



E-Tender No. MUM/N/EN/ROB/LC-49

**For**

**NAME OF WORK: - Construction of Road Over Bridge at IR km 96/4-10 in lieu of existing LC No. 49 at IR KM 97/18-20 between Palghar-Boisar Railway station of Mumbai-Delhi - Trunk route of Western Railway.**

**FINANCIAL BID  
(PACKET-B)**

**TENDER DOCUMENT**

April 2020

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



DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LTD  
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	MUM/N/EN/ROB/LC-49, Dated: 09.04.2020
Name of work	<b>NAME OF WORK: - Construction of Road Over Bridge at IR km 96/4-10 in lieu of existing LC No. 49 at IR KM 97/18-20 between Palghar-Boisar Railway station of Mumbai-Delhi - Trunk route of Western Railway.</b>
(a) Type of Tender	Open Tender (Single stage two packet).
(b) Type of Contract	Works Contract.
(c) Tender Value	<b>₹ 43,35,08,406/-</b>
(d) Completion Period	<b>18 months</b>
(e) Earnest Money	<b>₹ 50,00,000/- ( 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 10,000/- plus GST (18%) i.e. 11,800/- 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 GST (18%), 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 General 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 01.05.2020 at 11.00 AM at office of Chief General Manager (North) Mumbai, 7<sup>th</sup> Floor, New Administrative Building, DN Road, 400001</b>

**MUM/N/EN/ROB/LC-49**

<b>DATE &amp; TIME SCHEDULE</b>	
Date of Uploading of NIT & Other Documents (Online Publishing date)	<b>11.04.2020 at 12.00 Hrs.</b>
Documents download/Sell date (Online)	<b>From 12.04.2020 at 11.00 Hrs.</b>
Bid submission Last date (Online)	<b>15.05.2020 up to 15.00 Hrs.</b>
Last date of submission of originals of statutory documents i.e. EMD & Tender Document Charge	<b>21.05.2020 up to 17.30 Hrs.</b>
Bid Opening date & Time (online)	<b>22.05.2020 at 12.00 Hrs.</b>

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

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Signature of tenderer (s)

Date:

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For CGM/NORTH/MUMBAI/DFCCIL

**SUMMARY OF PRICES**

**NAME OF WORK:** - Construction of Road Over Bridge at IR km 96/4-10 in lieu of existing LC No. 49 at IR KM 97/18-20 between Palghar-Boisar Railway station of Mumbai-Delhi - Trunk route of Western Railway.

**Railway Portion**

Sl. No.	Description of works (Railway portion)	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"	₹ 67,05,401.73	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"	₹ 7,12,875.35	
3.	Execution of all works as per Schedule "C"	₹ 39,78,159.80	
4	Execution of all works as per Schedule "D"	₹ 1,85,500.00	
5	Execution of all works as per Schedule "E"	₹ 3,16,45,462.87	
5	Execution of all works as per Schedule "F"	₹ 7,30,28,211.41	
6	<b>GST@ 12%</b>	₹ 1,53,49,263.19	
	<b>Grand Total</b>	₹ 12,79,10,101.05	

**Approach Portion**

Sl. No.	Description of works (Approach portion)	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"	₹ 1,58,51,286.68	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"	₹ 11,66,03,207.90	
3.	Execution of all works as per Schedule "C"	₹ 13,28,59,907.57	
4	Execution of all works as per Schedule "D"	₹ 3,58,40,303.00	
5	Execution of all works as per Schedule "E"	₹ 44,43,600.00	
	<b>GST@ 12%</b>	₹ 3,66,71,769.61	
	<b>Grand Total</b>	₹ 30,55,98,305.10	

Total cost of Tender

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.

Signature of tenderer (s)

Date:

For CGM/NORTH/MUMBAI/DFCCIL

**SCHEDULE****SCHEDULE OF PRICES & TOTAL PRICES**

**Name of work:** - Construction of Road Over Bridge at IR km 96/4-6 in lieu of existing LC No. 49 at IR KM 97/18-20 between Palghar-Boisar Railway station of Mumbai-Delhi - Trunk route of Western Railway.

Schedule of approximate Quantities						
Name of work:- LC NO : 49 At Rly km 96/4-6 ( DFCC Ch : 128.900) between palghar & boisar of (JNPT(Mumbai) - Dadri (Delhi)- WDFC route						
(Railway portion)						
Schedule of Quantity 'A to E':-(USSOR- ITEMS)						
S.n o.	SOR NO	DESCRIPTION OF WORK	Unit	Qty	Rate	Amount
<b>Schedule 'A' (USSOR-2011 Items )</b>						
1		Earth work in excavation for foundations and floors of the bridges, retaining walls etc., including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. incl. all lift, disposal of surplus soil upto a lead of 300 M, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge				
	192010					
	192012	Ordinary rock	Cum	621.51	345.74	214879.88
	192014	Hard rock ( blasting prohibited )	Cum	30.00	543.14	16294.20
2	192020	Extra for the quantity of works, executed in or underwater and/ or liquid mud including pumping out water as required	Cum	100.00	108.63	10862.80

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3	192040	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast - in Situ) using 20 mm graded crushed stone aggregate and coarse sand of approved quality in RCC raft foundation & Pile cap including finishing, Using Admixtures in recommended proportions ( as per IS 9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra	Cum	247.50	1275.50	315686.25
4	192050	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M20 grade (Cast - in Situ) using 20 mm graded crushed stone aggregate and coarse sand of approved quality in Abutment, pier, wing walls and return walls of Mass cement concrete above RCC raft Including finishing complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra	Cum	27.02	1275.50	34466.62
5	192060	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast - in Situ) using 20 mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 10 M from foundation top level, including finishing, Using Admixtures in recommended proportions ( as per IS 9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra	Cum			
	192061	Abutment & Pier	Cum	337.55	1602.80	541017.85
	192063	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall, etc.	Cum	233.90	1755.45	410602.14

Signature of tenderer (s)

Date:

For CGM/NORTH/MUMBAI/DFCCIL

**MUM/N/EN/ROB/LC-49**

6		Providing, Driving and installing Bored cast in situ Reinforced Cement Concrete piles of specified diameter and length below pile cap in M- 35 grade Design Mix Cement Concrete , using 20 mm graded crushed stone aggregate and coarse sand of approved quality, to carry a safe working load not less than specified, excluding the cost of casing pipe but including the cost of shoe and length of pile to be embedded in pile cap etc complete, concreting by machine batching, machine mixing, scaffolding, using Admixture in recommended proportion( as per IS 9103), if approved in design Mix, placing with tremie pipe, chipping off of pile top to remove laitance concrete above cut off level etc, pumping and bailing out water, with all labour material complete including crossing of tracks if required, as per approved drawing, specification and direction of the Engineer in charge. Length of the pile for payment shall be measured Up to the bottom of pile cap excluding the mud mat. Payment for cement, casing pipe & reinforcement shall be paid extra				
	192070					
	192072	1200mm Diameter pile	Metre	450.00	8966.64	4034988.00
7		Extra for chiselling in addition to boring of piles if chiselling is resorted to in hard rock or big stone boulders larger than 30 cm depth by any means i.e. by chisel or manual chisel and hammer method				
	192090					
	192091	1200mm Diameter pile	Metre	180.00	1823.23	328181.40
8		Centring and shuttering including strutting, propping etc. and removal of form for:				
	195030					
	195031	RCC raft foundation & Pile cap	Sqm	148.50	145.30	21577.05
	195032	Abutment, pier, wing walls and return walls	Sqm	523.93	282.60	148063.61
	195033	Abutment cap, Pier Cap, Deck Slab, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall, etc.	Sqm	2069.45	303.84	628781.92
		<b>Total</b>				<b>6705401.73</b>

Signature of tenderer (s)

Date:

For CGM/NORTH/MUMBAI/DFCCIL



Schedule 'B' (USSOR-2011 Items )						
1		Providing and laying in position Design Mix Cement Concrete M 40 grade machine mixed, machine vibrated and machine batched using 20 mm graded crushed stone aggregate and coarse sand of approved quality for the Cast in situ Prestressed (Post tensioned) concrete girder / Box girders for spans upto 18.3 M (centre to centre) Including finishing, using Admixtures in recommended proportions (as per IS 9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra (deck slab, pedestal, seismic arrester & crash barrier etc.)				
	201010					
	201012	With Soffit level from 9m above Bed Level to 12m above Bed Level	Cum	416.76	1822.52	759547.97
	201015	Deduct for casting of Slab instead of Girders (for any heights)	Cum	416.76	111.99	-46672.62
		<b>Total</b>				<b>712875.35</b>
<b>Schedule 'C' (USSOR-2011 Items )</b>						
1	33062	Ordinary Portland Cement grade-53 Grade	MT	823.64	4830.00	3978159.80
		<b>Total</b>				<b>3978159.80</b>
<b>Schedule 'D' (USSOR-2011 Items)</b>						
1		Providing and fixing hand rail by welding etc. to steel ladders railing, balcony railing and staircase railing including applying a priming coat of approved steel primer				
	81420					
	81423	G.I. pipes 40mm nominal bore (class B)	Kg	2000.00	92.75	185500.00
		<b>Total</b>				<b>185500.00</b>

Schedule 'E' (USSOR-2011 Items )						
	11010	Earth work in excavation as per approved drawings and dumping at embankment site or spoil heap, within railway land, including 50m lead and 1.5m lift, the lead to be measured from the centre of gravity of excavation to centre of gravity of spoil heap: the lift to be measured from natural ground level and paid for in layers of 1.5m each, including incidental work, as per specifications-in				
1	11011	All kinds of soils	Cum	200.00	109.36	21872.00
2	13140	Removal of excavated/slip earth/ debris/ malba from the site of works to any other place outside Railway land/premises, including all excavations, handling, re-handling, loading, unloading and leading, etc. all labour and material as a complete job. Removal of Earth (all kinds of soils)/ROCKS, BOULDERS including mud/slush, slipped earth in catch water drains, side drains, over berms in cutting, water way of bridges, over coping of toe/breast/retaining walls etc. including crossing of nallah, railway tracks, making/repairing approach roads if required, all lead, lift, ascent, descents, or any other obstruction. Earth spoils to be dumped outside the cutting or railway embankments as per direction of Engineer in charge	Cum	200.00	123.38	24676.00
3	14010	Dressing Surface (average excavation or filling upto 15 cm) including removing vegetation in all kind of soil. Payment against this item is to be made only if it is not included in earth work item	10sq m	100.00	71.60	7160.00
4	45020	Supplying anti corrosive reinforcement bars with fusion bonded epoxy coating after sand blasting, cleaning, induction, heating etc. of the reinforcement bars complete as per specification. including cutting, bending, placing in position and binding all complete.				
	45021	Upto 16mm dia bars	Kg	73896.13	65.26	4822461.41
	45022	More than 16mm dia bars	Kg	172424.30	62.63	10798934.04

**MUM/N/EN/ROB/LC-49**

5	94060	Providing & fixing Precast Chequered tiles conforming to IS:13801:1993, manufactured under mechanical vibration & hydraulic pressing machine in double layer; top layer of 10 to 12 mm thickness of Dolomite Powder, graded chips, fibre and UV stabilised iron oxide Lanexess colour and bottom layer of 1:3 CC mixed with galvanised steel fibre of approved quality, jointed with neat cement slurry mixed with pigment to match shade of tiles including rubbing and cleaning etc. complete on 20mm thick bed of cement mortar 1:4 of sizes :				
	94061	250mm x 250mm x 25mm thick	Sqm	245.52	397.46	97584.38
6	98020	Supplying and laying interlocking pre-cast CC block pavers of approved design factory manufactured of specified grade cement concrete on passenger platform, foot paths, circulating area, etc, including setting in position over 25mm thick bedding layer of fine sand, filling the joints with fine sand, levelling including compaction as per IS 15658				
	98021	60 mm thick blocks of M30 grade for light traffic	Sqm	50.00	503.8	25190.00
7	181023	Dismantling concrete kerb stones/rail level platform stones /concrete beams / slabs or similar light structural parts/ stones without appreciable damage including stacking	Cum	15.00	495.90	7438.50
8	181030	Demolishing R.C.C. work including cutting and stacking of steel bars and disposal of unserviceable material within 50m lead. (Extra payment for scraping, cleaning and straightening of bars to be made separately)	Cum	50.00	903.09	45154.50
9	183060	Dismantling including stacking of serviceable material and disposal of unserviceable material within 50m lead				
	183061	Under layer of road of water bound macadam/ stone soling etc.	Sqm	50.00	53.23	2661.50
	183062	Bituminous top layer of road	Sqm	25.00	104.14	2603.50

Signature of tenderer (s)

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For CGM/NORTH/MUMBAI/DFCCIL

**MUM/N/EN/ROB/LC-49**

10	192080	Providing, fabricating and installing of casing pipe for bored piles for all diameters with specified thickness of steel plate including all labour, materials, pumping and bailing out water where ever required, complete as per technical specifications as directed by Engineer in charge. This will include the weight of plate only and no cognizance will be given for the fittings i.e. rivets and welding etc.	MT	20.00	68433.54	1368670.80
11	192100	Conducting load testing of a single pile Up to following capacity in accordance with IS 2911(Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc with all labour, material, tool & plants, equipment, machinery, etc complete as per drawing and specification, as directed by the Engineer				0.00
	192102	Initial load test above 50-ton capacity Up to 100-ton capacity pile	Each	7	88070.74	616495.18
	192103	Initial load test above 100 ton capacity Up to 250 ton capacity pile	Each	7.00	142574.13	998018.91
	192104	Extra for every increase of 50 T in pile capacity or part thereof over 250 T	Each	105	43817.59	4600846.95
	192106	Routine load test above 50-ton capacity Up to 100 ton capacity pile	Each	7.00	145814.71	1020702.97
	192107	Routine Load test above 100-ton capacity upto 250 ton capacity pile	Each	7.00	152986.97	1070908.79
	192104	Extra for every increase of 50 T in pile capacity or part thereof over 250 T	Each	105	43817.59	4600846.95
	192112	Piles with Lateral Load capacity of above 10 ton & upto 20ton	Each	7.00	58702.21	410915.47
	192113	Piles with lateral load capacity of above 20 ton	Each	7.00	73699.74	515898.18
12	201050	Providing and fixing in position of standard preformed sealed and slab type or strip seal elastomeric type expansion joints for Railway bridge or Road Over Bridges as per approved drawings and latest MOST/IRC specifications. The rates are inclusive of supplying, fixing with contractor's own materials e.g. inserts, bolts, socket tubes, Neoprene sheet/cap etc, equipments, machineries, labour, all taxes, royalty, all lead & lifts, transport, testing, surface preparations, Complete				

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For CGM/NORTH/MUMBAI/DFCCIL

**MUM/N/EN/ROB/LC-49**

	201051	For 80 mm expansion	Metre	35.70	10959.03	391237.37
13	234020	4cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5mm nominal size and 40% 10mm nominal size) 2.60cum and coarse sand 2.60cum of road surface and with 478kg bitumen per 100sqm of road surface over a tack coat including consolidation with road roller of 8 to 10tonne etc. complete (tack coat to be paid separately)				
	234021	With paving bitumen 80/ 100 heated and then mixed with solvent at the rate of 70grams per kg. of asphalt	Sqm	558.00	281.96	157333.68
14	31010	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centring and shuttering-All work up to plinth level				
	31023	1:2:4 (1 cement : 2 Sand : 4 graded stone aggregate 20mm nominal size) (cement quantity to be used 3.2 qtl/cum)	Cum	23.00	1645.73	37851.79
<b>Total</b>						<b>31645462.87</b>
<b>Schedule 'F' ( NS Items)</b>						
1	NS/1	Earthwork in excavation for foundation of piers, abutments, return walls, columns, Toe wall, Protection wall etc in all categories of soils such as sand, clay, moorum with or without stones, boulders (Excluding rock) as per specifications and special conditions of the contract and as directed by Engineer.	Cum	621.51	450	279678.22
		The rates are inclusive of Contractor's own machinery and equipments, labour, taxes, materials, leading & lifting, shoring, structing, timbering and buttressing with sand/clay bags and all such measures necessary to retain in position the sides of the foundation pit and including refilling the excavated soil, clearing and disposing the unwanted earth to low lying area within railway boundary and levelling the site, dewatering by manual or mechanical means etc. (No claim will be entertained on any account and payment will be made after finishing the item).				

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For CGM/NORTH/MUMBAI/DFCCIL

**MUM/N/EN/ROB/LC-49**

2	NS/2	Supplying, manufacturing, fabrication, testing and welding with stud guns etc. of normal headed/ round studs shear connector 25mm dia. And 200 mm length are confirming to IS 3935-66 as per specification of RDSO Drg. No. B11553, 52, 51 & RDSO B 11557-1 along with ferrules on top flange of girder for deck slabs as per the direction/approval of Engineer in charge. In case shear connectors/studs of other sizes are required, then payment/recovery on prorata basis of weight shall be made. The rate is inclusive of all taxes, service charges, transportation, lead, lift, wastage etc. Complete in all respect. Nothing extra shall be payable against any breakdown of machines. Site facilities shall be provided by the contractor at site. The facility of required Electricity of 400/440 V power source k/380 KVA DG set, cable 400A switch fuse, loading & unloading the machine from truck and to carry to site shall be done by the contractor.	No.	5000.00	300.00	1500000.00
3	NS/3	Fabrication of steel girder spans as per the approved drawing for composite construction i.e. (Steel + RCC) of superstructure of the Road over bridge with contractor's own mild structural steel confirming to IS: 2062-1992 with all welding, rivets, nuts bolts, HSWG Bolts etc. with contractor's own materials, fabrication, machinery, templates, fixtures, equipment's tools and plant, transportation skilled/unskilled labours, excise duty, Octroi, sales and 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 section 1900 of MORTH. 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 and painting. After fabrication in workshop first primer coat zinc chrome yellow (IS: 104 latest revision) will be applied to all parts excepts flooring system. The 2nd primer coat of zinc chrome red oxide IS 2074 and 1st finishing coat	MT	476.34	105000.00	50016120.00

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		of Aluminium paint to IS: 2339 will be applied on the girder parts before transportation of girder parts to the site with the contractor's paint and primer of approved quality. (Attached notes applicable to this item)				
		a) Fabrication agency for Fabrication of steel Plate girder (Composite girder) shall be on the current APPROVED VENDERS list of Steel Girder Bridge of RDSO Lucknow, at the time of execution. Inspection of girder shall be done by the nominated representative of the consignee (CGM/NORTH/DFCCIL/MUMBAI). The assembly and erection shall be done by specialized agency whose competency is certified by the manufacturer.				
		b) All welds are to be made by RDSO approved welder using approved welding procedures with submerged arc welding.				
		c) The rates are deemed to include cost of rivets, drifts, bolts and nuts riveting/welding etc. shown in approved drawing for stud bolt payment will be made in another item.				
		d) Any temporary arrangement strengthening of members(s) if required in connection with launching of girders shall be at contractors cost including restoring it back as per original standard drawing.				
		e) On completion of work the contractor shall clear all temporary staging and other arrangements, obstruction and restore it to its original position.				
		f) Contractor's has to ensure proper camber as per drawing, irrespective of launching scheme.				
		g) The rates are deemed to includes all labours, tools, plants, equipment , machinery, cranes etc. all leads, lifts, fuel electric charge etc. complete for all materials unless specified otherwise.				
		h) All butt welds are to be examined radio graphically. All other wells may be examined by radiographic or any other non-destructive methods which are equally effective. All the welds shall also be examined by liquid penetrant flaw detection method or by magnetic particle flaw detection method as per IS 3658 and IS 37063				

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		i) All layers of painting should be separately got approved by Engineer or his authorised representative.				
		j) All structural steel shall conform to Grade B specification except for rolled section (angles, channels, I-Sections). For rolled section Grade-A steel may be used.				
		k) Structural steel should be procured from SAIL/TISCO/RINL/JINDAL/ESSAR/SSCO only. If all these firms do not manufacture any steel section. On submission of the documentary proof and its verification, the contractor may be permitted to procure steel from other approved manufacturer. The Engineer's decision in this regard shall be final and binding on the contractor.				
		Galvanizing of steel bridge girder will be done for which extra payment will be paid under item no. 4/NS of schedule D				
		After assembling of girder till launching it is responsibility of the contractor for securing the steel girder (fabricated girder) at site.				
		Note for stage payment terms / conditions against addl. Item no. 2/NS for fabrication of steel of composite girder"				
		1) Fabrication & assembling of steel element & bringing each girder to the work site.				
		2) After satisfactory launching of the composite girder at proper location				
		3) Payment will be released on completion & erection in line and level and completion of painting as specified.				
		Note:- Contractor has to make his own arrangement for transportation of fabricated steel. No extra payment will be made on this account.				
4	NS/4(a)	Launching of Steel girder span 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 drawing with other ancillary steel structure fixed to the girder where necessary in proper level and alignment and as per technical specification.	MT	238.17	25,000.00	5954300.00



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	NS/4 (b)	Launching 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 drawing with other ancillary steel structure fixed to the girder where necessary in proper level and alignment and as per technical specification.	MT	238.17	15,000.00	3572580.00
5	NS/5	Extra for mentalising for item 3/NS with sprayed aluminium followed by protective coating painting with all contractors labour, materials, tools, Plants and Machinery scaffolding etc. complete in all respect.	M2	8800.00	750.00	6600000.00
6	NS /6	<b>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 equipments, manpower, site preparation, lead and lifts etc complete as per standard procedure, and as directed by the Engineer in Charge.</b> Note :- Rate is inclusive 1 All equipment . 2 All labour and consumable required 3 Mobilization of equipments, staff etc. 4 Preparation and submission of Reports in 3 copies. 5 Site preparation	Each	144.00	1,200.00	172800.00
7	NS/7	Epoxy painting. Supplying and applying epoxy paint of approved quality on surfaces of abutment, abutment caps, returns, piers, pier caps, PSC girders/slabs, deck slab, parapet walls, crash barriers etc. confirming to the specifications laid down in the special conditions of contract. The rate inclusive of contractor's own paint, material, equipments, machineries, labour, taxes, with all lead, lift, scaffolding staging, etc. complete. (Rates are for finished item and will be paid after application as per specification.	Sqm	3124.38	300	937313.20
8	NS/8	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	297.60	1200	357120.00
9	NS/9	Making and supplying of check rails of 52 kg/ 60 kg rails of various lengths for level crossing as per	Each LC	4.00	4000	16000.00

Signature of tenderer (s)

Date:

For CGM/NORTH/MUMBAI/DFCCIL

**MUM/N/EN/ROB/LC-49**

		approval drawings.				
10	NS/10	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 is provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	LS	1.00	500000	500000.00
11	NS/11	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. transportation and fixing in position including all lead and lift etc. complete as per approved designs and drawing and as directed by engineer				
		i) Capacity upto 250MT	Nos	34.00	74000	2516000.00
12	NS/12	Transportation of PSC sleepers, other P. way materials including rail pieces up to 4.50m length from Sleeper factory & other places to any yard in connection with construction of ROB at LC no- 55,60& 64 of Mumbai Division of Western Railway including loading transporting, unloading, stacking etc by using road cranes, if necessary for unloading PSC sleepers and other P. way materials as directed by Engineer in charge at site. Rate including all incidental charges and taxes like transportation, labour, T&P, royalty, Octroi etc complete.				
		i) First one KM	KM MT	15.00	400	6000.00
		ii) Extra for additional lead above 1 Km upto 200 km approx.	KM MT	30.00	10	300.00

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Date:

For CGM/NORTH/MUMBAI/DFCCIL

**MUM/N/EN/ROB/LC-49**

13	NS/13	<p>Load testing of one composite steel/span - Designing and Load testing of one composite girders/span as selected by Engineer confirming to Rly. Standard's with test loads to be applied and removed incrementally etc. complete as per special conditions and specifications of contract, as per relevant IS/IRC codes with all contractors labour supervisors, T&amp;P's all taxes, equipments, leading materials instruction of load test jacks etc, dial gauges, including all lead and lift, preparation and submission of test reports in the desired format etc. complete as required for successful completion of work of this item. The rates are inclusive of everything required for this item and will be paid only after load test is finished and the girder is cleared of the Kent ledge/loading material etc. Railways Kent ledge will be supplied free of cost to contractor, if available. Contractor to arrange for transportation of this material from where it is available and returning safely back at place of issue in original condition with all loading, unloading transportation etc complete at his cost. Damage to material if any will be recovered at the double price of procurement</p>	Each	2.00	300000	600000.00
		<b>Total</b>				<b>7,30,28,211.41</b>

Schedule of approximate Quantities						
Name of work:- LC NO : 49 At Rly km 96/4-6 ( DFCC Ch : 128.900) between palghar & boisar of (JNPT(Mumbai) - Dadri (Delhi)- WDFC route						
<b>(Approach portion)</b>						
S.n o.	MH PWD SOR NO	DESCRIPTION OF WORK	Unit	Qty	Rate	Amount
<b>Schedule 'A'</b>						
1	2.07	Clearing grass and removal of rubbish upto a distance of 50 metres outside the periphery of the area .	Square Metre	14263.00	3	42789
2	2.09	Clearing and grubbing road land including up rooting rank vegetation, grass, bushes, shrubs, sapling sand trees girth upto 300mm, removal of stumps of trees cut earlier and disposal of unserviceable material sands tacking of serviceable material to be used or auctioned upto a lead of 1000 metres including removal and disposal of toporganic soil not exceeding 150 mm in thickness.	Square Metre	80.00	9	720
3	12.04	Excavation for foundation in hard murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.				
		b) 1.50m to 3.00m lift, Add 10%	Cubic Metre	21452.00	212.3	4554259.6
4	12.08	Excavation for foundation in soft rock including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.				
		b) 1.50m to 3.00m lift, Add 10%	Cubic Metre	146.00	509.3	74357.8
5	12.7	Back filling behind abutment, wing wall and return wall as per drawing sand technical specifications etc. complete.(by granular material)	Cubic Metre	288.00	728	209664

**MUM/N/EN/ROB/LC-49**

6	51.12 5	Providing and laying of Plastirib T or equivalent raised profile edge line marking (audible vibratory) with special hot applied thermoplastic road marking compound according to IRC 35 : 2015, Clause 7.7 with 2 mm thick base coat layer above that ribs profile size of length 40 mm x width 140 mm x height 6mm thick (Total 8 mm thick) at the distance of 250 mm between two ribs including reflectorizing glass beads @ 250 gm / sq. mtr. area. The minimum and maximum width of raised profile should be 150 mm. The thickness of 8 mm profil should be exclusive of surface applied glass beads. The finished surface to be exclusive of surface applied glass beads. The finished surface to be levelled, uniform and free from streaks and holes, to be applied on edge lines.	Square Metre	697.00	2629	1832413
7	17.37	Providing and laying weep holes of 100mm diameter PVC pipes as per drawing for abutment returns, return walls etc. Complete.	Running Metre	441.42	424	187162.08
8	13.07	Supplying, fitting and fixing in position true to line and level elastomeric bearing including all accessories as per drawing and technical specification sand IRC:83(Pt-II) section IX and clause 2005 of MoRTH specifications etc. complete.	Cubic Centimetre	2451460.00	1.17	2868208.2
9	33.66	Providing and laying chequered tiles of approved quality of size 30cmx30cm, conforming to corresponding I.S. for flooring in required position laid on a bed of 1:4 cement mortar including cement float, filling joint with cement slurry cleaning curing etc. complete.	Square Metre	150.00	627	94050
10	14.5	Providing 100mm diameter GI water spouts as per detailed drawings in RCC slab and wearing surface / kerb etc. complete.	Number	160.00	868	138880
11	6.04 b	Ordinary Kilometre Stone	Number	1	404	404
12	11.11	Providing and laying cement concrete pipe of IS 458:2003 NP-2 class of 900mm diameter in proper line, level and slope including providing and fixing collars in cement mortar 1:2 and curing etc. complete.	Running Metre	10.00	4228	42280

Signature of tenderer (s)

Date:

For CGM/NORTH/MUMBAI/DFCCIL

**MUM/N/EN/ROB/LC-49**

13	12.72	Providing and laying of filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2 of MoRTH specifications to a thickness of not less than 600mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition as per drawing and technical specifications etc. complete.	Cubic Metre	3432.00	1100	3775200
14	17.66	Chipping and dressing of the R.C.C. piles upto 0.60meter including cleaning reinforcement and removal of dismantled materials upto a distance of 50meter beyond the building area etc. For providing pile caps.	Number	126.00	548	69048
15	43.17	Providing and fixing 8cm rigid PVC Nahani trap including PVC grating, bend, connecting piece of UPVC pipe upto the outside face of wall, making the good damaged surface and testing etc. Complete(Priorapproval of sample and brand by Ex. Engr. is necessary before use)	Number	189.00	430	81270
16	6.04 e	Lettering for cautionary/mandatory signboard sand village name boards	Number	4	168	672
17	6.19	Fixing in position Cautionary/Mandatory sign boards in ground with CC1:4:8 block of 60cmx60cmx75cm size etc. Complete as directed including all leads.	Number	2	836	1672
18	6.2	Fixing in position Road Junction/Informatory Sign Board in ground with C.C.1:4:8 block of 60cmx60cmx75cm size including all leads complete.	Number	2	1672	3344
19	6.38	Providing and fixing cautionary/warning sign board of size 60cm.having shape of equilatera ltriangle with apex point upwards. Prepared on 16gauge M.S.sheet including painting with one coat of zinc cromatestoving primer and two coat seach of white background, redborder and back side grays to veenamelled, bonded with cutout of Retroreflective sheet Engineering grade,symbol/letters/numerals/border/arrow, coated with non pealable crystal clear protective transparent coat retaining 100% reflection including one number of M.S.Angle iron post of size50x50x5mmof3.65m. long in flated at bottom drilled on top in one piece without joint painted with white and black bands of 30cm. fixing board and post with 2Nos. high strength G.I.bolts and nuts of	Number	2	3677	7354

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**MUM/N/EN/ROB/LC-49**

		size10mm dia. and 20mm long including all taxes, conveying, fixing in ground with cement concrete 1:4:8 block of 60cmx60cmx75cm size etc.				
20	12.4	Excavation for foundation in hard murum including shoring and strutting, dewatering as necessary and disposing off excavated stuff as directed etc. complete.( Box cutting road surface to proper slope)				
		b) 1.50m to 3.00m lift, Add 10%	Cubic Metre	5500.00	212.3	1167650
21	6.09	Supplying and Fixing of Molded Shank Raised Pavement Markers/Cat'sEye made of polycarbonate and ABS moulded body and reflective panels with microprismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000kg tested in accordance to ASTM D4280 Type Hand complying to Specification so category A of MORTH Circular NoRW/NH/33023/10-97DOIIDt11.06.1997.The height, width and length shall not exceed 50mm,100mm and 102+/-2mm and with minimum reflective area of 13Sq cm on each side and the slope to the base shall be 35+/-5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19+/-2mm and height not less than 30+/-2mm) from the body is to be a minimum value of 500Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nail sand using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer. The contractor shall submit a two year warranty for satisfactory field performance including stipulated retro-reflectance of the reflecting panel, to the Engineer.	Number	615.00	459	282285
22	35.2	Providing and applying priming coat over new /old steel and other metal surfaces including preparing the surface by thoroughly cleaning oil, grease ,dirt and other foreign matter and scoured with wire brushes ,fine steel wool, scrapper sand sand paper, scaffolding etc. complete.	Square Metre	500	30.00	15000
23	35.07	Providing and applying two coats of synthetic enamel paint of approved colour to new/old structural steel work and wood work in buildings, including scaffolding if necessary, cleaning and preparing the surface (excluding primer coat) etc. complete.	Square Metre	500	79.00	39500

Signature of tenderer (s)

Date:

**MUM/N/EN/ROB/LC-49**

24	1.39	Preparation of Land Acquisition proposal including collection of 7/12 and 8/A documents marking alignment on village maps, area calculation, preparation of proposal, printing, binding, etc. complete and submission of 5sets more ever liasoning and coordination with revenue authorities with compliance if any until finalisation of award including Joint measurement of the alignment. For new alignment.	Kilometre	1.00	22104	22104
25	2.27	Providing earthwork in embankment with approved materials obtained from departmental land upto lead of 50m. including all lifts, laying in layers of 20cm.to 30cm. thickness breaking clods, dressing to the required lines, curves ,grades & section, watering and compaction with vibratory roller to achieve not less than 97% of standard proctor density etc. complete.	Cubic Metre	2200.00	155	341000
				<b>Total Sch A</b>		<b>15851286.68</b>
<b>Schedule 'B'</b>						
S.n o.	MH SOR NO	DESCRIPTION OF WORK	Unit	Qty	Rate	Amount
1	15.126	Providing and laying <b>cast in situ/ready mix M35 RCC for 1200 mm diameter bored piles</b> each of load capacity as per design and of specified diameter of as directed, placed through steel shell sunk to the required depth through all strata except rock, excluding provision of reinforcement including placing concrete by tremie arrangement, compaction of concrete and with drawal of steel shell with fully automatic microprocessor based PLC with S CADA enabled with reversible drumty pemixer/concrete batch mix plant (panmixer) etc. complete. with fine aggregates of required specifications(Natural sand/ VSI sand finely washed etc )	Running Metre	530.00	17311	9174830
2	17.31	Providing and laying plain in situ/ready mix M-35 cement concrete of trap/granite/quartzite/gneiss/crushed stone metal mechanically mixed, <b>placed in foundation</b> and compacted by vibration including necessary bailing out water, curing curing concrete batch mixplant/pan mixer with fine aggregates of required specifications (Natural sand/VSI sand finely washed etc)(excluding dewatering by pump) for 14 days RCC Grade. With Concrete Mixer	Cubic Meter	1650.00	6418	10589700

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Date:

For CGM/NORTH/MUMBAI/DFCCIL



**MUM/N/EN/ROB/LC-49**

3	12.55	Providing and laying in situ/ready mix controlled grade of M15 of trap/granite/quartzite/gneiss metal for RCC works in cut off walls/curtain walls including necessary scaffolding ,centering, compacting by vibrator, finishing and curing etc. complete.(withfully automatic microprocessor based PLC with SCADA enabled with reversible drum type mixer/concrete batch mixplant (pan mixer)withnatural/artificial sand, excluding reinforcement)	Cubic Metre	1712.00	5158	8830496
4	17.5	Providing and laying in situ/ready mixM-35 cement concrete of trap/granite/quartzite/gneiss metal for cast in situ R.C.C. <b>solid piers, column</b> etc. including provision of V shaped false joints to form suitable panels on the faces to approve design with compacting by vibrating and curing complete. Including plywood/steel formwork, centering (excluding de watering by means of pump) and including bailling out water and including CM 1:3 curing complete. a) Height upto 5 M. (With Concrete Mixer) i) Height up to 5 m, normal rate.	Cubic Meter	3913.00	6892	26968396
5	17.5	Providing and laying in situ/ready mixM-35 cement concrete of trap/granite/quartzite/gneiss metal for cast in situ <b>R.C.C. solid piers, column</b> etc. including provision of V shaped false joints to form suitable panels on the faces to approve design with compacting by vibrating and curing complete. Including plywood/steel formwork, centering (excluding de watering by means of pump) and including bailling out water and including CM 1:3 curing complete. a) Height upto 5 M. (With Concrete Mixer) i) Height up to 5 m, normal rate.				
		ii) Height 5 to 7.50 m, add 5 percent extra over basic rate.	Cubic Meter	134.00	7236.6	969704.4
		iii) Height 7.50 to 10 m, 7.50 percent extra.	Cubic Meter	88.00	7408.9	651983.2
6	17.55	Providing and laying in situ/ready mix controlled M-35 cement concrete of trap/granite/quartzite/gneiss metal for reinforced cement concrete <b>caps over piers and abutments</b> including necessary scaffolding plywood/steel formwork, compacting by vibrating, finishing in CM1:3 and curing etc complete (Excluding reinforcement) With reversible drum type mixer/concrete batch mix plant (pan mixer).with fine aggregates of required specifications (Natural sand/VSI sand finely washed etc )	Cubic Meter	598.00	7312	4372576

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Date:

**MUM/N/EN/ROB/LC-49**

7	17.62	Providing and laying in situ/ready mix M-40 cement concrete of trap/granite/quartzite/gneiss metal for reinforced cement concrete block below the bearing including necessary scaffolding, plywood/steel formwork ,compaction by vibrating, finishing in CM1:3 and curing complete (Excluding reinforcement) Using reversible drum type mixer/concrete batch mix plant(pan mixer)with fine agree gates of required specifications (Natural sand/VSI sand finely washed etc )(wearing coat, pedetral & seismic arrestar)	Cubic Meter	492.00	5914	2909688
8	14.9	Providing and laying in situ/ready mix M-40 controlled cement concrete of trap/granite/quartzite/gneiss metal for RCC work in <b>solid/deck slab</b> etc. including ramming, vibrating, curing, formwork, centering and finishing in cement plaster excluding reinforcement etc. complete.(with fully automatic microprocessor based PLC with SCADA enabled concrete batch mix plant/pan mixer and Natural/VSI standard Artificial Sand)  iii) Height 7.50 to 10 m, 7.50 percent extra.(basic rate =8138)	Cubic Metre	1355.00	8748.35	11854014.25
9	14.92	Providing and laying in situ/ready mix M-40 controlled cement concrete of trap/granite/quartzite/gneiss metal for RCC work in <b>main/cross girders</b> , diaphragms etc. including ramming, vibrating, curing, formwork, centering and finishing in cement plaster excluding reinforcement etc. complete.(with fully automatic microprocessor based PLC with SCADA enabled concrete batch mix plant /pan mixer and Natural /VSI standard Artificial Sand)  iii) Height 7.50 to 10 m, 7.50 percent extra. (basic rate =8138)	Cubic Metre	2000.00	8748.35	17496700
10	7.37	Providing Reinforced cement concrete <b>crash barrier</b> at the edges of the road, approaches to bridge structure sand medians, constructed with R.C.C. M30 Grade concrete with HYSD reinforcement conforming to IRC:21 and dowel bars 25mm dia,450mm 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-DOIIIdated 24 June 1994 as per dimensions in the approved drawing and at locations directed by the Engineer, all as specified etc. complete. Spec: MORT and H 2013 CI 811 Page No 360	Running Metre	1934.00	3086	5968324

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Date:

11	50.45	Construction of Reinforced Earth Wall in M-35 Block Facia by Providing and Laying CE marked Knitted and PVC coated Polyester Uniaxial Geogrid (Techgrid)of Tech fab India indigenously manufactured from selected hight enacitypolyesteryarn with high molecular weight (>25000g/mol),and low carboxy lend group(<30mmol/kg)for Reinforced soil wall (extruded PPgeogrids & Polyesterstrips & Geostrips,Steel Strips not allowed & not accepted) with granular fill of PHi-32 degree(design is to be carried out in accordance with BS-8006/FHWA)with concrete block by M-35 as facia, casting & erection of blocks with Techgrid, providing & laying levelling pad byM-15, providing and laying coping beam by M-35, providing and laying 300 mm thick filter media etc. completed as per necessary drawing and instruction of Engineer-in-charge. Excluding providing, laying and compacting selected back fill and retained fill be hind the wall, excavation and ground improvement, if any. There in forced earth wall and slope should have 100%coverage of 5m width Knitted and PVC coated Polyester Geogrid. (Coating of Geogrid/Reinforcing geosynthetic material with LDPE, Latex, Bitumen and any other coating will not be allowed and will not be accepted).(Specification: MORTH Section-3100)with prior approval of concerned Superitending Engineer.				
	a	a) RE Wall Height 1 to 4 meter	Sqm	680.00	5486	3730480
	b	b) RE Wall Height 4 to 6 meter	Sqm	910.00	5832	5307120
	c	c) RE Wall Height 6 to 8 meter	Sqm	1046.00	6085	6364910
	d	d) RE Wall Height 8 to 10 meter	Sqm	200.00	6313	1262600
	e	e) RE Wall Height 10 to 12 meter	Sqm	0.00	6831	0
12	14.59	Providing and laying of RCC in M30 grade approach slab including reinforcement and formwork complete with fully automatic microprocessor PLC with SCADA enabled reversible drum type mixer/concrete batch mix plant (panmixer) as per drawings and technical specifications etc. complete with fine aggregate so if required specifications (Natural sand / VSI sand finely washed etc )		Cubic Metre	8427	151686
				<b>Total Sch B</b>		<b>116603207.9</b>

Schedule 'C'						
S.n o.	MH SOR NO	DESCRIPTION OF WORK	Unit	Qty	Rate	Amount
1	26.33	Providing and fixing in position TMT-FE-500 bar reinforcement of various diameters for R.C.C. pilecaps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintel spardis, copings, fins, arches etc.as per detailed designs, drawing sand schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.	Metric Tonne	327.00	62581	20463987
2	26.33	Providing and fixing in position TMT-FE-500 bar reinforcement of various diameters for R.C.C. pilecaps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintel spardis, copings, fins, arches etc.as per detailed designs, drawing sand schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete. <b>(Super structure)</b>	Metric Tonne	500.00	62581	31290500
3	26.33	Providing and fixing in position TMT-FE-500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintel spardis, copings, fins, arches etc.as per detailed designs, drawing sand schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete. <b>(Pier cap, pedestal, dirt wall &amp; seismic)</b>	Metric Tonne	134.55	62581	8420273.55
4	26.33	Providing and fixing in position TMT-FE-500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintel spardis, copings, fins, arches etc.as per detailed designs, drawing sand schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete. <b>(Pier retaining wall)</b>	Metric Tonne	555.00	62581	34732455
5	26.33	Providing and fixing in position TMT-FE-500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintel spardis, copings, fins, arches etc.as per detailed designs, drawing sand schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete. <b>(Approach slab &amp; wearing slab &amp; wearing coat crash barrier)</b>	Metric Tonne	329.00	62581	20589149
6	26.33	Providing placing and Driving in position 6 millimetre mild steel liner for R.C.C. Piles upto				

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**MUM/N/EN/ROB/LC-49**

		required depth with 12mm thick mild steel cutting edge of 0.50m length at bottom including fabricating cutting the mild steel sheet to required diameter and shape, welding the joints and driving with the help of required machineries including all materials labours and lifts etc. complete as directed by the Engineer in charge.				
	22.57	Upto 3.00 meter deep liner	Metric Tonne	67.13	72796	4886431.5
	22.58	Charge From 3.00 to 9.50 meter deep liner	Metric Tonne	67.13	75858	5091968.25
7	23.01	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed design and drawings or as directed including cutting, fabricating, hoisting, erecting, fixing in position making riveted/bolted/welded connections without connecting plates, braces etc. and including one coat of anti corrosive paint and over it two coats of oil painting of approved quality and shade etc. complete. <b>(for Railing, Staircase railing, Inspection platform etc.)</b>	Metric Tonne	100.00	73844	7384400
				<b>Total Sch C</b>		<b>132859907.5 7</b>
<b>Schedule 'D'</b>						
S.n o.	MH SOR NO	DESCRIPTION OF WORK	Unit	Qty	Rate	Amount
1	2.35	Providing, laying and spreading soil on a prepared subgrade, pulverizing, mixing the spread soil in place with rotavator with 3percents laked lime with minimum content of 70 percent of CaO, grading with motor grader and compacting with the road roller at OMC to achieve at least 98 percent of the max dry density to form a layer of sub base.	Cubic Metre	32477.00	510	16563270
2	3.01	Construction of granular subbase by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader/Paver on prepared surface and compacting with vibratory roller to achieve the desired density, complete as per clause 401--Plant Mix Method and Grading - I Material	Cubic Metre	3807.00	1569	5973183
3	3.23	Wet Mix Macadam--Providing, laying, spreading and compacting grade stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and	Cubic Metre	5506.00	1624	8941744

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		compacting with vibratory roller to achieve the desired density. Laying By Grader/Paver.				
4	3.44	DENSE BITUMINOUS MACADAM: Providing and laying dense bituminous macadam using crushed aggregates of Grading1, premixed with bituminous binder of specified grade of Bitumen @4.50 percent by weight of total mix and filler, transported to site with VTS, laid over a previously prepared surface, finished to there quired grade, level, alignment, and rolling to achieve the desired density for 76-100 mm compacted thickness. USINGB at ch mix type hot mix plant with SCADA, Sensor Paver, Vibratory roller with Stone Dust filler. (VG-30 bulk bitumen rates are considered to arrive at rates)	Cubic Metre	179.00	6415	1148285
5	3.48	BITUMINOUS CONCRETE:-Providing and laying bituminous concrete using crushed aggregates of grading1, premixed with bituminous binder @5.20 percent by weight of total mix and filler, transported to site with VTS, laid over a previously prepared surface, finished to the required grade, level, alignment, and rolling to achieve the desired compaction for 50mm compacted thickness with specified grade of Bitumen, Excluding prime/tackcoat. For Bitumen of specified grade--USINGB at chmix type hot mix plant with SCADA, Sensor Paver, Vibratory roller with Stone Dust filler.(VG-30 bulk bitumen rates are considered to arrive at rates)	Cubic Metre	20.00	6793	135860
6	4.01	Providing bituminous Type A liquid seal coat on bituminous surface including supplying all materials and bitumen of specified grade preparing existing road surface, heating and applying bitumen@0.98 Kg Sqm. by mechanical means, spreading chips and rolling, by static roller having weight 8 to 10MT. etc. complete. (VG-30 bulk bitumen rates are considered to arrive at rates)	Square Metre	22023.00	47	1035081
7	14.68	Providing and laying of a strip seal expansion joint catering to maximum horizontal movement upto 70 mm to be installed by the manufacturer / supplier to their authorized representative ensuring compliance to the manufacturers instruction for installation as per approved drawings and standard specifications etc. complete.	Running Metre	168.00	12160	2042880
				<b>Total Sch D</b>		<b>35840303.00</b>

Signature of tenderer (s)

Date:

Schedule 'E'						
S.n o.	MH SOR NO	DESCRIPTION OF WORK	Unit	Qty	Rate	Amount
1	NS/1	Epoxy painting. Supplying and applying epoxy paint of approved quality on surfaces of abutment, abutment caps, returns, piers, pier caps, PSC girders/slabs, deck slab, parapet walls, crash barriers etc. confirming to the specifications laid down in the special conditions of contract. The rate inclusive of contractor's own paint, material, equipments, machineries, labour, taxes, with all lead, lift, scaffolding staging, etc. complete. (Rates are for finished item and will be paid after application as per specification.	Sqm	14812	300	4443600
				<b>Total Sch E</b>		<b>4443600</b>
				<b>Grand Total</b>		<b>₹ 30,55,98,305. 10</b>

**END OF DOCUMENTS**