



**Tender No. JP/EN/RE-RGS-FL/WC/ROB/18 & 30**

**for**

**Construction of Bridge portion of Two-Lane ROBs in lieu of LC No. 18 at Km. 23/5-6 between Kund-Kathuwas stations and LC No. 30 at Km 37/8-9 between Ateli-Mirjapur Bachod stations on Rewari-Phulera-Ringas section in Jaipur Division of North Western Railway.**

**FINANCIAL BID  
(PACKET-B)**

**TENDER DOCUMENT  
June-2016**

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

**GENERAL INFORMATION / DATA SHEET**

TENDER NOTICE NO.	<b>JP/EN/RE-RGS-FL/WC ROB/18 &amp; 30</b> <b>Date: 19.04.2016</b>
Name of the work	Construction of Bridge portion of Two Lane ROBs in lieu of LC No. 18 at Km. 23/5-6 between Kund-Kathuwas stations and LC No. 30 at Km 37/8-9 between Ateli-Mirjapur Bachod stations on Rewari-Ringas-Phulera section in Jaipur Division of North Western Railway.
(a) Tender Value	<b>Rs 14,58,64,053/-</b>
(b) Completion Period	15 months
(c) Earnest Money	<b>Rs 29,17,290/-</b>
(d) Date and Time of Issue of Tender	<b>From 14.06.2016 to 14.07.2016 on all working days from 10:30 hrs. to 17:00 hrs. against the prescribed fee of Rs. 10000/- which is not refundable.</b>
(e) Last date and Time of submission of Tender	14.07.2016 upto 15:00 hrs
(f) Date and Time of Opening of Tender (Technical bids - Packet A)	On 14.07.2016 at 15:30 hrs
(g) Validity of offer	90 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 given in clause 16.4 of GCC

**Name of Work: Construction of Bridge portion of Two Lane ROBs in lieu of LC No. 18 at Km. 23/5-6 between Kund-Kathuwas stations and LC No. 30 at Km 37/8-9 between Ateli-Mirjapur Bachod stations on Rewari-Ringas-Phulera section in Jaipur Division of North Western Railway.**

**Schedule-A (USSR - 2010 items)**

<b>USSOR Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Rate</b>	<b>Qty</b>	<b>Amount</b>
116070	Finishing with epoxy paint(two or more coats) at all location prepared and applied as per manufactures specification including appropriate priming coat preparation of surface etc complete on concrete.	sqm	94.47	6687	631720.89
192010	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 up to 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.				
192011	All kinds of soils	Cum	233.79	9583.00	2240409.57
192030	Providing and laying Plain Cement Concrete 1:3:6 with graded stone aggregate of 40 mm 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	1227.60	338	414928.80

192070	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 & bailing out water, with all labour material complete including crossing of tracks if required, as per approved drawing, specification & 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.				
192073	1000mm Diameter	metre	7033.95	1200	8440740.00
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	54837.56	30	1645126.80
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 & 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				
192103	Initial load test above 100 ton capacity Up to 250 ton capacity pile	Each	85951.00	4	343804.00
192104	Extra for every increase of 50 T in pile capacity or part thereof over 250 T.	Each	17683.84	26	459779.84
192107	Routine Load Test above 100 ton capacity Up to 250 ton capacity pile	Each	76908.72	2	153817.44
192110	Lateral load testing of single pile in accordance with “IS Code of practice IS: 2911 (Part IV) for determining safe allowable lateral load of pile” with all labour, material, tool & plants, equipment, machinery, etc complete as per drawing and specification as directed by the Engineer				

192113	Piles with lateral load capacity of above 20 ton	Each	46917.29	4	187669.16
192120	Pulse Echo Test (PET) for integrity testing of piles with contractor's men, materials and machines. The rate includes cost of Inspection of site, preparation of pile head and any other unforeseen cost required for the test, submission of reports in triplicate as per satisfaction of the Engineer in Charge at site.	Each	29037.50	48	1393800.00
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				
201051	For 80 mm expansion	Metre	22535.29	70.8	1595498.53
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 stipulated design load Based on Design load & not span				
201061	For Span design load upto 100 MT	Each	89674.17	2	179348.34
201062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	Each 100m	87487.54	6	524925.24
222170	Providing and fixing of Drainage Spouts of 100 mm UPVC complete as per drawing and Technical specification	Metre	235.77	150	35365.50
211060	Providing and fixing 65/50 mm nominal dia B class G.I. pipe railing used in rows for footpath or anti-crash barrier railing incl. cost of M.S. angle and channels in vertical posts, riveting, welding / rivetting, priming painting two coats, at all heights labour and material as a complete job				
	6.3 kg/m=weight of GI pipe	Kg	59.31	1710.88	101472.20

211140	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or un reinforced 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, 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				
211141	POT-PTFE Bearing	MT Bearing Capacity	210.45	15000	3156750.00
201070	Providing, fabricating & fixing in position to exact design profiles, prestressing H.T.S. cables 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 forming 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	133930.24	16.98	2274298.27
31010	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centering and shuttering - All works upto Plinth level :				
31011	1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal size)	Cum	1467.94	396.00	581304.24

31020	Providing and laying cement concrete, up to plinth in retaining walls, walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc, excluding the cost of cement and of shuttering, centering.				
31023	1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size)	Cum	1682.52	98.00	164886.96
51010	Brick work with non-modular (FPS) bricks of class designation 7.5 in foundation and plinth in :				
51018	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	2150.23	1840.00	3956423.20
51040	Extra over item 051010 & 051020 for brick work in superstructure beyond plinth level upto floor two level :	Cum	156.64	1104.00	172930.56
111020	15 mm cement plaster on the rough side of single or half brick wall of mix -				
111022	1:6 (1cement: 6 fine sand)	sqm	71.22	9600.00	683712.00
115010	White washing with lime to give an even shade				
115011	New work (three or more coats)	sqm	8.55	10920.00	93366.00
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				
233012	On bituminous surface @ 0.25kg/ sqm	sqm	13.41	938.4	12583.94
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	237.53	938.4	222898.15
237010	Providing and fixing Cat's Eye (Glow studs) heavy integral stem, reflective, aluminum die cast with elegant finish of size 100x100mm 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 studs should have	Each	483.33	83	40116.39

	reflectors fitted on one side of the studs (3Nos. 7 element or 1No. 29 element reflector) complete				
238030	Providing and laying bitumen mastic wearing course (as per specifications) with industrial bitumen of grade 85/25 conforming to IS:702 prepared by using mastic cooker and laid to required level and slope including providing antiskid surface with bitumen precoated fine grained hard stone chipping of approved size at the rate of 0.005 cum per 10 sqm and at approximate spacing of 10 cm centre to centre in both directions, pressed into surface, including cleaning the surface, removal of debris etc. all complete (Considering bitumen using 10.2% as per MORTH Specification				
238032	40 mm thick	Sqm	1005.49	925.8	930882.64
237030	Supplying and laying Kerb stone 30cm X 20cm (In Section / including chamfering as per design if any) chisel dressed on top and sides including fixing in 1:6 cement sand mortar and pointing with 1:2 cement mortar (1cement:2 Sand ordinary) including all excavation / refilling, ramming and other incidental works as required	Meter	470.10	247	116114.70
211090	Providing cutting fabricating treating fixing & painting structure steel conforming to IS:2062 in access ladders, inspection platforms, trolley refuge, railing etc. joints welded to neat finish including one coat of primer & two coats of synthetic enamel paints.	MT	52941.57	8	423532.56
108160	Providing and fixing on wall face unplasticised - Rigid PVC single socketed rain water pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS: 5382 leaving 10mm gap for thermal expansion.				
108162	110mm dia.	metre	182.18	150	27327.00
108170	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised- Rigid PVC rain water pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS: 5382 leaving 10mm gap for thermal expansion.				
108171	Coupler, 75mm.	Each	104.88	12	1258.56
108172	Coupler, 110mm	Each	139.90	36	5036.40
108180	Providing and fixing on wall face unplasticised - PVC moulded bend and shoe for unplasticised- Rigid PVC rain water pipes conforming to IS: 13592 Type A				



	including jointing with seal ring conforming to IS: 5382 leaving 10mm gap for thermal expansion				
108182	Bend 87.5o, 110mm dia bend	Each	160.41	12	1924.92
108184	Shoe (Plain), 110mm dia shoe	Each	261.76	36	9423.36
021170	Leading miscellaneous materials such as iron work, rails, pipes, wooden logs, stones over pitching stone size, RCC/PCC beams / slabs etc. and all similar articles (each individual article or bundle being more than 3.5 metres long in the longest direction) by truck, trailor, etc including all loading, unloading and stacking, lead over 500m and upto 10 km. Note : Lead under this item is payable when the same exceeds 500m.	MT	144.76	42.00	6079.92
021171	Additional lead for every subsequent km or part thereof, over 10 km and upto 100 km over item no. 021170	MT/Km	7.07	3780.00	26724.60
021172	Additional lead for every subsequent km or part thereof, over 100 km and upto 400 km over item nos. 021170 &.021171	MT/Km	5.31	13230.00	70251.30
081030	Structural steel work welded in built up sections, trusses and framed work, girders, stagings, racks, etc including cutting, bending, straightening, hoisting, fixing in position, including applying a priming coat of approved steel primer, complete - upto				
081031	Structural steel work welded in Built up Section trusses and frame work In RSJ, Tees, Angles and Channels for Height gauge (Barrier for traffic)	kg	70.41	4500.00	316845.00
081032	<b>In flates,Plates,Round or Square bars</b>	kg	68.79	3000.00	206370.00
81412	In gratings, frames, guard bar, ladders, railings, brackets, gates and similar works	kg	72.74	600.00	43644.00
92060	Providing and laying plain cement concrete flooring of specified thickness with mix design concrete over firm, well prepared and well compacted bed including provision of designed expansion joint & finishing manually or mechanical trowel ling & vacuum dewatering complete. Expansion joint to be paid for separately.				
92062	M-25 (Wearing coat in box portion)	cum	2322.93	34.18	79397.75
222290	Providing Boulder backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra	cum	162.70	273.46	44491.29

081140	Supplying and fixing Lewis/ holding down bolts of approved design with nuts and washers complete	KG	52.97	100.00	5297.00
142010	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete upto 800mm dia.				
142015	450mm dia. R.C.C. pipe	Meter	540.25	100.00	54025.00
171520	Drilling of bore well for specified depth in all types of soil and rock mechanically with all contractor's tools, plants, material and labour up to 75 meters				
171523	For 250 mm dia	meter	522.68	75.00	39201.00
171526	Extra over 75m drilling for 250mm dia	meter	104.54	20.00	2090.80
193040	Dry/Wet Sinking of Circular Wells (Other than pneumatic method) in all types of strata except hard rock requiring ballasting, including bailing and pumping out water, removal of excavated soil, with all labour and material required for sinking as per drawing and direction of the Engineer in charge, disposal of surplus soil upto 1 Km lead in the adjoining bank/embankment (The compaction to be paid separately under the relevant item)				
193041	From initial level of cutting edge & Up to 3m depth	cum	117.66	61.07	7185.50
193042	From 3m to 10m depth	cum	153.86	142.50	21925.05
193070	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M25 grade (Cast - in Situ) using 20 mm graded crushed stone aggregate and coarse sand of approved quality in the following elements of well 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 drawings and technical specifications as directed by Engineer. Payment for cement, reinforcement and shuttering shall be paid extra				
193072	In Steining of wells	cum	1373.85	41.12	56492.71
193071	Well kerb	cum	1373.85	28.27	38838.74

193030	Supplying, Fabrication, assembly erection & placing in position of cutting edge of well curb with structural steel including M.S sheet/ Plates of specified thickness for pier/abutment complete as per approved plans and as per direction of Engineering In charge including all operations like cutting, bending, straightening, drilling holes, bolting, riveting, welding, threading, jointing of steel sections including outer and inner places liners and skin plates, stiffeners, hooks bottle nuts, bond rods etc as per design including all ascent, descents, leads, lifts, handing, re-handling, all other obstructions whatsoever, diverting channels, pumping / bailing out of water and wherever required including cost of steel such as flats, sheets, angles, steel bars etc. with all labour and material as a complete job.	Meter			119022.06
			59511.03	2.00	
195030	Centering and shuttering including strutting, propping etc. and removal of form for :				
195035	In well Kerb & Steining	Sqm	236.2	95.00	22439.00
259270	Supply of Woven Geotextile made from polypropylene multifilament yarn, having minimum mass of 220 GSM & ultimate tensile strength of 40 kN/m with puncture resistance of 600 N and apparent opening size of 150 microns	sqm		14.14	2276.54
	Supply of materials in Water harvesting sump		161		
252120	Coarse sand (Minimum zone III )	cum	690.00	7.07	4878.30
252100	Stone Aggregate broken : 10 mm nominal size	cum	546.25	7.07	3861.99
252090	Stone Aggregate broken : 20 mm nominal size	cum	575	7.07	4065.25
171540	Providing supplying, lowering and fixing in bore unperforated MS casing pipe 6 mm thickness up to specified depth below ground level with all contractor's tools, plants, material and labour etc. complete				
171543	200 mm internal pipe	meter	1095	75.00	82125.00
171550	Extra for using slotted or perforated MS casing pipe				
171553	200 mm internal pipe	meter	110.05	20.00	2201.00
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	Cum	1439.19	479.12	689544.71

33060	<b>Supply and using cement at worksite :</b>				
33062	OPC 53 grade	Tonne	5060.00	2522.00	12761320.00
	<b>Steel:</b>				
45010	Supplying Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
45016	Thermo Mechanically Treated bars(TMT) Note - The Contractor Shall quote the Rate for (TMT) Bar of Grade Fe-500	Kg	45.54	540456.89	24612406.97
	Miscellaneous cost of Any Other USSOR item to Complete the Work		L.S		1000000.00
	<b>Total of Schedule-A (USSOR Items)</b>				<b>71546176.64</b>
	<b>Add 24.995% Escalation on USSOR 2010</b>		24.995%		<b>17882966.85</b>
	<b>GROSS AMOUNT SCH.'A' (USSOR-2010)</b>				<b>89429143.49</b>
<b>Schedule-B (Non-Schedule Items)</b>					
NS-1	Providing reinforcement cement concrete of <b>mix design M-35/M-40</b> Grade with clean well graded 6mm to 20mm size broken stone aggregate cast-in-situ complete including batching, mixing, handling, placing, vibrating, compacting, curing as per specifications, cost of fixing and removing of centering and shuttering as per approved drawings in pile caps, piers, pier caps, pedestals, crush barrier, parapet, median, kerb, etc. complete.				
	The rate includes the cost of all materials such as stone aggregate, sand, water, shuttering and centering, all labours, handling, batching, mixing, vibrating etc, equipments and machinery such as mechanical mixer, vibrator etc. finishing smooth of exposed surfaces after removing centering and shuttering. The rates inclusive of providing temporary staging arrangements with contractor's material. The rates also include transportation of all materials with all lead, lift, all taxes & royalties etc. but excluding the cost of cement & reinforcement steel, which will be paid separately under relevant NS items.				
(i)	RCC in Pile Cap	Cum	2503.35	398	996333.30
(ii)	Sub structure-pier, pier cap, pedestals & abutments etc.	Cum	5642.98	619	3493004.62
(iii)	In super structure-deck slab, parapet, wearing coat, crash barrier etc.	Cum	6785.39	561	3806603.79

NS-2	<p>Providing controlled reinforcement concrete in M-45 grade with clean well graded 6mm to 20mm size broken stone aggregate cast-in-situ in <b>PSC I/Box Girder with diaphragm &amp; deck slab</b> super-structure including handling, placing, vibrating, compacting, curing, fixing and removing centering and shuttering as per Railway's approved drawings and MORT&amp;H (IRC) specifications. The rate includes cost of erection of temporary steel staging including strutting, propping, wedging, easing, striking, &amp; removal etc. complete and casting of platform for staging if required, providing required clearance for safe movement of trains duly observing all safety precautions making provision for fixing overhead equipments, road lights arrangements, cable ducts, drainage spouts, etc. Rate also includes the cost of all materials such as coarse aggregates, fine aggregates, water, admixtures etc. including transportation with all lead lift taxes and royalties. The rate inclusive of all labours, tools and plants, machinery and equipments to complete the work in all respect.</p>	Cum	12350.96	449	5545581.04
	<p>NOTE:- The rates are exclusive the cost of cement, reinforcement steel, HTS wires which will be paid separately under relevant NS items.</p>				
NS-3	<p>Supply, fabrication, (with MS IS 2062:2006 Gr.B killed &amp; Normalised structural steel) transportation of steel Girders to sites, including testing of welded, revitted steel girder as per Indian Railway standard specification for Steel Bridge Girders SI.No. B1-2001 and as per RDSO Drawing No. 11755/R,11756/R (as corrected upto date) IRC loading standard including supply and fixing in position of shop rivets, bolts, nuts, washer, welds, electrodes etc. required for complete fabrication of girders and transportation of fabricated Girders to the construction site as per direction of engineer in charge including loading &amp; unloading at site and stacking of same at place(s) as directed by Engineer incharge including applying shop paint of approved quality over the structural members complete in all respect and including cost of labour, MS bolts nuts, rivets, welds all consumables, tools and plants etc. and all taxes.</p>	MT	101542.37	280.24	28456233.77
	<p><b>NOTE:-</b></p>				

(i)	The rates shall also include assembling at shop yard or at site as directed by Engineer. all structural steel section such as Angles, Channels, Flats, Plates etc. required for complete work including its transportation shall be arranged by the Contractor on his own cost, all steel shall be approved quality as per specification. For testing / inspection and charged thereof refer additional Special Conditions and Specifications for fabrication and erection of steel structure.				
(ii)	The rate also includes NDT and other testing as per Railway Specification for the fabricated girder.				
(iii)	The fabrication work / cost includes preparation and approval of fabrication (shop) drawings / scheme welding of components, all structural steel welding consumables, cutting, shaping, holing, welding by fillet or butt welds, post weld treatments, inspection and testing, construction of all types of ties, stiffeners, packing, diaphragm, H.D. Bolt steel drifts, shop welding, shop rivets, jigs, fixtures, back up supports, accessories etc. and marking each number for site identification and transporting various components from fabrication yard to bridge site in package bundles and other means with due care and safeguards as described in the specifications, and as directed by Engineer including loading, unloading, sorting, number-wise systematic matching etc. complete with contractor's own labour, material, tools & plants including all lead, lift and taxes complete.				
(iv)	The rate also includes apply one coat of base shop paint and finish two coat paint of approved sample after launching and casting & finishing of deck slab with all respect works. The paint sample should be got approved from the Engineer and application should also be as per instruction of Engineer.				
(v)	The rate also includes cost of inspection testing of girder in stages by consignee from railway.				
NS-4	Assembling, erection and launching of fabricated steel girders (with MS IS 2062:2006Gr.B killed & normalised structural steel) in proper position, line, Level, alignment including erection of staging and scaffolding, dismantling the same after completion of work under traffic block. The rate shall be inclusive grouting of sleeve bolts on the bed block complete in all respect with all materials, labour, tools and plant lead, lift and taxes.	MT	23086.13	280.24	6469657.07
(i)	Erection work includes preparation and approval of erection / assembly / launching scheme.				

(ii)	Erection work includes Contractor's own cranes of sufficient capacity and boom length, steel trestles as per site conditions of safe and adequate capacity or other manual / mechanical methods of erection and launching of truss members / girders. It also includes the work of battens, lacings, ties, Stiffeners, packing, diaphragm, T&F bolts, steel drifts, field riveting, templates, jigs, fixtures, back up supports, accessories, temporary staging of CC Cribs of sufficient quantity for flooring and camber jacks, mechanical and hydraulic jacks, steel wire ropes and winch crabs, launching nose of steel for cantilever launching (if any), dead anchorages and any other suitable material such as small cranes for field assembly, shifting of leaves of steel girders from horizontal position to vertical position and vice-versa, scaffolding and air compressors welding plants, pneumatic tools and mini workshop facilities at site etc.				
(iii)	The job of erection also includes transport of already led materials (vide relevant item) to assembly platform or to nearby site location, lifting of truss components to required staging, assembly of truss members on drifts / bolts, field riveting and welding with the Contractor's own labour, material, tools & plants etc. complete job as required for the work.				
(iv)	This also includes cost of material, fabrication, erection and dismantling of all temporary components like gap structure, tower, high tensile cables (including anchorages), truss strengthening members, sway restraining devices such as sway rope restraining cables, counter weights, dead anchorages and other preliminary arrangements used for launching truss members etc. to suit the site requirements as required for the work for which no extra payment shall be made.				
(v)	Provision of all accessories such as inspection ladder, trolley refuge, pipe line, fixing arrangements, cable fixing arrangement and railings etc. of steel is also covered under above item which shall be paid as per actual weight.				

NS/5	Casting, Transporting and launching of precast reinforced concrete slab in M-25 design mix for RCC boxes including launching during traffic block or without traffic block etc. as per approved drawings & design with contractor's own materials such as sand, water, 6mm to 20mm well graded machine crushed stone aggregate, admixtures etc. including machine mixing of all gradients, placing, mechanical vibrating, curing etc. and providing shuttering, centering, formwork and handling, transporting to bridge sites including loading & unloading and launching including supplying, laying and levelling of required layer of sand underneath RCC slab as per approved drawing with contractor's own labour and equipments, all lead, lift, royalties, taxes etc. complete in all respect except cost of reinforcement & cement which will be paid separately under relevant USSOR items.	Cum	4200.85	71	298260.49
NS/6	Casting and transporting precast reinforced cement concrete boxes and U-Type/L-Type retaining wall segments in M30/35 design mix near LHS site with machine batched, machine mixed and machine vibrated design mix concrete, including the cost of centering, shuttering, finishing, admixture, if required, as per IS: 9103 to retard setting of concrete/improve workability without impairing strength and durability as per direction of Engineer-in-charge. Only machine mixed and automatic weigh batched concrete/ concrete produced by Fiori shall be used during entire work. The concrete shall be placed with the help of mechanical means only. Rates are inclusive of all the materials, labour, transporting to bridge sites including loading & unloading with contractor's own labour and equipments . Curing, machinery, tools, plants, taxes etc. complete in all respect except cost of reinforcement & cement which will be paid separately under relevant USSOR items.	Cum	5454.68	365	1990956.45
NS/7	Placement of precast reinforced cement concrete components ( RCC box/U-Type/L-Type segments of retaining walls) with the help of suitable capacity road crane at desired location during traffic block of short duration with all contractor's labour, tools , material, cranes, machinery, preparation of surface including cost of filling of joints by epoxy mortar, cutting of lifting hooks by gas cutting, all lead, lift, taxes etc complete in all respect.				
(a)	RCC box segments requiring traffic block.	MT	3691.208	444	1638896.35
(b)	RCC box/U-type/L-type segments not requiring traffic Block or in closed sections.	MT	1800.0824	469	844238.65



NS-8	Providing, laying, spreading (with paver finisher only) and compacting wet mix macadam (WMM) base course comprising of graded stone aggregate and granular material conforming to MORT&H specification (Table 400-II) in layers of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT &H specification clause -406 including all material, labour, machinery, lighting, guarding,. .....				
	For Temporary Traffic Diversion	Cum	1432.84	496	<b>710688.64</b>
NS-9	Supply, installation, testing and commissioning of lifting barrier (for level crossing gate) Drawing No.SA-7974/M (Adv) Alt-3 with Gate lamps, levers with lever locks, boom locks arrangement and winch to Drg. No.SA-8132DC (Adv), complete 10 meters to spec. No. IRS-S-1078. <b>Both side of level crossing (1 set = 02 Barriers).</b>	per set	221246.85	1.00	<b>221246.85</b>
	(Note: This NS item will be operated only when a Temporary LC is required to be commissioned before construction of LHS)				
NS/10	Supply and shrouding of pea gravel 2mm to 4mm size for tube well assembly according to Rly. Specification based on ISI specification of tube well	Cum	2743.17	10.00	<b>27431.71</b>

NS/11	<p>Laying of new BG/MG track at level crossings as per RDSO approved drawing with Railway's New/SH rails for check rails and special sleepers laid truly square at required spacing over the compacted ballast bed with contractor's own labour and T &amp; P. The rates include fabrication of check rails as per standard drawing, fixing them on the special sleepers with the help of MS brackets, bolts, washers, plate screws etc; applying two coats of anti corrosive paint of approved quality on running as well as check rails, marking sleeper spacing, cleaning and greasing of the MCI insert and ERCs as per Para 1411 (5) of IRPWM (second reprint 2004 corrected up to date), raising of track in stages by not more than 75mm at a time to achieve clean ballast cushion of 300mm to 350mm, two rounds of packing manually to bring the longitudinal and transverse level to desired standard, dressing and boxing of ballast, providing wooden blocks between the check rails on both the ends and filling up the space between the wooden blocks by ballast to facilitate smooth movement of road traffic and any other incidental work to the entire satisfaction of the Engineer in charge.</p> <p>(i) Level Crossings with 7.00 (+0.50) m long check rails.</p> <p>(Note: This NS item will be operated only when a Temporary LC is required to be commissioned before construction of LHS)</p>	Each LC	5192.43	2.00	<b>10384.86</b>
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NS/12	<p>Removing of existing any type of track for insertion of RCC boxes, laying, linking &amp; lifting of any type of track on newly laid RCC box on either side of LHS including cutting of rails, drilling of holes, subsequent through packing to make track fit for 75Kmph &amp; de-stressing of LWR/CWR of any type of track and picking up of stone ballast (new or retrieved) including loading &amp; leading of ballast from stacks</p> <p>Various activities involved in this work along with their tentative scope are:</p> <p>(i) Removing of existing track - 39.0mtr  (ii) Removing ballast from track &amp; keeping it away from site of work.  (iii) After insertion of RCC boxes, putting back existing ballast at (ii) above and supplying&amp; putting in track additional quantity of ballast so as to provide minimum ballast cushion of 300mm to 350mm in compacted condition.  (iv) Re-laying &amp; linking of track - 39.0mtr  (v) Lifting of track in stages of 50/75mm for required length to ensure ballast cushion of 300mm to 350mm as per site conditions minimum ballast supply 50.0cum on each LHS.  (vi) Cutting of any type of rails – 4 to 8 nos.  (vii) Drilling of 31.75mm/26.5mm or similar dia holes in rails of any section- 16 nos  (viii) Subsequent through packings to make track fit for 75Kmph-50.0mtr either side of LHS  (ix) Local de-stressing of LWR/CWR 100.0m on either side of LHS.  (x) AT welding of rail joints on any type of rail on single rail/SWP/LWR with Railway prefabricated moulds and railway portions as per IRS specifications T-19-2012 ( amended up to date)</p> <p>Note: Qty. and scope of work shown above at S.No. (i) to (x) are tentative only. The scope of these items may vary as per site conditions &amp; as per direction of Engineer-in-charge for completing the work of LHS safely and successfully. The quoted rates are for complete job. Nothing extra shall be paid on any account.</p>	Each	73131.44	1	<b>73131.44</b>
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NS/13	Insertion and taking out of temporary service girder of required length as per need of site below track in short duration traffic block as per Railway approved drawing to provide temporary arrangement for casting of box/excavation of hard/rocky strata to make space for launching of RCC Box/for launching of RCC components in subsequent blocks, including making and laying sleeper cribs, bearing plate, dismantling & laying of track, cutting/filling of earth etc. as per standard drg. to make track fit for 20 Kmph speed, with contractors own labour, crane, tools and plants etc. Nothing extra will be paid to the contractor except the accepted rate, whatsoever. (Note: This NS item will be operated only when RUB is constructed cast in-situ)	per job	103116.32	1	<b>103116.32</b>
NS/14	supplying and fixing protective Screen made of MS angle, tee flat, xpm GI plain sheet etc. and fixing by welding/J hook Bolts, nuts, clamps making Cement, mortar strip to fill up the gap between slab and bottom of screen or as suitable to site condition including one or more coats of zinc Cromate over a coat of red Oxide on FOB/ROB between section as directed by engineer in charge. red Oxide confirming to IS 104 and Covering Coat of Aluminium Confirming to IS 2339 to Approved quality with all taxes , Octroi, Contractors labours materials , tools and plants lead, lift transportation etc.	Kg	108.79	1000	108790.00
<b>Total of Schedule-B</b>					<b>54794555.35</b>
<b>Schedule-C Misc. NS Items:</b>					
NS/15	Carrying out the work of detail design and working drawing of railway portion of ROBs at level crossing No. 18 and 30 as per special conditions/specifications for and submission of approved detail design and working drawing after proof checking from IIT/NIT.	per job	937454.05	1	937454.05
<b>Gross Total of Schedule C (Misc. NS Items)</b>					<b>937454.05</b>
<b>Schedule-D (Vehicle)</b>					
NS/16	Providing diesel driven Vehicle (Xylo/Tavera or similar MUV field vehicle) on hiring basis for running up to 3500 Km and 312 hours per month. The rate includes all taxes, license fee, permit, driver's wages, repair and maintenance of vehicle etc with exceptions as mentioned in conditions.	Vehicle Per Month	46860	15	702900.00
<b>Gross Total of Schedule D (Vehicle)</b>					<b>702900.00</b>
<b>Total of Schedule A+B+C+D</b>					<b>145864052.89</b>

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**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 NWR 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.

## SUMMARY OF PRICES

**Name of work:-** Construction of Bridge portion of Two Lane ROBs in lieu of LC No. 18 at Km. 23/5-6 between Kund-Kathuwas stations and LC No. 30 at Km 37/8-9 between Ateli-Mirjapur Bachod stations on Rewari-Ringas-Phulera section in Jaipur Division of North Western Railway.

Sl. No.	Description of works	Amount of Schedule (Rs.) (updated DFCCIL Rate / cost)	Rates to be quoted in figures & words (Clearly mention above / below / at par on updated DFCCIL Rate / cost given in column 3)
1	2	3	4
1.	Execution of all works as per Schedule "A" <b>(items as per USSOR 2010 of NW Rly)</b>	<b>89429143.49</b>	..... % age <b>above / below / at par</b> (in figures)  ..... <b>above / below / at par</b> (In words)
2.	Execution of all works as per Schedule "B" <b>(Non-schedule items)</b>	<b>54794555.35</b>	..... % age <b>above / below / at par</b> (in figures)  ..... <b>above / below / at par</b> (In words)
3.	Execution of all works as per Schedule "C" <b>(Misc. Non-Schedule Items)</b>	<b>937454.05</b>	..... % age <b>above / below / at par</b> (in figures)  ..... <b>above / below / at par</b> (In words)
4	Execution of all works as per Schedule "D" <b>(Vehicle)</b>	<b>702900.00</b>	..... % age <b>above / below / at par</b> (in figures)  ..... <b>above / below / at par</b> (In words)
	<b>Grand Total</b>	<b>145864052.89</b> Say <b>145864053.00</b>	

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Notes:

- (i) The above prices are inclusive of all taxes, duties including Excise duty, Sales Tax, Octroi, Local levies, Works Contract Tax etc.
- (ii) The tenderer should quote single percentage above / at 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 is 24.995% above the rates of USSOR 2010 of NW Railway), if the rate of any item of USSOR - 2010 of NW Railway / Schedule A is "X" and

- (a) If percentage quoted by the contractor is 5 % above (+5%),  
If USSOR rate of item is X then Rate (R) of item payable to contractor will be  $(X) \times 1.24995 = (Y)$  ;  $(Y) \times 1.05 = (R)$  ;
- (b) Similarly, If percentage quoted by the contractor is 5 % below (-5%),  
If USSOR rate of item is X then Rate (R) of item payable to contractor will be  $(X) \times 1.24995 = (Y)$  ;  $(Y) \times 0.95 = (R)$  ;
- (c) If percentage quoted by the contractor is at par, Rate payable to contractor =  $(X) \times 1.24995$
- (d) In case of NS items i.e. Schedule B, C & D, Updation factor shall be 1. Rate Percentage above/ below quoted by the contractor would be considered.