



Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL)  
Government of India, Ministry of Railways

Tender No. MGS/EN/2020-21/ROB/LC-72B/317

for

Name of Work: Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwarar - Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

E-TENDER DOCUMENT  
FINANCIAL BID (PACKET-B)

May-20

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

CGM OFFICE  
General Manager/Coordination, DDU  
DFCCIL  
Manas Nagar Railway Colony,  
Pt Deen Dayal Upadhyay Nagar (Mughalsarai)  
Chandauli -232101, Uttar Pradesh, India

CORPORATE OFFICE  
DFCCIL, 5TH Floor, Pragati Maidan Metro Station Building,  
New Delhi-110001

## GENERAL INFORMATION / DATA SHEET

TENDER NOTICE NO	Tender No. MGS/EN/2020-21/ROB/LC-72B/317
Name of the work	Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar - Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. <b>complete in all respect in DDU Division of East Central Railway.</b>
(a) Tender Value (in Rs.)	₹ 371,233,388.62
(b) Completion Period	18 months
(c) Earnest Money	₹ 5,000,000
(d) Date and Time of Issue of Tender	From 11 Hrs of 30.05.2020
(e) Last date and Time of submission of Tender	30.06.2020 upto 15:00 hrs
(f) Date and Time of Opening of Tender (Technical bids -Packet A)	<b>On 30.06.2020 at 15:30 hrs</b> <b>Opening date of Financial Bid will be Notified later</b>
(g) Validity of offer	120 days from the date of opening of Technical Bid
(h) Retention Money / Security Deposit	5 % of Contract Value
(i) Performance Bank Guarantee	Performance Guarantee (PG) have to be submitted within 21(Twenty One) 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 Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.				
S. No.	Description of works	Cost as per USSOR 2012 of EC Rly/ Basic Cost	DFCCIL updated %	DFCCIL updated cost in Rs
1	2	3	4	5
1	Execution of all works as per Schedule "A-I" (NS Item)	65,782,482.00	0	65,782,482.00
2	Execution of all works as per Schedule "A-II" (NS Item)	54,444,042.00	0	54,444,042.00
3	Execution of all works as per Schedule "A-III" (NS Item)	1,666,986.00	0	1,666,986.00
4	Execution of all works as per Schedule "B-I" (Items as per SOR 2012 of EC Rly Chapter -1 only)	291,396.28	32.62	386,449.75
5	Execution of all works as per Schedule "B-II" (Items as per SOR 2012 of EC Rly Chapters - 3,4,9,11 & 18 only)	8,885,760.39	32.95	11,813,618.44
6	Execution of all works as per Schedule "B-VI" (Items as per SOR 2012 of EC Rly Chapters - 19,20 & 22 only)	66,873,430.99	34.48	89,931,390.00
7	Execution of all works as per Schedule "B-VII" (Items as per SOR 2012 of EC Rly Chapters - 21 only)	600,414.76	56.65	940,549.72
8	Execution of all works as per Schedule "B-VIII" (Items as per SOR 2012 of EC Rly Chapters - 23 & 24 only)	12,253,089.58	40.20	17,178,831.59
9	Execution of all works as per Schedule "B-X" (Items as per SOR 2012 of EC Rly Chapters - 8,10& 17 only)	10,339,575.81	20.65	12,474,698.21
10	Execution of all works as per Schedule "B-XII" (Items as per SOR 2012 of EC Rly not covered by the items of Schedule -A ,Schedule-B-I,B- II,B-VI , B-VII ,B-VIII , C-I & C-II only)	1,000,000.00	25.24	1,252,400.00
11	Execution of all works as per Schedule "C-I" (Cement- OPC 43 Grade)	25,643,469.12	23.33	31,626,090.47
12	Execution of all works as per Schedule "C-II" (Reinforcement Steel FE 500D)	67,199,485.54	24.61	83,735,850.45
	<b>Grand Total</b>			<b>371,233,388.62</b>

**NOTES:**

- The Tenderer shall quote single percentage for each Schedule. If the tenderer quotes different percentage (%) above / below againsts each items of any schedule (i.e. A-I, A-II, A-III, B-I, B-II,B-VI, B-VII,B-VIII, B-X, B-XII, C-I & C-II ), else his offer will be summarily rejected.
- The above prices are inclusive of all taxes (GST, Works Contract Tax etc.), Octroi or Local levies
- 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.
- This Tender Schedule does not contain Schedules B-III, B-IV, B-V, B-IX and B-XI because of these Schedules are not present.
- Rate of item payable to Contractor shall be as per following example:-
  - For Schedule B-I (Updation factor is 1.3262, since 32.62% above is the rate of DFCCIL over USSOR 2012 of EC Railway).  
If the rate of any item of USSOR - 2012 of EC Railway/Schedule B-I is "X" and
    - If percentage quoted by the contractor is 5% above (+5%). Rate payable to contractor = (X) x 1.3262 x 1.05
    - If percentage quoted by the contractor is 5% below (-5%). Rate payable to contractor = (X) x 1.3262 x 0.95
    - If percentage quoted by the contractor is at par, Rate payable to contractor = (X) x 1.3262
  - Similarly updation factor for Schedule B-II,B-VI, B-VII,B-VIII, B-X, B-XII, C-I & C-II is 1.3295, 1.3448, 1.5665, 1.4020,1.2065,1.2524,1.2333 and 1.2461 respectively.
  - In case of NS items i.e. Schedule A-I, A-II, A-III, Updation factor shall be 1.

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "A-I" (NS Item)**

<b>SN</b>	<b>NS Item</b>	<b>Description</b>	<b>unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>	
1	NS-1	<p>Providing and laying in position machine batched, machine mixed and machine vibrated design Mix Cement concrete M-40 grade (cast in situ) Using 20 mm graded Crushed stone aggregate and coarse sand of approved quality in RCC deck slab laid to required camber including end cantilever, RCC crash barrier, RCC railing etc. including pumping of concrete to site of laying, finishing, using admixtures in recommended proportions (as per IS: 9103), if approved in mix design to accelerate or retard setting of concrete, improve Workability without impairing strength and durability with all contractor's labor, tools &amp; plants material (excluding cost of cement reinforcement and suturing) Fuel consumables machinery, loading unloading, lead and lift complete in all respect as a complete jobs per speculations &amp; as directed by engineer.</p> <p>Notes-</p> <p>(i) Payment for cement, reinforcement and shuttering shell be paid extra as per relevant USSOR item included in the relevant schedule.</p> <p>(ii) The concrete is to be poured at the approved safe height and distance from live OHE wires carrying 25KV AC traction (on IR Track) to cast monolithically to the required level as per approved drawing over already launched main steel girder with proper joining arrangement through shear connector.</p> <p>(iii) 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 etc</p> <p>(iv) The contractor shall make adequate arrangement below the girder to avoid falling of anything over the track during concreting of the slab. The rate includes design and provision of all temporary works and to ensure safety of running traffic at all times.</p>	1	CUM	187.00	9,618.00	1,798,566.00
2	NS-2	Reinforced Earth Structures					

SN	NS Item	Description	unit	Qty	Rate	Amount	
		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 warpping 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.					
		The coping beam is not permitted and the top panels shall be 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 fascia panels is also included in the rates of this item.	1	Sqm	4,870.00	5,954.00	28,995,980.00
		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 componenets 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 fascia patterns on panels including name of clients etc. from the Engineer-in-Charge. Nothing extra shall be payable for 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.					

SN	NS Item	Description	unit		Qty	Rate	Amount
	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 facia 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 the item/ incidental work required to complete the item as per direction of Engineer-in-Charge.					
3	NS-3	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.	1	Cum	13,752.00	2,130.00	29,291,760.00
	A)	With Sand					
	Notes:	1.The specification and construction details to be adopted shall be as per section 3100 of MoRTH Specification.					
		2.For compaction of Earthwork, attention is invited to clause 3105.5 of MORTH Specification.					
		3.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.					

SN	NS Item	Description	unit		Qty	Rate	Amount
4	NS-4	Providing and laying in position machine batched, machine mixed and machine vibrated design Mix Cement concrete M-40 grade (cast in situ / Precast including hoisting and fixing in place as per drawings and specifications ) Using 20 mm graded Crushed stone aggregate and coarse sand of approved quality in RCC deck slab laid to required camber including end cantilever, RCC crash barrier,Friction slab, RCC railing etc. including pumping of concrete to site of laying, finishing, using admixtures in recommended proportions (as per IS: 9103), if approved in mix design to accelerate or retard setting of concrete, improve Workability without impairing strength and durability with all contractor's labor, tools & plants material (excluding cost of cement reinforcement and shuttering) Fuel consumables machinery, loading unloading, lead and lift complete in all respect as a complete jobs as per specification & as directed by engineer.	1	Cum	1,188.00	4,300.00	5,108,400.00
5	NS-5	Painting Two Coats on New Concrete surfaces (crash barrier and curb stone) after filling the surface with synthetic enamel paint in all shades on new concrete surfaces.	1	Sqm	2,636.00	78.00	205,608.00
6	NS-6	Supply of Admixture for use in production of cement concrete as per design mix and in required proportion.	1	Litre	6,164.00	62.00	382,168.00
		<b>Sub-Total</b>					<b>65,782,482.00</b>

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**Execution of all works as per Schedule "A-II" (NS Item)**

SN	NS Item	Description	unit		Qty	Rate	Amount
1	NS-1	Supply, fabrication and erection of Welded type BOW STRING girders of required span BOW STRING girder of span more than 45.7 m as per RDSO standard drg / approved drawings, East Central Railway Unified Standard Specifications – 2012(amended up to date) and Indian Railways Standard specification for fabrication and erection of steel girder bridges and locomotive turntables (Fabrication Specification) Serial No B1- 2001 (amended up to date) including all incidental works etc, supplying and fixing in position of shop welding / shop bolting with nuts and washers, field bolts, STUD SHEAR CONNECTOR etc. required for complete fabrication of the girders and transportation of the fabricated materials at site and stacking of the same at places as directed by Engineer including metalizing as per clause No 39.2.1 of B1-2001 over the structural members with all contractor's labour, fuel, consumables, machinery, loading, unloading, tools & plants, material, lead and lift complete job as per specifications and as directed by Engineer.	1	MT	375.00	136,730.00	51,273,750.00
		<b>Notes</b>					
		(i) Steel (Plates and Rolled section) should conform to IS: 2062-2011. It shall have Sub quality 'BO' & Grade E250 (Fe 410) for rolled sections and E350 (Fe 490) for plates shall be fully killed and fully controlled cooled.					
		(ii) The steel shall be procured only from those firms, which are Established, Reliable, Indigenous & Primary Producers of Steel, having Integrated Steel Plants (ISP), using iron ore as the basic raw material and having in house iron rolling facilities, followed by production of liquid steel & crude steel.					
		(iii)40% of rate payment shall be made after steel material required for fabrication (as per drawing) is received at site.					
		(iv)15% of rate payment shall be made on acceptance of fabricated components at site.					
		(v) 20% of rate payment shall be made after erection& launching.					
		(vi) (a) 10% of rate payment shall be made after metalizing/Painting (b) 15% of rate payment shall be made after final approval of DFCCIL and successful completion of all works (ROB wise) included in this item including metalizing and finishing complete.					
		(vii) No deduction for holes and no addition for rivets /bolts/welds etc shall be made.					
		(viii) The contractor shall submit the detailed erection drawing and launching scheme along with necessary design calculation for approval to DFCCIL before erection and launching of girder.					
		(ix) Temporary supports if any required for the erection/ launching shall be erected after the approval of Engineer. Nothing extra shall be payable on this account.					



SN	NS Item	Description	unit		Qty	Rate	Amount
		(x) The contractor shall take all safety precautions with Engineer as per extant rules/ guidelines Nothing extra shall be payable on this account					
		(xi) Not with standing above, the contractor shall be fully responsible for any mishap that may occur as a result of negligent working. Contractor has to take every precautionary measure for safety of running train during and after launching of girder.					
		(xii) The rate includes launching under traffic blocks wherever required. However, the rate does not include the cost of possession of traffic/ OHE block.					
		(xiii) The Block required shall be arranged by DFCCIL at the request of contractor. The duration of the block shall be as approved by Engineer. If the block granted is not made available due to unavoidable reasons, nothing extra/ no compensation shall be paid					
		(xiv) However penalties, if any, levied by Indian Railways caused due to any careless working or otherwise of violation of the Terms and conditions of the track/ OHE block, shall be payable by the contractor					
		(xv) The cost of all tests as per prevailing code for acceptance shall be borne by contractor					
		(xvi) The Rate also include fixing of 25 mm dia 200 long stud shear connectors as per Specification and drawing,					
2	NS-2	Providing and fixing hand rail over the crash barrier consisting of 16 mm MS base plate, embedded with 16 mm dia welded lugs, 16 mm MS vertical plates etc. as per specifications and drawing enclosed with the tender document. All the railing components as mentioned above shall be painted with approved colour shade as per direction of Engineer-in-Charge including all primers and paints as per specifications. The thickness of plates are shown in the drawing. Pipe to be 65mm diameter (NB) (class B) G I pipe with a weight not less than 6.5 kg/m and conforming to IS: 1161-1979. Item to include all incidental works required to complete the work as per drawings and as directed by the Engineer-in-Charge. Measurement shall be made for all the material in term of length of Pipe.	1	Meter	1,905.00	1,608.00	3,063,240.00
3	NS-3	Integrity testing of Pile using Low Strain/ Sonic Integrity Test/ Sonic Echo Test method in accordance with IS 14893 including surface preparation of pile top by removing soil, mud, dust & chipping lean concrete lumps etc. and use of computerised equipment and high skill trained personal for conducting the test & submission of results, with all contractor's labour, tools & plants, material, fuel, consumables, machinery, loading, unloading, lead & lift complete in all respect as a complete job as per specification & as directed by Engineer. per test 120 93,624.00	1	per test	132.00	811.00	107,052.00
		<b>Sub-Total</b>					<b>54,444,042.00</b>

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**Execution of all works as per Schedule "A-III" (NS Item)**

<b>SN</b>	<b>NS Item</b>	<b>Description</b>	<b>unit</b>		<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
1	NS-1	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.	1	Cum	831.00	2,006.00	1,666,986.00
		<b>Sub-Total</b>					<b>1,666,986.00</b>

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**Execution of all works as per Schedule "B-I " (Items as per SOR 2012 of EC Rly Chapter -1 only)**

SN	USSOR-2012 ECR	Description	unit	Qty	Rate	Amount
1	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 2m along the track. 12mm 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. Cost of cement to be paid separately.	1 Meter	300.00	256.95	77,085.00
2	011010	Earth work in excavation as per approved drawings and dumping at embankment site or spoil heap, within railway land, including 50m lead and 1.5m lift, the lead to be measured from the centre of gravity of excavation to centre of gravity of spoil heap; the lift to be measured from natural ground level and paid for in layers of 1.5m each including incidental work, as per specifications				-
(a)	011011	All kinds of soils	1 cum	42.00	93.54	3,928.68
3	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. (Corrigendum-1) dated 19.12.12	1 Cum	920.00	139.23	128,091.60

4	013130	Extra for mechanical compaction of earth/blanketing material filled in embankment with contractor's rollers of suitable capacity, type and size to achieve specified density as per specification, testing as per IS codes including cost of water, T&P, consumable material and all labour as a complete job. The work is to be executed as per Latest edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow.	1	Cum	920.00	14.8	13,616.00
5	013140	Removal of excavated / slip earth / debris / malba from the site of works to any other place outside Railway land/premises, including all excavations, handling, rehandling, loading, unloading & leading etc. all labour and material as a complete job. Removal of Earth (all kinds of soils)/Rocks, Boulders including mud/slush, slipped earth in catch water drains, side drains, over berms in cutting, water way of bridges, over coping of toe/breast /retaining walls etc. including crossing of nallah, railway tracks, making/repairing approach roads, if required, all lead, lift, ascent, descents, or any other obstruction. Earth spoils to be dumped outside the cutting or railway embankments as per direction of Engineer in charge.		m3	500.00	137.35	68,675.00
		<b>Sub-Total</b>					<b>291,396.28</b>

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**Execution of all works as per Schedule "B-II " (Items as per SOR 2012 of EC Rly Chapters - 3,4,9,11 & 18 only)**

SN	USSOR-2012ECR	Description	unit	Qty	Rate	Amount
1	031010	Providing and laying in position cement concrete of specified proportion excluding cost of cement, centering and shuttering - All works upto plinth level :				
(a)	031011	1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20mm nominal size)	1 cum	3.00	2813.6	8,440.80
2	042010	Centering and shuttering including strutting, propping etc. and removal of form for :				-
(a)	042011	Foundations, footings, bases of columns, raft foundation of washable aprons. Pile caps. Footings of FOB etc.	1 Sqm	23.00	138.30	3,180.90
(b)	042013	Suspended floors, roofs, landings, balconies, FOB slabs, walkway slabs and access platform	1 Sqm	3,985.00	230.28	917,665.80
(c)	042014	Lintels, beams, plinth beams, bed blocks, girders, bressumers and cantilevers	1 Sqm	5,197.00	201.54	1,047,403.38
(d)	042015	Columns, pillars, posts and struts	1 Sqm	144.00	282.30	40,651.20
(e)	042030	Extra for additional height in centering, shuttering wherever required with adequate bracing, propping etc. including cost of de-shuttering and de-centering at all levels, over a height of 3.5 m for every additional height of 1 meter part thereof in suspended floors, landing, beams and balconies (plan area to be measured)	1 Sqm	3,985.00	90.40	360,244.00
3	041010	Providing and laying in position M-20 Grade concrete for reinforced concrete structural elements, but excluding cost of centering, shuttering, reinforcement and Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge.				-
(a)	041011	All work upto plinth level including raft foundation of washable aprons, HS tank, pile cap, footings of FOB and Platform shelter etc.	1 cum	14.00	3,341.60	46,782.40
(b)	041012	All works in buildings above plinth level upto floor two level	1 cum	59.00	3,619.33	213,540.47

**Execution of all works as per Schedule "B-II " (Items as per SOR 2012 of EC Rly Chapters - 3,4,9,11 & 18 only)**

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
4	096060	Kota stone slab flooring of size up to 30cmx30cm over 20mm (average) thick base of 1:4 cement mortar (1 cement: 4 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete					-
(a)	096061	20mm thick	1	Sqm	132.00	1,082.51	142,891.32
5	098020	Supplying and laying interlocking pre-cast CC block pavers of approved design factory manufactured of specified grade cement concrete on passenger platform, foot paths, circulating area etc. including setting in position over 25mm thick bedding layer of fine sand, filling the joints with fine sand, leveling including compaction as per IS:15658					-
(a)	098022	80mm thick blocks of M-35 grade for medium traffic	1	Sqm	2,000.00	726.57	1,453,140.00
							-
6	091032	Flat Brick		m2	250.00	237.25	59,312.50
7	031051	All works upto plinth level		m3	22.00	2856.68	62,846.96
8	041011	Providing and laying in position M-20 Grade concrete for reinforced concrete structural elements, but excluding cost of centering, shuttering, reinforcement and Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer in charge		m3	77.00	3341.6	257,303.20
9	041012	All works in buildings above plinth level upto floor two level		m3	50.00	3619.33	180,966.50
10	042011	Foundations, footings, bases of columns, raft foundation of washable aprons, Pile caps, Footings of FOB etc.		m2	217.00	138.3	30,011.10
11	042014	Lintels, beams, plinth beams, bed blocks, girders, bressumers and cantilevers		m2	84.00	201.54	16,929.36
12	042015	Columns, pillars, posts and struts		m2	252.00	282.3	71,139.60

**Execution of all works as per Schedule "B-II " (Items as per SOR 2012 of EC Rly Chapters - 3,4,9,11 & 18 only)**

SN	USSOR-2012ECR	Description	unit	Qty	Rate	Amount
13	042040	Supplying and applying shuttering oil for mould releasing, having (flash point 54°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	m2	528.00	8.02	4,234.56
14	042030	Extra for additional height in centering, shuttering wherever required with adequate bracing, propping etc. including cost of de-shuttering and de-centering at all levels, over a height of 3.5m for every additional height of 1 metre or part thereof in suspended floors, roofs, landing, beams and balconies (plan area to be measured)	m2	267.00	90.4	24,136.80
15	042025	Edges of slabs and beams in floors and walls under 20cm wide	m	100.00	88.1	8,810.00
16	043013	In lintels, beams, bressumers	m3	104.00	5388.95	560,450.80
17	045014	High yield strength deformed bars	kg	15,000.00	64.46	966,900.00
18	042013	Suspended floors, roofs, landings, balconies, FOB slabs, walkway slabs and access platform	m2	265.00	230.28	61,024.20
19	099184	Granite Pink - Area of slab over 0.5 sqm but upto 1.0 sqm	m2	580.00	3748.67	2,174,228.60
20	121091	Two or more coats on new work	m2	835.00	42.95	35,863.25
21	121170	Painting two coats (excluding priming coat) with white or green ready mixed paint of approved quality on steel or wood work	m2	500.00	46.67	23,335.00
22	181030	Demolishing R.C.C. work including cutting and stacking of steel bars and disposal of unserviceable material within 50m lead. (Extra payment for scraping, cleaning and straightening of bars to be made separately)	m3	50.00	729.06	36,453.00
23	181021	1:2:4 or richer mix with max. 20 mm coarse aggregate	m3	14.00	489.61	6,854.54
24	181040	Extra over Item Nos. 181021 and 181050, if pavement breaker is used on orders of Engineer	m3	17.00	218.72	3,718.24
25	182013	In cement mortar	m3	32.00	400.63	12,820.16
26	186020	Dismantling steel work and trusses upto 10m span and 5m height in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking within 50m lead	kg	40,231.96	1.15	46,266.75
27	184082	Asbestos sheet	m2	500.00	16.43	8,215.00
		Sub Total				<b>8,885,760.39</b>

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "B-VI " (Items as per SOR 2012 of EC Rly Chapters - 19,20 & 22 only)**

SN	USSOR-2012ECR	Description	unit	Qty	Rate	Amount	
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 specification as directed by Engineer in charge					
(a)	192011	E/W in All kinds of soils	1	CUM	1,581.00	292.92	463,106.52
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	1	CUM	150.00	2,234.33	335,149.50
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 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.	1	CUM	1,110.00	2,745.77	3,047,804.70
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 in charge. Payment for cement, reinforcement & shuttering shall be paid extra.					
(a)	192061	Abutment & Pier	1	CUM	766.00	2,883.06	2,208,423.96
(b)	192063	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	1	CUM	600.00	3,157.63	1,894,578.00
(c)	192064	Approach slab at formation level, Dirt wall/ballast wall at formation level	1	CUM	28.00	3,294.92	92,257.76



**Execution of all works as per Schedule "B-VI " (Items as per SOR 2012 of EC Rly Chapters - 19,20 & 22 only)**

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
5	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 20mm 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 upto the bottom of pile cap excluding the mud mat. Payment for cement, casing pipe & reinforcement shall be paid extra.					
(a)	192073	Pile 1000mm diameter	1	Meter	3,990.00	8,244.28	32,894,680.59

**Execution of all works as per Schedule "B-VI " (Items as per SOR 2012 of EC Rly Chapters - 19,20 & 22 only)**

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
7	192100	Conducting load testing of a single pile upto 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					
(a)	192103	Initial load test up to 250 MT	1	Each	1.00	94,429.95	94,429.95
(b)	192104	Extra above 250 MT for each 50 MT	1	Each	32.00	12,282.86	393,051.52
(c)	192107	Routine load test up to 250 MT	1	Each	3.00	76,386.05	229,158.15
8	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					
(a)	192113	Piles with lateral load capacity of above 20 ton	1	Each	1.00	56,648.87	56,648.87
10	195030	Centring and shuttering including strutting, propping etc. and removal of form for .					
(a)	195031	RCC Raft Foundation & Pile cap	1	Sqm	795.00	138.30	109,948.50
(b)	195032	Abutment, pier, wing walls and return walls	1	Sqm	1,530.00	227.40	347,922.00
(c)	195033	Abutment cap, Pier Cap, Inspection Platform & Pedestal over Pier cap, Fender wall, Diaphragm wall etc.	1	Sqm	1,641.00	230.28	377,889.48
(d)	195034	Approach slab at formation level, Dirt wall / ballast wall at formation level	1	Sqm	66.00	138.30	9,127.80
(e)	195038	In Bottom/ top slab, side walls, toe wall and sumps haunch filling head walls or any other component.	1	Sqm	4,379.00	227.40	995,784.60
11	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 for the Cast in-situ Prestressed (Post tensioned) concrete girder / 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 incharge. Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, sheathing, anchorage cones, stressing of cables and grouting of the ducts will be done extra.					
(a)	201011	With Soffit level upto 9m above Bed level	1	CUM	930.00	3,199.36	2,975,404.80
(b)	201014	Extra for increase in span by every 1m or part thereof for spans above 18.3m & upto 30.5m	1	Meter	59.00	36.93	2,178.87
(c)	201015	Deduct for casting of Slab instead of Girders (for any heights)	1	CUM	-930.00	147.72	-137,379.60

**Execution of all works as per Schedule "B-VI " (Items as per SOR 2012 of EC Rly Chapters - 19,20 & 22 only)**

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
12	201020	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M-40 grade using 20mm graded crushed stone aggregate and coarse sand of approved quality for the Precast Prestressed (Post tensioned) concrete girder/Box (spans upto 30.5m) in contactor's casting yard, 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.Payment for Shuttering, Cement, Admixtures, reinforcement, HTS cables, anchorage cones, stressing of cables and grouting of the ducts will be done extra. Launching of girder/slab in position is not included in this item.	1	Cum	831.00	2,977.78	2,474,535.18
13	201040	Design, manufacturing, supplying and fixing in position elastomeric bearing pads under prestressed concrete girder, for Pre-cast as well as cast-in-situ girders as per approved drawing. The rate shall include cost of load test of one no. bearing from Railway approved firms and all fixing materials, equipments, machineries, labour, taxes, loading, unloading, leading, lifting etc. complete. Rates include getting the drawing approved from Railway and cost of inspection during manufacturing from railway approved organization. (Note : 1. The rate is for finished item complete and paid only after fixing in position below the girder. 2. The volume shall be given in the drawing and no deduction shall be made for inserted steel plates etc.)	1	CU. CM	1,263,600.00	1.37	1,731,132.00

**Execution of all works as per Schedule "B-VI " (Items as per SOR 2012 of EC Rly Chapters - 19,20 & 22 only)**

SN	USSOR-2012ECR	Description	unit		Qty	Rate	Amount
14	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	1	Meter	176.00	28,789.51	5,066,953.76
15	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 Kent ledges/loading material etc. The load shall be 1.25 times the stipulated design load, based on design load & not span					
(a)	201061	For Span design load upto 100 MT	1	Each	2.00	64,285.56	128,571.12
(b)	201062	Extra for every increase of 100 MT or part thereof in the span load capacity upto 800 MT	1	Each	2.00	63,125.55	126,251.10
16	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 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.	1	MT	81.00	135,257.06	10,955,821.86
		<b>Sub-Total</b>					<b>66,873,430.99</b>

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "B-VII " (Items as per SOR 2012 of EC Rly Chapters - 21 only)**

SN	USSOR-2012ECR	Description	unit	Qty	Rate	Amount
1	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.				
(a)	211141	POT-PTFE Bearing	1 MT Bearing Capacity	1,454.00	412.94	600,414.76
		<b>Sub-Total</b>				<b>600,414.76</b>

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "B-VIII " (Items as per SOR 2012 of EC Rly Chapters - 23 & 24 only)**

SN	USSOR-2012 ECR	Description	unit	Qty	Rate	Amount	
1	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					
(a)	231041	Sub-base with stone aggregate 90mm to 45mm including stone screening 13.2mm size	1	cum	1266.00	1,925.10	2,437,176.60
(b)	231042	Base course with 63mm to 45mm size including stone screening 13.2mm size	1	cum	506.00	1,691.15	855,721.90
(c)	231043	Base course with 53mm to 22.4mm size including stone screening 11.2mm size	1	cum	506.00	1,955.22	989,341.32
2	231070	Providing and laying 4cm thick moorum surfacing (Consolidated thickness) on platforms, pathways, etc including spreading watering and consolidation with 3T Roller or light power roller complete.	1	Sqm	800.00	21.88	17,504.00
3	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)	233011	On W.B.M @ 0.4kg/sqm	1	Sqm	5065.00	22.20	112,443.00
(b)	233012	On bituminous @0.25kg/sqm	1	Sqm	8646.00	15.47	133,753.62
4	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)	234011	With paving bitumen 80/100 heated and then mixed with solvent at the rate of 70 gram per kg of asphalt	1	Sqm	667.00	195.41	130,338.47

**Execution of all works as per Schedule "B-VIII " (Items as per SOR 2012 of EC Rly Chapters - 23 & 24 only)**

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
5	237050	Supplying and laying precast Kerb Stone of concrete M-25 Grade 30cmx20cm (in section / including chamfering as per design if any) including fixing in 1:6 cement sand mortar and pointing with 1:2 cement mortar (1 cement :2 sand ordinary) including all excavation/refilling, ramming and other incidental works as required.	1	Metre	1400.00	324.19	453,866.00
6	238010	Providing and laying Dense Bituminous macadam on prepared surface with specified graded crushed stone aggregate for profile corrective base / binding course, mixing of stone aggregate, filler and bitumen in hot mix plant, transporting the mixed material and laying with paver finisher fitted with electronic sensing device to the required level and					
(a)	238014	50mm average compacted thickness with bitumen of 60/70 grade @ 3.5% by weight of total mix	1	Sqm	5065.00	356.81	1,807,242.65
7	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					
(a)	238021	40mm/50mm compacted thickness with bitumen of grade 60/70 @ 6.5% and lime @ 3% by weight of total mix	1	Cum	346.00	9,261.19	3,204,371.74

**Execution of all works as per Schedule "B-VIII " (Items as per SOR 2012 of EC Rly Chapters - 23 & 24 only)**

SN	USSOR-2012 ECR	Description	unit	Qty	Rate	Amount	
8	238040	Manufacturing supplying and fixing retro reflective sign boards made up of 2mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type-IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bi-lingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class-2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size25mmx25mmx3mm alongwith theft resistant measures, mounted and fixed with 2 nos. M.S. angles of size 35mmx35mmx5mm to a vertical post made up of M.S. Tee section ISMT 50mmx50mmx6mm welded with base plate of size 100mmx100mmx5mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS- Tee support to be painted in black and white colours). Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in- charge. (Note : Concreting for fixing may be done as per site requirement and paid for separately)					
(a)	238041	Cautionary/warning sign boards of equilateral triangular shape having each side of 900mm with support length of 3650mm	1	Each	20.00	3,766.42	75,328.40



**Execution of all works as per Schedule "B-VIII " (Items as per SOR 2012 of EC Rly Chapters - 23 & 24 only)**

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
9	238050	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and in accordance with applicable specifications	1	Sqm	500.00	3,769.00	1,884,500.00
10	238060	Providing and fixing of raised pavement markers made of polycarbonate moulded body and reflective panels with micro prismatic lens made of polycarbonate with abrasion resistant coating. The length, weight and width of body shall not exceed 95mm, 18mm and 105mm respectively. The lower surface of the RPM shall be supported with two nylon shanks, each of length not less than 25mm. Fixed to the road by using twin nylon shanks using bituminous adhesive on bitumen roads or thout nylon shanks with epoxy resin adhesive on concrete roads as per tions of Engineer Incharge. The RPM should conform to the quality standards as laid down in IR Standard Specifications	1	Each	20.00	767.05	15,341.00
11	241010	Supplying at site					
(a)	241018	MS angle posts/struts of required size including bottom to be split and bent at right angle in opposite direction for 10cm length and drilling holes upto 10mm dia. etc. complete	1	Kg	1732.00	64.34	111,436.88
12	242060	Providing 1.8m high fencing with 2.4m angle iron 50mmx50mmx6mm posts placed every 3m centre to centre embedded in cement concrete blocks every 15th posts (or nearer if there is abrupt change of ground slope) last but one end post and corner post shall be strutted on both sides and end posts on one side only, and struts embedded in cement concrete blocks and provided with 7 horizontal lines and two diagonals interwoven with horizontal GI barbed wires of barbed wire 9.38 kg/100m (min) between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete (cost of posts, struts and concrete to be paid for separately)	1	Metre	400.00	61.81	24,724.00
		Sub-Total					12,253,089.58

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhawar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "B-X " (Items as per SOR 2012 of EC Rly Chapters - 8,10& 17 only)**

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
1	81410	Steel work welded in built-up sections / framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required					
(a)	81420	In gratings, frames, guard bar, ladders, railings, brackets, gates and similar works	1	Kg	15,538.00	87.45	1,358,798.10
(b)	81421	M.S. tube (medium) 40mm nominal bore	1	Kg	565.00	106.20	60,003.00
2	081031	In RSJ, tees, angles and channels	1	kg	66,666.67	87.27	5,818,000.00
3	081032	In flats, plates , round or square bars Note for Item 081030 : Purlins and wind bracings shall be paid separately under item 81010. Note for Items 081011, 081021 & 081022 : These rates are not to be paid for ironwork with rails, which should be paid under each item separately.	1	kg	29,833.33	84.23	2,512,861.67
4	081140	Supplying and fixing lewis/holding down bolts of approved design with nuts and washers complete	1	kg	467.00	67.14	31,354.38
5	012050	Supplying and filling sand in plinth and under floors including watering, ramming, consolidating and dressing complete	1	m3	23.33	602.73	14,063.70

Execution of all works as per Schedule "B-X " (Items as per SOR 2012 of EC Rly Chapters - 8,10& 17 only)							
SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
6	109200	Providing and fixing permanently colour coated trapezoidal profiled sheet of depth 28-30mm at 195-205mm pitch distance with precisely engineered "Rib & Flute" design. Profiled sheets shall be min. 0.5mm TCT/0.45mm BMT high tensile zinc aluminium alloy coated zincalume / galvalume steel sheet (550 mpa yield strength) having a coating of mass of 150 gsm zinc-aluminium coating AZ- 150 total on both sides as per AS 1397:1993 finished with 20 microns approved colour coating of Silicon Modified Polyester (SMP) / Super Polyester paint coat on exposed surface over a primer coat of 5 microns and a back coat of 5 microns on reverse side over a 5 microns primer coat. There shall be 2 small ribs/square flutes between profiles for providing additional strength. The sheet to be fixed over the purlins with hexagonal head self drilling suitable fasteners with neoprene / EPDM washer on crests of the sheet	1	m2	650.00	713.34	463,671.00
7	109261	Upto 600mm width (girth)	1	m2	84.00	486.89	40,898.76
8	081110	Providing and fixing expanded metal 20mmX60mm 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	1	m2	84.00	475.30	39,925.20

<b>Execution of all works as per Schedule "B-X " (Items as per SOR 2012 of EC Rly Chapters - 8,10&amp; 17 only)</b>						
<b>SN</b>	<b>USSOR-2012 ECR</b>	<b>Description</b>	<b>unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
		Sub Total				10,339,575.81

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "B-XII " (Items as per SOR 2012 of EC Rly not covered by the items of Schedule -A ,Schedule-B-I,B- II,B-VI , B-VII ,B-VIII , C-I & C-II only)**

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
1		Any items of USSOR 2012 of EC Rly, which are not covered in above schedule – A, Schedule B-I to B-VIII, Schedule C-I & C-II,	% above or %below	LS amount			1,000,000.00
		<b>Sub-Total</b>					<b>1,000,000.00</b>

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "C-I " (Cement- OPC 43 Grade)**

SN	USSOR-2012 ECR	Description			Qty	Rate	Amount
1	033060	Supplying and using Cement at worksite:					
(a)	033061	Ordinary Portland Cement Grade -43	1	MT	3,867.00	6,631.36	25,643,469.12
		<b>Sub-Total</b>					<b>25,643,469.12</b>

Name Of Work:- Construction of Two-Lane Road Over Bridge (ROB) and construction of 5.5mtr wide FOB in lieu of level crossing no. 72B at IR Chainage 649/5-7 between Chandauli Majhwar – Saiyadraja including Obligatory Spans, Viaduct Spans, approaches roads etc. complete in all respect in DDU Division of East Central Railway.

**Execution of all works as per Schedule "C-II " (Reinforcement Steel FE 500D)**

SN	USSOR-2012 ECR	Description	unit		Qty	Rate	Amount
1	045010	Supplying reinforcement for RCC work including straightening, cutting, bending, placing in position and binding all complete:					
(a)	045016	Thermo-Mechanically Treated Bars 500D	1	KG	1,042,499.00	64.46	67,199,485.54
		Note: The contractor shall quote the rate for TMT Bars of Grade 500D					
		<b>Sub-Total</b>					<b>67,199,485.54</b>

**Note for Stage Payment:**

- i) The material shall be delivered at site and properly stored under covered sheds in measurable stacks
- ii) The quantities of materials shall be brought to the site only in such installments that would facilitate smooth progress of work and consumed in reasonable time.
- iii) Proper accountal in the material register to be maintained in the prescribed format at the site for the receipt and use of the material.
- iv) Ownership of such material shall be deemed to vest with the DFCCIL for which the contractor should submit an indemnity bond in prescribed format
  
- v) Before releasing the stage payment, the contractor shall insure the material at his own cost in favour of DFCCIL against theft, damages, fire etc.
- vi) Stage payment in all such cases not be more than 75% of the rate of steel awarded in the contract. The balance payment shall be released only after the material is actually consumed in the work.
- vii) The price variation claim for steel would continue to be governed as per extant PV clause and with reference to delivery at site.