	507.02	1014.04

			reflective sheeting as per latest M.O.S.T. specifications (As per attached drawing)			
29	14006A	622.00	Providing and laying chequered precast cement concrete tiles 22mm thick with aggregate of sizes upto 6mm in floors, treads of steps and landings on 20mm thick bed of C.M. 1:6 (1-cement : 6-sand) or L.M. 1:1.5(1-Lime putty : 1.5 coarse sand) joint with neat cement slurry with pigments to match the shade of the tiles. (up to 10 ton).	Sqm	474.7	295263.40
30	27100A	76.00	Providing PVC. 100 mm. diameter water spouts including necessary iron gratings as per drawings.	Each	187.86	14277.36
31	26161	136.00	Providing and laying Road marking with hot applied thermo plast 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)	Sqm	298.96	40658.56

32	27097A	319.00	Providing and fixing post and pipe railing as per detailed drawing including 3 coats of painting to steel works complete.	Rmt	1073.63	342487.97
33	26163	910.00	Supplying and fixing cat eye (Stimsonite) made out from Acrylo butyle styrene high compression injection moulding with reflector made of MMC (prismatic type of size 12cm x 6cm x 2.5cm) provided with bituminous adhesive 100g. with each unit for fixing. (High Intensity grade).	Nos.	375.72	341905.20
			TOTAL AMOUNT OF SCHEDULE-A			30199533.39

SCHEDULE -B						
Schedule of Approximate quantities						
SN.	Item No.	Total Qty.	Item of work	Unit	Total Rate	Amount in Rs.
1	State NS/1	2.00	Marking out the center line of the Bridge and various other component structures and complete lining out and leveling with theodolite, levels, including constructing necessary masonry pillars for lines and levels and establishing necessary bench marks etc. complete as directed.	L.S	12625.00	25250.00
2	State NS/2	516.80	Providing & filling in foundation with ordinary cement concrete M 15 mix and providing necessary vertical pin headers including formwork vibrating ramming & curing complete.	Cum.	2647.21	1368078.13
3	State NS/3	3300.20	Providing and casting in-situ controlled cement concrete of M35 grade for RCC work for pier & abutment foundations 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, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary as per specification and drawing.	Cum.	3967.28	13092817.46
4	State NS/4	6374.00	Providing and laying in position cement concrete of specified grade for trench filling excluding the cost of centering and shuttering - All work up to plinth level: 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum.	2460.36	15682334.64

Signature of tenderer (s)

Date:

For CPM/NORTH/MUMBAI/DFCCIL

5	State NS/5	504.00	Providing and casting in-situ controlled cement concrete of M30 grade for RCC work for Retaining walls foundations 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, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary as per specification and drawing.	Cum.	3841.03	1935879.12
6	State NS/6	1664.25	providing and casting in situ controlled cement M35 for RCC work in piers and abutment return wall as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete. A)height from 0.0 to 5.0 m	Cum.	4028.89	6705067.10
7	State NS/7	708.93	providing and casting in situ controlled cement M35 for RCC work in piers and abutment return wall as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete.A)height from 5.0 to 10.0m	Cum.	4251.09	3013745.06
8	State NS/8	1827.80	Providing and casting in situ controlled cement concrete M35 for RCC works on pier cap, abutment cap and dirt wall including controlled cement concrete or pedestals of required drawings, centering shuttering, scaffolding wherever necessary laying vibrating curing and finishing complete	Cum.	4081.41	7460001.20
9	State NS/9	161.00	Providing and casting in situ controlled cement concrete M40 for RCC works for Pedestal and Seismic Arrestor including controlled cement concrete or pedestals of required drawings, centering shuttering, scaffolding wherever necessary laying vibrating curing and finishing	Cum.	4207.66	677433.26

			complete			
10	State NS/10	3454.50	Providing and casting in situ controlled cement concrete M-35 for R.C.C. work in superstructure including centering, shuttering scaffolding, ramming, vibrating curing and finishing complete.(A) T-Beam and Deck slab type of superstructure. (I) Deck slab	Cum.	4793.46	16559007.57
11	State NS/11	2152.40	Providing and casting in situ controlled cement concrete M-35 for R.C.C. work in superstructure including centering, shuttering scaffolding, ramming, vibrating curing and finishing complete. (A) T-Beam and Deck slab type of superstructure. (II) Main and cross Girder	Cum.	4793.46	10317443.30
12	State NS/12	394.60	providing and casting in situ controlled cement M30 for RCC work in Retainng Wall Stem as per drawing including centering shuttering scaffolding where necessary laying vibrating curing and finishing complete.	Cum.	3902.64	1539981.74
13	State NS/13	1824.90	Providing and casting in -situ controlled cement concrete of M 40 grade for RCC crash Barrier 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.	Cum.	4080.40	7446321.96

14	State NS/14	25.20	Providing and casting in-situ controlled cement concrete of M-30 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 in super structure for approach slab 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 technical specification of MORTH & as directed by Engineer Incharge.	Cum.	4009.70	101044.44
15	State NS/15	36142.00	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 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, 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)	Sqm.	202.00	7300684.00

16	State NS/16	540.00	Providing and fixing in position Strip Seal Type Expansion Joint (for movement upto 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. The Contractor shall procure Strip Seal Expansion Joint, confirming to relevant MORTH specification from M/s.Sanfield (India) Ltd. / METCO or from reputed manufactures of Strip Seal Expansion Joint with prior approval of Engineer-in-charge.	R.mt	9065.30	4895263.96
17	State NS/17	2.00	Providing Pylon consist of cast-in-situ concrete of M30grade exposed finish as per drawing and as directed by engineer incharge. Rate includes providing required shuttering and form work but excluding stone slab & carving. (Reinforcement shall be paid in respective item.)	Nos.	3827.90	7655.80
18	State NS/18	2.00	Providing and casting in situ reinforced cement concrete M30 grade controlled cement concrete in RCC Chamber 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 client 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	Cu.m.	3827.90	7655.80

Signature of tenderer (s)

Date:

For CPM/NORTH/MUMBAI/DFCCIL

			& lift with contractors labour, tools & plants machinaries, as required with F3 type exposed concrete finish and form mark.			
19	State NS/19	341.10	<p>Providing and casting in situ reinforced cement concrete M30 grade controlled cement concrete in kerb, protection wall around pier, 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 client etc complete as per specification</p> <p>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 machinaries, as required with F3/U3 type exposed concrete finish and form mark</p>	Cum.	3827.90	1305696.69

20	State NS/20	0.00	Reinforced Earth Retaining Wall (Reinforced earth retaining walls have four main components as under: a) Excavation for foundation, foundation concrete and cement concrete grooved seating in the foundation for facing elements (facia material). b) Facia material and its placement. c) Assembling, joining with facing elements and laying of the reinforcing elements. d) Earthfill with granular material which is to be retained by the wall. Facing elements of RCC	Sqm	5913.83	23405767.46
21	State NS/21	4753.00	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.	Cu.m.	565.60	2688296.80
22	State NS/22	3961.00	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.	Cu.m.	735.28	2912444.08
23	State NS/23	15841.00	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.	Sq.m.	25.25	399985.25

24	State NS/24	1686.00	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 compaction complete,including providing & laying tack coat 2.5kg /10sqm all as per MORTH specification.	Cu.m.	4355.12	7342732.32
25	State NS/25	971.00	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.	Cu.m.	5335.83	5181090.93
26	State NS/26	8421.00	Providing and laying 25 mm thick 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 precoated finegrained 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 center to center in both directions, pressed into	Sq.m.	423.19	3563682.99

			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.			
27	State NS/27	246.00	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) Only crash barrier	Cum	3479.35	855920.10

28	State NS/28	287.00	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)	Cum	4153.73	1192120.51
29	State NS/29	9026.00	PRIMER & PROTECTIVE COATING-providing and laying the external decoative waterproff & Protective coating system for concrete and masonry shall be MASTERSEAL 200H , a single component elastomeric crack bridging acrylic coating applied at an average thickness of 50 micro DFT in two coat the product shall be applied on ssuitability primed substate using MASTERSEAL 399 as primer . The product must be crack bridging elongation type with elongation at break , exceeding 200% & tensile strength exceeding 2 MPa The system shall exhibit exellant bond strength with the substrate at least exceeding 1.0 MPa , when tested as per ASTMD 4541.	Sqm	182.81	1650043.06
			TOTAL AMOUNT OF SCHEDULE-B			148633444.73

SCHEDULE -C**Schedule of Approximate quantities**

Sr. No.	Item No.	Total Quantity	Item of work	UNIT	Rate	Amount in Rs.
					Total Rate	
1			Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for foundation of pier, abutment & 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.			
2		309.33	FOR OPEN FOUNDATION	MT	39934.54	12352882.46
3		292.28	FOR RETAINING WALL	M.T.	45575.24	13320731.15
4		515.00	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for super structure 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.	MT	44990.45	23170081.75
5		516.60	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for super structure 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	MT	44990.45	23242066.47

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			and detailed drawing.			
6		47.90	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for Seismic Arrestor, Pedestal and Dirt Wall.	MT	44770.27	2144495.93
7		31.60	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for piers, abutments, returns and 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.	MT	45575.24	1440177.58
8		256.10	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for approach slab, Crash barrier and Friction Slab	cu.cm.	44298.60	11344871.46
9	27109	300.10	Providing and placing in position High Yield Strength Deformed (HYSD) bars reinforcement (TMT Fe 500D grade) conforming to IS 1786 of all categories for piers, abutments, returns and 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.	MT	45575.24	13677129.52

10	27111	224.30	<p>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 cap, abutment cap, dirt wall and pedestal 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.</p>	MT	45575.24	10222526.33
11	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, squarebars, pipe, square pipe ,etc. including welding, cutting, wastage, etc. complete.</p> <p>The rate is inclusive of welding rod, supply & fixing of correct size nut, bolts, washers, paint, with all contractor's materials, labour, tools & 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.</p> <p>The work shall be done as per drawing and specification.</p>	MT	45419.70	227098.50

			<p>The work shall be carried out as per IS:800, IS:816</p>			
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12	27123	35.00	<p>Providing and placing the reinforcement in designed position, fixing, lowering in position HYSD of TMT bars Fe500 D grade conforming to IS 1786 for kerb, protection wall etc. 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.</p> <p>1) The waste cut pieces shall not be included in the paying quantity. 2) Black annealed binding wire shall not be included in the paying quantity. 3) The work shall be done as per execution drawing.</p>	MT	44298.60	1550451.00
			TOTAL AMOUNT OF SCHEDULE-C			112692512.16

SCHEDULE -D

Schedule of Approximate quantities

Sr. No.	Item No.	Total Qty.	Description of Work	UNIT	Rate	Amount in Rs.
1	NS/1	1249.00	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. 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	MT	94629.73	₹ 11,81,92,532. 77

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			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	9350.00	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 descents, crossing of track/obstruction etc. complete in all respect and as per direction of the Engineer.	Per Sq.m.	607.09	₹ 56,76,291.50
3	NS/3	0.00	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			

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			scaffolding and other temporary arrangements required for the purpose of 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 HSEFG 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.			
	(a)	339.00	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	16825.91	₹ 57,03,983.49
	(b)	911.00	launthing of steel girder span including its components on non-running line 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	3181.19	₹ 28,98,064.09
4	NS/4	20.00	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 paint conforming to IS:102 or Zinc chromate paint conforming to IS:104 followed by tow coats of Aluminium	MT	71620.22	₹ 14,32,404.40

			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 in position true to line and level POT cum PTFE bearings including cost of all materials, fixtures, preparing surface for receiving bearing, grouting of sleeves with non shrink high strength groute, loads testing of bearing, transporting and fixing in position including all lead and lifts etc. complete as per approved design & drawing and as directed by Engineer-in-charge under prestressed concrete girders as per approved drawings and special condition. Specification of contract. The contractor will supply design & drawing for this item.			
		48.00	Fixed bearing	Nos.	53550	₹ 25,70,400.00
		48.00	Sliding bearing	Nos.	53550	₹ 25,70,400.00
			Note: The rate is for finished item complete and paid only after fixing in position below the girder.			
6	NS/6	1.00	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	256339.20	₹ 2,56,339.20
			TOTAL AMOUNT OF SCHEDULE-D			₹ 13,93,00,415.45

SCHEDULE-E

Schedule of Approximate quantities

Sr. No.	Item No.	Total Qty.	Description	UNIT	Rate	Amount
1	NS/1	100000	Autocad Drawings : Preparation / Alternation and submission of drawings such as general arrangement drawings , phase drawings, scheme plan, structural drawings etd. On Auto Cad as per details and directions given by the Engineer in charge including plotting and submitting in standard inklet film of 50 micron and CD, submitting check prints on A3/A2/A0 size papers and final rint complete and as per insturctions of Engineer in charge.	Per Sqcm	0.4	40000.00
2	NS/2	1	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 actually 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. LS	LM	500000	500000.00

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3	NS/3	280	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	1179.8	330344.00
4	NS/4	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	2997	11988.00
5	NS/5	250	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	331.49	82873.00
			TOTAL AMOUNT OF SCHEDULE-E			₹ 9,65,205.00

SCHEDULE-F

Schedule of Approximate quantities

Sr.No.	Item No.	Item of work	Unit	Quantity	Rate	Amount (Rs.)
1	USSOR	USSOR of W.Rly. Items requiring for successful completion of the work as advised by in-charge of the work.	No.	1	1500000	1500000
Total Amount of Schedule-F						₹ 15,00,000.00

Total of Schedule A, B, C, D, E & F	₹ 43,32,91,110.72
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END OF DOCUMENTS
