



Tender No. ALD(W)/EN/ROB-18 & 67/OT-04/297/2015-16

For

Construction of 02 nos ROB's (excluding approaches) in lieu of level crossings No. 18 and 67 at Km 879/01-03 & 986/07-09 respectively of ALD-CNB section of Allahabad Division of North Central Railway.

**FINANCIAL BID
(PACKET-B)**

**TENDER DOCUMENT
January'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	ALD(W)/EN/ROB-18 & 67/OT-04/297/2015-16 dated 28/01/2016
Name of the work	Construction of 02 nos ROBs (excluding approaches) in lieu of level crossings No. 18 and 67 at Km 879/01-03 & 986/07-09 respectively of ALD-CNB section of Allahabad Division of North Central Railway.
(a) Tender Value	Rs. 15,10,07,696
(b) Completion Period	15 months
(c) Earnest Money	Rs. 30 Lacs
(d) Date and Time of Issue of Tender	From 01/02/2016 to 21/03/2016 upto 13.00 Hrs on all working days from 10:30 hrs. to 17:00 hrs. against the prescribed fee of Rs. 10,000/-+ 7% UPST=10,700/- which is not refundable.
(e) Last date and Time of submission of Tender	21/03/2016 upto 15:00 hrs
(f) Date and Time of Opening of Tender (Technical bids -Packet A)	On 21/03/2016 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 submit 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 02 nos ROBs (excluding approaches) in lieu of level crossings No. 18 and 67 at Km 879/01-03 & 986/07-09 respectively of ALD-CNB section of Allahabad Division of North Central Railway..

Sl. No.	Description of works	Cost as per USSOR 2010 of NC Rly	DFCCIL updated Rate (in %)	DFCCIL updated cost in Rs	Rates to be quoted in figures & words (Clearly mention above / below / at par on updated DFCCIL 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)	19873019.18	+ 74.00%	34579053.37 % 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)	15039295.52	+ 14.00%	17144796.89 % age (in figures) (In words)
3.	Execution of all works as per Schedule "C" (NS Items)	60123706	At Par	60123706 % 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)	7176000	+ 14.00%	8180640 % 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.)	27175000	+ 14.00%	3,09,79,500 % age (in figures) (In words)
	Grand Total			151007696.26	

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 factor is 1.74, since 74% is above the rates of USSOR 2010 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 = $(X) \times 1.74 \times 1.05$
- (b) If percentage quoted by the contractor is 5 % below (-5%), Rate payable to contractor = $(X) \times 1.74 \times 0.95$

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- (c) If percentage quoted by the contractor is at par, Rate payable to contractor = $(X) \times 1.74$
 - (d) Similarly updation factor for Schedule B, D and E is 1.14.
 - (e) In case of NS items i.e. Schedule C, Updation factor shall be 1.

Signature of the Tenderer (s) with Seal

**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)
SCHEDULE 'A' - (ITEMS AS PER USSOR 2010 OF NC RLY FOR BRIDGE CHAPTERS)						
	191010	Exploratory drilling of Boreholes down to required depth, drilling of 150mm diameter boreholes in all type of soils except hard rock and large boulders (boulder core more than 30 cm), including refilling and reinstating surface, and disposing off surplus material including use of mechanical rigs with power operated winches as well as percussion / chieselling tool for advancing through occasional seams of hard strata to be employed, where necessary in Dry area				
1	191011	0m to 10m	metre	20	1561.06	31221.2
2	191012	10m to 20m	metre	20	1742.25	34845
3	191013	20m to 30m	metre	20	2032.63	40652.6
	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 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				
4	192011	All kinds of soils	cum	300	165.5	49650

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
5	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	100	1782.20	178220.00
6	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	800	1694.28	1355424.00
	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				

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		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				
7	192061	Abutment & Pier	cum	400	1779.00	711600.00
8	192063	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall, etc.	cum	270	1948.42	526073.40
	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 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				

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
9	192072	1200mm diameter	metre	1000	7874.24	7874240.00
	192100	Conducting Load Testing of 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				
10	192103	Initial load test above 100 ton capacity up to 250 ton capacity pile	Each	2	81014.63	162029.26
11	192104	Extra for every increase of 50 T in pile capacity or part thereof over 250 T	Each	2	13676.66	27353.32
12	192107	Routine Load test above 100 ton capacity up 250 ton capacity pile	Each	2	125285.20	250570.40
	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 Engineer				
13	192111	Piles with lateral load capacity of Up to 10 ton	Each	2	23630.72	47261.44
14	192112	Piles with lateral load capacity of above 10 ton & upto 20 ton	Each	2	33149.21	66298.42
15	192113	Piles with lateral load capacity of above 20 ton	Each	2	55199.37	110398.74
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,	Each	40	36587.25	1463490

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		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				
	195030	Centring and shuttering including strutting, propping etc. and removal of form for :				
17	195031	RCC raft foundation & Pile cap	Sqm	880	127.80	112464.00
18	195032	Abutment, pier, wing walls and return walls	Sqm	1820	214.70	390754.00
19	195033	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall, etc.	Sqm	1940	213.09	413394.60
20	195038	In Bottom/top slab, side walls, toe wall and sumps haunch filling head walls or any other component	Sqm	200	214.7	42940
	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				
21	201051	For 80 mm expansion	metre	60	23136.28	1388176.8
	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				

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		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				
22	201061	For Span design load upto 100 MT	Each	2	66772.64	133545.28
23	201062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	Each 100m	4	65548.13	262192.52
24	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	Kg	1400	59.89	83846.00
	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				

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		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				
25	211141	POT-PTFE Bearing	MT Bearing Capacity	24000	171.27	4110480
26	222170	Providing and fixing of Drainage Spouts of 100 mm UPVC complete as per drawing and Technical specification	metre	22	268.10	5898.20
		TOTAL COST OF SCHEDULE 'A' ITEMS				19873019.18

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
SCHEDULE 'B' - (ITEMS AS PER USSOR 2010 OF NC RLY OTHER THAN BRIDGE CHAPTERS)						
1	013120	Earthwork in filling in embankment, guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds if provided, platforms etc. with earth excavated from outside railway boundary entirely arranged by the contractor at his own cost as per RDSO's latest guidelines and specifications and special condition of contract including all leads, royalty, lifts, ascents, descents, crossing of nallahs or any other obstructions. The rates shall include all dressing of bank to final profile, demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling. taxes, octroi and royalty etc. as a complete job. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special conditions of contract	cum	1600	208.30	333280
2	014110	Providing and removing barricading with the help of portable fencing along the running track where the work is to be done in close vicinity of the track. Fencing shall consist of self supporting steel angles of size 50 x50x6mm, 1.5m long provided with hooks etc. and embedded in CC 1:2:4 block of size 0.23x0.23x0.23M placed at c/c distance of 2.0 M along the track. 12 mm dia rods in three horizontal layers tack welded with the angle posts including providing Retro-reflective tapes in Horizontal & vertical direction. Note : Released material will be the property of the contractor after the completion of work.	metre	220	105.95	23309

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		Cost of cement to be paid separately.				
	031050	Providing and laying in position cement concrete of M 20 grade, excluding the cost of cement and of centering and shuttering, as per direction of the Engineer in charge :				
3	031051	All works upto Plinth level	cum	20	1847.51	36950.2
4	031052	All works above plinth level in retaining walls, walls (of any thickness) including attached pilasters, columns, pillars, posts, struts, buttresses, anchor blocks, parapets, copings, bed blocks, string or lacing courses, window sills, fillets, kerbs, steps etc.	cum	8	1967.43	15739.44
	031020	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.				
5	031024	1:1.5:3 (1cement : 1.5 sand : 3 graded stone aggregate 20mm nominal size)	cum	20	1883.40	37667.9096
6	042040	Supplying and applying shuttering oil for mould releasing, having (Flash point 54 degree C and specific gravity 0.88±0.02) for concrete formwork to be applied either by brush or with spray machine to the entire satisfaction of Engineer Incharge	Sqm	2000	7.11	14220
	043010	Providing, hoisting and fixing in position upto floor two level M20 Grade precast RCC work including setting in cement mortar 1:3 (1 cement : 3 coarse sand) and finishing smooth with 6mm thick				

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete including cost of centering, shuttering, finishing, Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability, excluding cost of cement and steel reinforcement, as per approved plan & direction of Engineer incharge.				
7	043015	In slabs for drain covers, manhole covers, flue tops etc.	cum	30	2695.23	80856.9
	081020	Structural steel work riveted or bolted in built up sections, trusses and framed work, girders, staging, racks etc including cutting, bending, straightening, drilling, rivetting, bolting, hoisting, fixing in position including applying a priming coat of a approved steel primer complete - upto 6m height above GL				
8	081021	In RSJ, tees, angles and channels	Kg	500	57.04	28520
9	081022	In flats, plates, round or square bars	Kg	500	57.51	28755
	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 6m height above GL				
10	081031	In RSJ, tees, angles and channels	Kg	500	69.24	34620
11	081032	In flats, plates , round or square bars	Kg	500	68.00	34000
	081040	Extra for every subsequent 3m height or part thereof over 6m height above GL for erection and fixing of steel work :				

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
12	081042	Over item no 081022	Kg	500	3.19	1595
13	081043	Over item no 081032	Kg	500	5.85	2925
14	081110	Providing and fixing expanded metal 20X60mm strands 3.25mm wide and 1.6mm thick on angle iron flat iron frames including all incidental work complete. Cost of frames to be paid separately under relevant item	Sqm	100	397.23	39723
15	081130	Providing and fixing MS flat 25mm x 6mm covering over expanded metal/ hard drawn wire fabric edges (executed as per Item 081110 and 081120) along the perimeter of the angle iron or flat iron framework including all incidental work, complete	Metre	240	146.07	35056.8
16	081140	Supplying and fixing lewis/ holding down bolts of approved design with nuts and washers complete	Kg	160	61.13	9780.8
17	091090	Laying cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) of thickness 40 to 100mm as under layer of flooring	cum	20	2152.53	43050.6
	094040	Precast Chequered factory made terrazzo tiles 22mm thick/ with graded marble chips size upto 6mm in floors jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing of cement slurry complete on 20mm thick bed of cement mortar 1:4 (1cement : 4Coarse sand)				
18	094042	With ordinary cement with pigment	Sqm	400	596.56	238625.6925
	121010	Applying Priming Coat :				
19	121013	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanized	Sqm	240	17.31	4154.4

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		iron/steel works				
	121050	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade				
20	121051	Two or more coats on new work	Sqm	340	45.30	15402
	121090	Painting with aluminium paint of approved brand and manufacture to give an even shade				
21	121091	Two or more coats on new work	Sqm	240	42.26	10142.4
22	154010	Providing and fixing 110mm dia PVC soil, waste and vent pipes including jointing and cost of spun yarn and sand etc. complete	metre	200	221.56	44312
	231040	Providing and laying water bound macadam with specified stone aggregate, stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete.				
23	231041	Sub-base with stone aggregate 90mm to 45mm including stone screening 13.2mm size	cum	200	1003.48	200696
24	231080	Providing and spreading 6mm thick layer of red bajri/ moorum, watering and rolling with 3 T roller or light power roller complete including preparation of the surface and rolling	Sqm	200	29.81	5962
25	232010	Surface dressing on new surface with paving bitumen of grade A-90/ S-90 of approved quality using 2.25 kg of bitumen. per sqm with 1.65 cum of stone chippings 13.2mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8	Sqm	200	194.59	38918

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
		tonne capacity etc. complete				
	233030	Providing and laying 2.5cm premix carpet surfacing with 2.25Cum and 1.12cum of stone chippings of 13.2mm size and 11.2mm size respectively and 180kg of hot bitumen per 100sqm over a tack coat including consolidation with road roller of 6 to 8tonne capacity etc. complete (tack coat to be paid separately.				
26	233031	With paving asphalt 80/ 100 heated and then mixed with solvent at the rate of 70grams per kg. of asphalt	Sqm	200	152.22	30444
	238020	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				
27	238021	40 mm / 50mm compacted thickness with bitumen of grade 60/70 @ 6.5% and lime @ 3% by weight of total mix	cum	110	8351.61	918677.10
		ADD LS AMOUNT FOR UNFORSEEN ITEMS OF USOR.				12731912.28
		TOTAL COST OF SCHEDULE 'B' ITEMS				15039295.52

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
SCHEDULE 'C'						
1	NS-1	Providing & laying design mix control concrete using weigh batching method, M-35/M-40 using Cement, coarse sand of approved quality and mechanically crushed well graded coarse aggregate 20mm and down gauge in RCC DECK SLAB, CENTRE VERGE, END CANTILEVER, RAILING BEAM, ANTI CRASH RAILING etc. at the approved safe height and distance from live OHE wires carrying 25KV AC traction to cast monolithically to the required level as per approved drawing & design over already launched main steel girder with proper joining arrangement through shear connector.	Cum	600	8294.00	4976400.00
	NOTE					
	a)	The necessary shuttering arrangement has to be planned using already launched main steel girder. No support from ground will be allowed for this purpose. The rates includes for working under running traffic condition, all leads, lifts, ascents, descents, all other obstructions, cutting, hooking, bending, placing, keeping and maintaining in position steel reinforcement, cost of MS binding wire of approved gauge, designing concrete mix using weigh batching including arrangement of weigh batching plant, mechanical mixing, vibrating of concrete, use of admixtures if required, curing of concrete for a specified period finishing the exposed surface of concrete etc. complete				
	b)	The contractor should made adequate arrangement below the girders to avoid falling of any thing over the track during working for the slab. The rate also includes design and provision of all temporary arrangement for casting, erection, scaffolding and submission of detailed design and drawing for temporary works and to ensure safety of running traffic at all times.				
	c)	Cement & reinforcement steel & shuttering will be arranged by the contractor & payment for the same will be made separately under relevant SOR/NS Items				
2	NS-2	(a) RCC work with design mix control concrete using weigh batching method, M-35/M-40 using Cement, coarse sand of approved quality and mechanically crushed well graded coarse aggregate 20mm &down size in WEARING COAT	Cum	110	4462.00	490820.00

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		laid to required camber & slope with temperature reinforcement as per specification and approved plan/design arrangement made for fixing of expansion joints and drainage spouts including cost of uncoiling, straightening, cutting, hooking, bending, binding including placing, keeping & maintaining in position in all the reinforcement steel including cost of the binding wire, design mix with weigh batching mechanical mixing, use of admixtures if required, vibrating & curing of concrete for a specified period. The rate includes for all ascend, descend, lead & lift above/below ground level, all labour & material as a complete job.				
		Note: Cement & reinforcement steel will be arranged by the contractor & payment for the same will be made separately under relevant SOR/NS Items.				
3	NS-3	Supplying, fabrication, transportation of components of welded/riveted STEEL GIRDER (37.7 m or similar span) for required spans as per Railway drawing including supplying and fixing in position of shop rivets, bolts with nuts, washer and providing steel trough etc. required for complete fabrication of the girder and transportation of the fabricated material at site and stacking of the same at places as directed by Engineer-in-charge. The rates shall also includes primer coat of Zinc Chromate conforming to IS:104-1979 over the structural member complete in all respect and cost of all material, fuel, labour, MS bolts, nuts, rivets, paint, tools & plants, loading, unloading, all taxes in vogue, trial assembly in the shop yard or at site as directed by the Engineer-in-charge. The rate shall also inclusive of supplying & fixing in position steel bearing plate, bed plate, strips, stiff plates and location strips etc as	MT	200	91269.00	18253800.00

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		completed job.				
		i) Structural steel shall be conform to IS Hot Rolled Low, Medium and High tensile structural steel, conforming to IS:2062 (2006) (E 250) revised upto date				
		ii) Steel plate girders shall be obtained from RDSO approved firms only. Steel plate girders will be inspected and checked by the competent authority / Railway's official				
		iii) No deduction will be made for the holes and also no extra payment will be made for the rivets, bolts and welds.				
		iv) Mode of payment				
		a) 40% of rate payment shall be made after steel material required for fabrication (as per drawing) is received at contractor workshop / fabrication site. The payment shall be made on the basis of invoice and against bank guarantee of requisite value covering full completion period of bridge.				
		b) 50% of rate payment shall be made on acceptance of fabricated components at site and submission of indemnity bond.				
		c) 10% will be made after final approval of Railway and successfully commissioning of work.				
4	NS-4	Assembling, riveting/bolting with contractor's own material, erection, launching, lowering, aligning and placing at exact position as per approved scheme of steel plate girder for required span in proper level and alignment including painting two coats of aluminum paints, providing and fixing high strength friction grip bolts and holding down bolts including stud type/flexible shear connector with all necessary works like making holes, grouting of bolts with epoxy based compound as directed by Engineer-in-charge. The rate will inclusive of supplying /erection and dismantling of staging, scaffolding and other temporary arrangement required for assembling, erection, launching and lowering of the girder. The rate shall be also inclusive of cold straightening of deformed bent girder parts before the assembling including contractor's all labour, materials t&p, testing etc.	MT	200	23122.00	4624400.00

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		complete.				
	NOTE	Mode of payment				
	i)	a) 85% of rate shall be made on completion of riveting, launching and complete erection with drifts and service bolts in position with lowering and placing of girder in position.				
		b) 10% of rate shall be made on testing and replacing of loose rivets, placing of girder on bearing, painting etc. complete in all respect.				
		c) 5% balance shall be made after final approval of Railway and successful completion of work.				
	ii)	The contractor shall submit a scheme /methodology for launching of girder along with necessary calculation wherever required for approval of railway.				
	iii)	Temporary supports if any required for the launching purpose shall be erected after the approval of Railway. Nothing extra shall be payable on this account.				
	iv)	The contractor shall take all safety precautions that will be necessary in consultation with Engineer-in-charge as per extant rules /guidelines. Nothing extra shall be payable on this account.				
	v)	Notwithstanding above, the contractor shall be fully responsible for any mischhap that may occur as a result of negligent working.				
	vi)	Contractor has to take every precautionary measure for safety of running train during and after launching of girder.				
		Supply of structural steel at the site of work or workshop, fabrications, transportation, assembly and painting as per direction of engineer of the steel superstructure bowstring girder (Upto 60m) complete, as per approved structural & fabrication drawing and as per technical specifications etc. including surface preparations sand blasting painting erection of bearing etc. complete item with contractor's materials consumables per drawings/specifications contract conditions and as approved/directed by engineer.				
5	NS-5	With structural steel conforming to IS 2062: 2006 E 350 (Fe 490)/E 410 (Fe 540) or equivalent	MT	50	85000	4250000.00

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
6	NS-6	With structural steel conforming to IS 2062; 2006 E 250 B (Fe 410 W) or equivalent.	MT	250	79561.4	19890350.00
		Note				
		a) Structural steel shall be supplied by contractor as per the relevant specification				
		b) The fabrication including preparation and submission of fabrication(shop) drawings/schemes cutting shaping drilling holes, welding of components welding consumables all inspection and testing of raw materials, fabrication process and fabricated material; connections of all the types of ties, stiffeners, packing diaphragm H.D.Bolts steel drifts shop welding shop rivets templates jigs fixtures back up supports, accessories etc and marking each member for site identification and transporting various components from contractor's fabrication yard/workshop to bridge site in packages bundles an other means with due care and safeguards, as described in the contract conditions and specifications and as directed/approved by engineer including loading unloading sorting member wise systematic matching etc. complete with contractor's own labour material tools & plants including all lead lift and taxes complete				
		c) The cost includes one trial assembly for each type of girder on shop floor as required and approval by inspecting agency. All works shall be carried out as per approved drawings, relevant cadal provisions technical specifications and as approved/directed by the engineer				
		d) The cost also includes surface preparations and painting of all components of the girders in terms as directed/approved by the engineer				
		e) provision of of all accessories such as inspection ladder trolley refuge, pipe line fixing arrangements cable fixing arrangement shear connector fixing and railings etc of steel is also covered under above item which shall be paid as per actual weight				
		f) Material as per requirement shall be brought to site and kept under contractor's custody at his own cost and risk without any damage like rusting of steel etc. the structural steel are to be procured from SAIL, TATA or RINL and shall conform to latest/stipulated IS/I.S specifications. if the structural steel of particulars size/dimension/specification is not available with or not manufacture by above manufactures then on production of non-availability/non-manufacturing certificate or production of proper document to the satisfaction of concerned Engineer- in-charge may consider and approve use of structure steel of any other reputed make/source/specification(equivalent). approvals of use of alternate brand(s) specifications (equivalent) shall be given only for specific cases and for limited durations. Decision of engineer to approve/dis-approve use of alternate brand / make/speciation(equivalent) final binding and conclusive. Manufactures test certificate conforming to latest IS specifications should be produced by the contractor duly authenticated by him DFCCIL reserve the right to take samples of materials supplied by the contractor and to get the same tested in required laboratories at the cost of the contractor and the results thereof shall be binding on the contractors.				

Sl. No.	Item no.	Description of items	Unit	Qty.	Rate (Rs)	Amount (Rs)
		g) DESIGN & DRAWING Design and drawing of bow string girder of ROB shall be got done by the contractor with latest IRS/IS/RDSO technical specifications with proof checking from IIT/NIT				
7	NS-9	Launching of Bowstring Steel Girder(upto 60m) or composite steel(upto 50m span) in Railway span or any other span (by method which is to be approved by Commissioner of Railway Safety or Engineer-in-charge) & placing in position true to line and level including pulling, pushing, lateral shifting, loading, unloading complete in all respect as per drawing and specification observing all safety measures, obtaining road traffic block with appropriate authority providing suitable diversion if required etc complete job. Erection work includes preparation and approval of erection/assembly/launching scheme. Rate shall include the cost of all labours, leads, lifts, ascents, descent, crossing of traffic road. The job of erection includes erection and fixing of bearings in correct position. The item also includes lowering and placing of girder on bearing nad its centering/aligning.	MT	300	20793.12	6237936.00
8	NS-7	DESIGN & DRAWING Design and drawing of foundation sub-structure and super structure of both ROB shall be got done by the contractor with latest IRS/IS/RDSO technical specifications with proof checking from IIT/NIT	LS			1400000.00
		TOTAL COST OF SCHEDULE 'C' ITEMS				60123706.00

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
SCHEDULE 'D' - SUPPLY OF CEMENT						
	033060	Supply and using cement at worksite :				
1	033061	OPC 43 grade	Tonne	1200	5980.00	7176000.00
		TOTAL COST OF SCHEDULE 'D' ITEMS				7176000.00

Sl. No.	Item no. of NCR USSOR -2010	Description of items	Unit	Qty.	Rate as per NCR USSOR-2010 (Rs)	Amount (Rs)
SCHEDULE 'E' - SUPPLY OF REINFORCEMENT						
	045010	Supplying Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.				
9	045016	Thermo-Mechanically Treated bars	Kg	500000	54.35	27175000
	Notes:- (i)	The contractor shall quote the rate for Thermo-Mechanically Treated bars of Grade Fe 500.				
		TOTAL OF SCHEDULE 'E'				27175000.00

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.

Signature of the Tenderer (s) with Seal