



**Tender No. TDL/EN/BHU-KRJ-LXING/EC/ROB-APPROACH/P-2**

**For**

Construction of approach portion (except Railway portion obligatory spans) of Two-Lane Road Over Bridge (ROB) at 04 (four) level crossings for LC No. 17C/3T at IR chainage 1126/21-23, LC No. 18C/3E at IR chainage 1130/9-11, LC No. 21C/3E at IR chainage 1139/3-5, LC No. 23B/3T at IR chainage 1146/33,1147/01, including Viaduct Spans, Approach road as per IRC standard between SHW-ETW stations & TDL-CNB Section Allahabad Division of North Central Zonal Railway.

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

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

**AGRA OFFICE:-**

Chief Project Manager/Tundla/DFCCIL,  
3/20, 3<sup>rd</sup> Floor, KPS Tower, Mayur Complex, Nagla Padi,  
Near Tulsi Cinema, NH-02,  
Agra -282002

**CORPORATE OFFICE:-**

DFCCIL, 5<sup>th</sup> Floor, Pragati Maidan Metro Station Building Complex,  
New Delhi-110001.

**GENERAL INFORMATION/DATA SHEET**

TENDER NOTICE NO	<b>TDL/EN/BHU-KRJ-LXING/EC/ROB-APPROACH/P-2 DATE: 17.01.2020</b>
Name of the work	Construction of approach portion (except Railway portion obligatory spans) of Two-Lane Road Over Bridge (ROB) at 04 (four) level crossings for LC No. 17C/3T at IR chainage 1126/21-23, LC No. 18C/3E at IR chainage 1130/9-11, LC No. 21C/3E at IR chainage 1139/3-5, LC No. 23B/3T at IR chainage 1146/33,1147/01, including Viaduct Spans, Approach road as per IRC standard between SHW-ETW stations & TDL-CNB Section Allahabad Division of North Central Zonal Railway.
(a) Tender Value	₹ 73,16,69,411/-
(b) Completion Period	15 months
(c) Earnest Money	₹ 73,16,695/-
(d) Date and Time of Issue of Tender	From 21.01.2020
(e) Last date and Time of submission of Tender	24.02.2020 upto 15:00hrs
(f) Date and Time of Opening of Tender (Technical bid -Packet A)	On 24.02.2020 at 15:30hrs
(g) Validity of offer	120 days
(h) Retention Money / Security Deposit	5 % of Contract Value
(i) 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

**SUMMARY OF PRICES**

**Name of work:** -Construction of approach portion (except Railway portion obligatory spans) of Two-Lane Road Over Bridge (ROB) at 04 (four) level crossings for LC No. 17C/3T at IR chainage 1126/21-23, LC No. 18C/3E at IR chainage 1130/9-11, LC No. 21C/3E at IR chainage 1139/3-5, LC No. 23B/3T at IR chainage 1146/33,1147/01, including Viaduct Spans, Approach road as per IRC standard between SHW-ETW stations & TDL-CNB Section Allahabad Division of North Central Zonal Railway.

Sl. No.	Description of works	Cost as per USSOR 2010 of NC Rly	DFCCIL updated %	DFCCIL updated cost in Rs	Rates to be quoted in figures & words (Clearly mention above / below / at par on updated DFCCIL Rate / cost given in column 4/5)
1	2	3	4	5	6
1.	Execution of all works as per Schedule "A" (items as per USSOR 2010 of NC Rly for Bridge Chapter No. 19, 20, 21 & 22)	9,08,08,652.77	48.63%	13,49,68,901.00	..... % age (in figures) ..... (In words)
2.	Execution of all works as per Schedule "B" (items as per USSOR 2010 of NC Rly for chapters other than bridge Chapters and S.N. 4 & 5 below)	3,64,55,176.60	129.27%	8,35,80,783.00	..... % age (in figures) ..... (In words)
3.	Execution of all works as per Schedule "C" (NS Items)	23,72,29,627.00	0.00%	23,72,29,627.00	..... % age (in figures) ..... (In words)

4.	Execution of all works as per Schedule "D" (items as per USSOR 2010 of NC Rly for supply of Cement)	5,25,04,400.00	28.66%	6,75,52,161.00	..... % age (in figures) ..... (In words)
5.	Execution of all works as per Schedule "E" (items as per USSOR 2010 of NC Rly for supply of Steel Reinforcement including straightening, cutting etc.)	16,08,78,717.50	29.50%	20,83,37,939.00	..... % age (in figures) ..... (In words)
	<b>Grand Total</b>			<b>73,16,69,411.00</b>	

## Notes:

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

For Schedule A (Updation factor is 1.4863, since 48.63% is above the rates of USSOR2010 of NC Railway), if the rate of any item of USSOR - 2010 of NC Railway / Schedule A is "X" and

- (a) If percentage quoted by the contractor is 5 % above (+5%), Rate payable to contractor =  $(X) \times 1.4863 \times 1.05$
- (b) If percentage quoted by the contractor is 5 % below (-5%), Rate payable to contractor =  $(X) \times 1.4863 \times 0.95$

- (c) If percentage quoted by the contractor is at par, Rate payable to contractor =  $(X) \times 1.4863$
- (d) Similarly Updation factor for Schedule B,D and E is 2.927, 1.2866 and 1.2950
- (e) In case of NS items i.e. Schedule C, Updation factor shall be 1.

**SCHEDULE -1  
SCHEDULE OF PRICES & TOTAL PRICES**

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
<b>SCHEDULE 'A' - (ITEMS AS PER USSOR 2010 OF NC RLY FOR BRIDGE CHAPTERS)</b>						
1	192010	Earthwork in excavation for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil upto a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specifications as directed by Engineer				
(a)	192011	All kinds of soils	cum	19670	165.50	32,55,385.00
2	192030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40mm nominal size, in foundation and floors, retaining walls of bridges including mechanical mixing, vibrating, pumping and bailing out water where ever required with all materials and labour complete but excluding the cost of cement and shuttering as per drawings and technical specifications as directed by Engineer.	cum	920	1782.20	16,39,624.00
3	192040	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of	cum	7850	1694.28	1,33,00,098.00

Sl. No.	Item no. of NCR USSOR-2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		approved quality in RCC raft foundation & Pile cap including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability without impairing strength and durability complete as per specifications and direction of the Engineer. Payment for cement, reinforcement and shuttering shall be paid extra.				
4	192060	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality for the following Reinforced cement concrete structural elements up to height of 10m from foundation top level, including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate or retard setting of concrete and/or improve workability without impairing strength and durability complete as per specifications and direction of the Engineer. Payment for cement, reinforcement & shuttering shall be paid extra.				
(a)	192061	Abutment & Pier	cum	1240	1779.00	22,05,960.00
(b)	192063	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	cum	1520	1948.42	29,61,598.40

Sl. No.	Item no. of NCR USSOR-2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
(c)	192064	Approach slab at formation level, Dirt wall/ ballast wall at formation level	cum	160	2,033.14	3,25,302.40
5	195030	Centring and shuttering including strutting, propping etc. and removal of form for :				
(a)	195031	RCC Raft Foundation & Pile cap	sqm	3460	127.80	4,42,188.00
(b)	195032	Abutment, pier, wing walls and return walls	sqm	3640	214.70	7,81,508.00
(c)	195033	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	sqm	2550	213.09	5,43,379.50
(d)	195034	Approach slab at formation level, Dirt wall / ballast wall at formation level	sqm	17240	127.80	22,03,272.00
(e)	195038	In Bottom/top slab, side walls, toe wall and sumpshaunch filling head walls or any other component	sqm	18660	214.70	40,06,302.00
6	201010	Providing and laying in position Design Mix Cement Concrete M-40 grade machine mixed, machine vibrated and machine batched using 20mm graded crushed stone aggregate and coarse sand of approved quality <b>for the Cast in-situ Prestressed (Post tensioned) concrete girder</b> / Box girders for spans upto 18.3m (centre to centre) Including finishing, using Admixtures in recommended proportions (as per IS:9103), if approved in Mix design to accelerate, retard setting of concrete, improve workability without impairing strength and durability complete as per specifications and direction of the Engineer in charge. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones,				



Sl. No.	Item no. of NCR USSOR-2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		stressing of cables and grouting of the ducts will be done extra.				
(a)	201011	With Soffit level upto 9m above Bed level	cum	8430	2117.31	1,78,48,923.30
(b)	192104	Extra for increase in span by every 1m or part thereof for span above 18.3m & upto 30.5m	metre/cum or part thereof	96045	30.73	29,51,462.85
7	201050	Providing and fixing in position of standard preformed sealed and slab type or strip seal elastomeric type expansion joints for Railway bridge or Road Over Bridges as per approved drawings and latest MOST/IRC specifications. The rates are inclusive of supplying, fixing with contractor's own materials, e.g. inserts, bolts, socket tubes, Neoprene sheet/cap etc., equipments, machineries, labour, all taxes, royalty, all lead & lifts, transport, testing, surface preparations, complete				
(a)	201051	For 80mm expansion	meter	400	23,136.28	92,54,512.00
8	201060	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges/loading material etc. The load shall be 1.25 times the				

Sl. No.	Item no. of NCR USSOR-2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		stipulated design load, based on design load & not span				
(a)	201061	For Span design load upto 100 MT	Each	4	66,772.64	2,67,090.56
(b)	201062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	Each 100 MT	2	65,548.13	1,31,096.26
9	201070	Providing, fabricating & fixing in position to exact design profiles, <b>prestressing H.T.S. cables</b> of all classification made from Low Relaxation strands conforming to IS:14268-1995 in Prestressed Concrete girders/slabs etc. including supplying, cutting, making into cables with necessary spacers, colour coding, protecting with water soluble oil at all time, anchoring of cables, supplying and placing spiral corrugated type galvanized metal steel ducts sheathing made up of Cold Rolled Cold Annealed (CRCA) mild steel conforming to IS:513 of required diameter/ thickness, vent pipe, placing, bending, routing, fixing, stressing & grouting of cable ducts with cement grout, Anchorage sets in required number with provision for future prestressing, if any including all lead and lift with contractor's own materials, labour, equipments etc. complete as per drawings & specifications. Rate also includes covering anchorage pads with epoxy mortar of approved quality to avoid corrosion. Cement for grouting to be paid separately.	MT	180	1,40,567.44	2,53,02,139.20
(a)	201071	Deduct for not using CRCA sheathing & other related items for	MT	180	- 34,920.24	- 62,85,643.20

Sl. No.	Item no. of NCR USSOR-2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		pretensioned members from item 201070				
(b)	201072	Extra for using HDPE sheathing instead of CRCA sheathing	MT	180	148.67	26,760.60
10	222180	Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498-1970 in required profile behind boulder filling of abutments, wing walls / return walls etc. above bed level with all labour and material complete job as per drawing and technical specification of RDSO Guidelines	cum	5710.00	1,505.65	85,97,261.50
11	222260	Providing & laying non pressure NP-4 Class RCC pipe with collars, jointing with 1:2 cement and ordinary sand mortar including testing of joints, but excluding earthwork with all labour and material as a complete job. Cement for mortar will be paid separately.				
(a)	222264	1200mm dia.	metre	230.00	4,272.44	9,82,661.20
12	194010	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast in-Situ) in bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component using 20mm graded crushed stone aggregate and coarse sand of approved quality of cast in-situ RCC box of size upto 5m (bigger inside dimension) including finishing, Admixtures in recommended proportions (as per IS:9103), if approved in Mix design, to accelerate, retard setting of	cum	40.00	1,694.28	67,771.20

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		concrete, improve workability without impairing strength and durability, complete as per drawings and technical specifications as directed by Engineer in charge. Payment for cement, reinforcement and shuttering shall be paid extra.				
		<b>TOTAL COST OF SCHEDULE 'A' ITEMS</b>				<b>8,96,19,514.07</b>

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
<b>SCHEDULE 'B' - (ITEMS AS PER USSOR 2010 OF NC RLY OTHER THAN BRIDGE CHAPTERS)</b>						
13	33130	Supplying & mixing high range poly carboxylate ether base water reducing admixture Plast Super-C700 conforming to IS:9103-1999 (to be added @ 1% by weight of cement) for CC & RCC work for controlling water cement ratio and for gaining early strength	Kg	30150	86.65	26,12,497.50
14	234010	2.5 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5 mm nominal size and 40% 10 mm nominal size) @ 1.65 cum per 100 sqm and coarse sand at 1.65 cum per 100 sqm of road surface and with bitumen @ 56 kg/cum of stone chippings and @ 128 kg/cum, of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete, (tack coat to be paid separately) :				
(a)	234013	With refinery modified bitumen CRMB 55 conforming to IRC: SR: 53- 1999	sqm	60920	179.89	10,958,898.80
15	233010	Providing and applying tack coat using bitumen emulsion (Rapid setting) complying with IS: 8887-1995, spraying the bitumen emulsion with mechanically operated spray unit, cleaning and preparing the existing road surface as per specification				
(a)	233012	On bituminous surface @ 0.25kg/ sqm	sqm	10550	13.81	1,45,695.50
16	231040	Providing and laying water bound macadam with specified stone aggregate, stone screening and binding material including screening, sorting, spreading to template and				

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		consolidation with power road roller of 8 to 10 tonne capacity etc. complete				
(a)	231041	Sub-base with stone aggregate 90mm to 45mm including stone screening 13.2mm size	cum	7570	1003.48	7,596,343.60
(b)	231042	Base course with 63mm to 45mm size including stone screening 13.2mm size	cum	7570	1459.59	11,049,096.30
17	231010	Preparation of subgrade by excavating earth upto 22.5 cm depth, dressing to camber and consolidating with power road roller of 8 to 12 tonne capacity including making good the undulations etc. and disposal of surplus earth with lead upto 50m.	sqm	38830	38.91	1,510,875.30
18	236070	Painting road surface marking with adequate number of coats to give uniform finish with ready mixed road marking paint conforming to IS:164, on bituminous surface in white/yellow shade including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete				
(a)	236071	New work (minimum two coats)	sqm	11110	80.90	898,799.00
19	222170	Providing and fixing of Drainage Spouts of 100mm UPVC complete as per drawing and Technical specification	metre	1050	268.10	281,505.00
20	237010	Providing and fixing Cat's Eye (Glow studs) heavy integral stem, reflective, aluminium die cast with elegant finish of size 100mmx100mm and 20mm high having a stem of 50mm (or 12mm dia. 90mm long) screwed and nailed to fix into the road surface or at the nosing of the central verge. The road	each	2610	536.96	1,401,465.60

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		studs should have reflectors fitted on one side of the studs (3 nos. 7 element or 1 no. 29 element reflector) complete				
		<b>TOTAL COST OF SCHEDULE 'B' ITEMS</b>				3,64,55,176.60

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
<b>SCHEDULE 'C' - NON SCHEDULED ITEMS</b>						
21	NS-1	Providing and laying M-35 grade (using 43/53 grade ordinary Portland Cement) precast concrete fascia wall (Area of each fascia panel shall not be less than 1.5 sqm. Height shall not be less than 900mm, min 180mm thick) including design and getting the approval ` liner finishes as per the design requirements. PVC drainage pipes, 200mm precast cover fascia for drainage pipes, joint filler, as per approved drawings, logo panels, geo-textile filter fabric for wrapping pipes etc. including filter media (500mm thick) behind the fascia wall, drain sleeve in lower panels as per drawings and design, supplying and laying in position the specified and approved Geo- Grid soil reinforcement including cutting in required length, placing in position and connecting with the precast fascia panels as per the design and drawings and direction of the Engineer-in-Charge all complete with all materials, labour, lead and lift ,plants, machinery, taxes royalty etc. complete. Item to include all incidental work required to complete the job as per drawing and specifications.	sqm	8650.00	6003.24	5,19,28,026.00
		The coping beam is not permitted and the top panels shall be				



Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		casted in the inclined profile as per approved shop drawings. The cost of backfill between reinforced soil wall panels (except filter media) is not included in this item and shall be paid for separately, any ground improvement works for bearing capacity enhancement of ground (if required) shall also be included in the quoted rates. reinforcement used in precast facia panels is also included in the rates of this item				
		NOTES				
	(A)	The scope of work in the above item includes:				
	(a)	All initial layout and alignment of reinforced soil wall after site clearance and excavation in all type of soils, existing road pavement including BM, AC, WMM, WBM etc. for the construction of Reinforced Soil wall structure including all components like reinforcing element, Precast panel, etc. dismantling of footpath, planters, etc. as per the directions of Engineer-in-Charge and preparing designs and shop drawings giving levels etc. The work shall be started only after approval of the design and shop drawings by Engineer-in-Charge.				
	(b)	Approval of the facia patterns on panels including name of clients etc. from the Engineer-in-Charge. Nothing extra shall be payable for				

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		mock ups and trials of the fascia panels. The approved mock up fascia shall be protected from any damage during execution of the work, this will form part of landscaping works.				
	(c)	Filter media min. 500mm thick with stone crushed aggregates as per approved drawings from the bed level to the top level of the embankment of reinforced earth structure and behind the fascia panels for proper drainage as per approved drawings and particular specifications.				
	(d)	Providing and placing 200 mm dia HDPE perforated Pipe (perforation at top half only) wrapped in non-woven geotextile and filled with filter media, as per drawings for the drainage of seepage water from the fill between RS walls.				
	(e)	All transportation, erection in position alignment and all incidental works as per approved shop drawings to the satisfaction of Engineer-in-Charge.				
	(B)	MEASUREMENT				
		The reinforced Soil wall area shall be measured from top of concrete levelling pad at base to top of RCC fascia wall panel for payment. No separate payment shall be made for any type of reinforcement, filter media, non-woven geotextile wrappers filter, perforated pipe, Geo - Grid, levelling pad/ course for any of				

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		the item/ incidental work required to complete the item as per direction of Engineer-in-Charge.				
22	NS-2	Providing, placing and compacting approved backfill material in layers as per approved methodology for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) Wall panels as per approved drawings and particular specifications. Item to include 500 mm thick sub-grade construction as per specifications with CBR under soaked conditions not less than 6%. All incidental work required to complete the job shall be included in the quoted rates. The item shall be measured and paid for the finished volume of backfill and subgrade placed in position excluding the volume of filter media at behind the RS walls.	cum	35150.00	1886.00	6,62,92,900.00
	(A)	With Sand				
		NOTES:				
	(a)	The specification and construction details to be adopted shall be as per section 3100 of MoRTH Specification.				
	(b)	For compaction of Earthwork, attention is invited to clause 3105.5 of MORTH Specification.				
		The earth fill material shall be clean, free draining, granular with high friction and low cohesion, non-corrosive, coarse grained with not 10 per cent of particles passing 75 micron sieve, free of any deleterious matter, chlorides, salts, acids, alkalies, mineral oil, fungus and microbes and shall be of specified PH value.				

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
23	NS-3	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in subbase / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.	cum	15130.00	2,165.00	32,756,450.00
24	NS-4	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 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 as per MoRTH specification clause No. 507 complete in all respects.	cum	5810.00	7513.00	43,650,530.00
		NOTES:				
	(a)	Although the roller are required only for 3 hours as per norms of output, but the same have to be available at site for six hours as the hot mix plant and paver will take six hours for mixing and paving the output of 450 tonnes considered in this analysis. To cater for the idle period of these rollers, their usage rates have been multiplied by a factor of 0.65.				
	(b)	Quantity of Bitumen has been taken for analysis purpose. The actual				

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		quantity will depend upon job mix formula.				
	(c)	Labour for traffic control, watch and ward and other miscellaneous duties at site including sundries have been included in administrative overheads of the contractor.				
	(d)	In case DBM is laid over freshly laid tack coat, provision of mechanical broom and 2 mazdoors shall be deleted as the same has been included in the cost of tack coat.				
	(e)	The individual density for each size of aggregates to be used for construction i.e. 37.5-25 mm, 25-10 mm etc. should be found in the laboratory and accordingly the quantities should be ammended for use in field. The average density of 1.5 tonne/cum is only a reference density in this Data Book.				
	(f)	The individual percentage of aggregates should be calculated from the total weight of dry aggregates i.e. excluding the weight of bitumen. The weight of filler will also be 2 per cent by weight of dry aggregates.				
25	NS-5	Design, Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel / fabricated structural steel, metal and elastomer elements complete as per IS:2062, IS:1030,				

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		AISI:304, AISI:316, IS:6911, BS:3784, IS:3400, IS:226, BS-5400, Bridge Code and as per drawing and approved Technical Specifications. The design of the bearings shall be submitted by the manufacturers / contractor and got approved from Railway before fixing. Test report of the bearings should be got approved before the materials are lifted from the manufacturer premises. Payment is based on 250 MT capacity of Bearing.				
	(a)	Bearing for 24m span PSC Girder	set	57	1,69,723.00	96,74,211.00
26	NS-6	Erection of Prestressed Girder on bearings with crane at site on sub-structure with labour, equipment, T&P and all temporary arrangements, scaffolding etc. complete with contractors design and scheme for longitudinal launching/side slewing (not requiring traffic block) approved by Engineer in charge.	cum	3360	1,753.50	58,91,760.00
27	NS-7	Providing and laying Dense Bituminous concrete on prepared surface with specified graded stone aggregate for wearing course, mixing of bitumen, filler & stone aggregate in hot mix plant, transporting the mixed material and laying with mechanical paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per specification to achieve the desired density and compaction, but excluding cost of primer / tack coat				
	(a)	40 mm / 50mm compacted thickness with bitumen of grade CRMB (Crumb rubber Modified Bitumen) 60 @ 5.5% and lime @ 3% by weight of	cum	2450	11,035.00	27,035,750.00

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		total mix				
		<b>TOTAL COST OF SCHEDULE 'C' ITEMS</b>				<b>23,72,29,627.00</b>

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
<b>SCHEDULE 'D' - SUPPLY OF CEMENT</b>						
28	033060	Supply and using <b>cement</b> at worksite:				
(a)	033061	OPC 43 Grade	MT	8780	5980.00	5,25,04,400.00
		<b>TOTAL COST OF SCHEDULE 'D' ITEMS</b>				5,25,04,400.00



Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSO R-2010 (Rs)	Amount (Rs)
<b>SCHEDULE 'E' - SUPPLY OF REINFORCEMENT</b>						
29	045010	Supplying reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete -				
(a)	045016	Thermo-Mechanically Treated bars	kg	2960050	54.35	16,08,78,717.50
	Notes:- (i)	The contractor shall quote the rate for Thermo-Mechanically Treated bars of Grade Fe 500.				
		<b>TOTAL COST OF SCHEDULE 'E' ITEMS</b>				16,08,78,717.50

**Explanatory Notes for BOQ:**

- (i) Contractor shall quote rates of shuttering and curing for all heights.
- (ii) The rates of reinforcement item mentioned in the above schedule includes placing of reinforcement under running traffic conditions.
- (iii) All NCR USSOR items contain item nos., if any discrepancy is found in nomenclature, schedule nomenclature will prevail.
- (iv) Tenderer must quote their rates for supply and erection of fabricated girders with their own material including loading, transportation and unloading at site. DFCCIL shall not provide any assistance for procurement of raw material for manufacturing the girders tendered for.
- (v) The rates shall also be inclusive of all taxes legally leviable and / or any other taxes, license fee and royalty charges etc. if any.
- (vi) The above quantity is approximate: -The DFCCIL reserve the right to increase / decrease the same.
- (vii) The contractor has to submit launching scheme and detailed drawing of each component of the Railway safety and nothing extra shall be paid for this activity.