



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

Tender No. MGS/EN/19/2018-19/GAQ RFO & Balance SEB-MGS/288
for

Name Of Work:- Construction of double line Rail Flyover including approach portion between Ganjkhwaja - Mughalsarai Railway Stations and construction of bridges, road under bridges and other miscellaneous works in Mughalsarai - Sonenagar section of East Central Railway in Connection with construction of Eastern Dedicated Freight Corridor

E-TENDER DOCUMENT
FINANCIAL BID (PACKET-B)
Revised- Including Corrigendum No.-1 Dated 22.11.2018
Nov-18

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

CPM OFFICE
Chief Project Manager/MGS, DFCCIL
2nd Floor, Swarna Complex, Susuwahi,
(Near Union Bank of India)
Post-Susuwahi, Thana-Lanka,
Varanasi -221011 (U.P.)

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

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GENERAL INFORMATION / DATA SHEET

TENDER NOTICE NO	MGS/EN/19/2018-19/GAQ RFO & Balance SEB-MGS/288
Name of the work	Construction of double line Rail Flyover including approach portion between Ganjkhwaja - Mughalsarai Railway Stations and construction of bridges, road under bridges and other miscellaneous works in Mughalsarai- Sonenagar section of East Central Railway in Connection with construction of Eastern Dedicated Freight Corridor
(a) Tender Value (in Rs.)	₹ 1,041,771,544.39
(b) Completion Period	18 months
(c) Earnest Money	₹ 10,417,715
(d) Date and Time of Issue of Tender	From 11 Hrs of 01.11.2018
(e) Last date and Time of submission of Tender	30.11.2018 upto 15:00 hrs
(f) Date and Time of Opening of Tender (Technical bids -Packet A)	On 30.11.2018 at 15:30 hrs Opening date of Financial Bid will be Notified later
(g) Validity of offer	120 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

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Summary of Prices

Name of Work: Construction of double line Rail Flyover including approach portion between Ganjkhwaja - Mughalsarai Railway Stations and construction of bridges, road under bridges and other miscellaneous works in Mughalsarai- Sonenagar section of East Central Railway in Connection with construction of Eastern Dedicated Freight Corridor

S. No.	Description of works	Cost as per USSOR 2012 of EC Rly/ Basic Cost	DFCCIL updated %	DFCCIL Updated cost
1	2	3	4	5
1	Execution of all works as per Schedule "A - I" (NS Item)	94,672,588.20	-	94,672,588.20
2	Execution of all works as per Schedule "A - II" (NS Item)	195,961,923.58	-	195,961,923.58
3	Execution of all works as per Schedule "A - III" (NS Item)	262,464,818.00	-	262,464,818.00
4	Execution of all works as per Schedule "A - IV" (NS Item)	83,480,540.00	-	83,480,540.00
5	Execution of all works as per Schedule "A - V" (NS Item)	114,515,495.00	-	114,515,495.00
7	Execution of all works as per Schedule "A - VI" (NS Item)	21,851,500.00	-	21,851,500.00
8	Execution of all works as per Schedule "B - I " (Item as per SOR 2012 of EC Rly Chapter - 1)	40,673.08	22.30	49,743.18
9	Execution of all works as per Schedule "B - II " (Item as per SOR 2012 of EC Rly Chapter - 3, 4, 9, 11 & 18 only)	4,090,890.16	20.20	4,917,249.97
13	Execution of all works as per Schedule "B - VI " (Item as per SOR 2012 of EC Rly Chapter - 19, 20 & 22 only)	53,708,873.93	30.78	70,240,465.32
14	Execution of all works as per Schedule "B - VII " (Item as per SOR 2012 of EC Rly Chapter - 21 only)	2,911,728.00	47.73	4,301,495.77
	Execution of all works as per Schedule "B - XII " (Item as per SOR 2012 of EC Rly Chapter - 8, 10 & 17 only)	5,000,000.00	18.63	9,315,000.00
19	Execution of all works as per Schedule "C - I " (Item as per SOR 2012 of EC Rly Chapter - Cement - OPC 43 Grade only)	49,691,844.17	11.02	55,167,885.40
20	Execution of all works as per Schedule "C - II " (Item as per SOR 2012 of EC Rly Chapter - Reinforcement Steel FE500D only)	106,784,178.16	16.902	124,832,839.95
	Total	995,175,052.29		1,041,771,544.39

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S. No.	Description of works	Cost as per USSOR 2012 of EC Rly/ Basic Cost	DFCCIL updated %	DFCCIL Updated cost
1	2	3	4	5

NOTES:

- (i) The Tenderer shall quote single percentage for each Schedule. If the tenderer quotes different percentage (%) above / below against each item of any schedule (i.e. A-I, A-II, A-III, A-IV, A-V, A-VI, B-I, B-II, B-VI, B-VII, B-XII, C-I & C-II), his offer will be summarily rejected.
- (ii) The above prices are inclusive of all taxes (GST, Works Contract Tax etc.), Octroi or Local levies
- (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) This Tender Schedule does not contain Schedules B-III, B-IV, B-V, B-VIII, B-IX, B-X and B-XI because of these Schedules are not present.
- (v) Rate of item payable to Contractor shall be as per following example:-
 - 1) For Schedule B-I (Updation factor is 1.2230, since 22.30% 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
 - a) If percentage quoted by the contractor is 5% above (+5%). Rate payable to contractor = $(X) \times 1.2230 \times 1.05$
 - b) If percentage quoted by the contractor is 5% below (-5%). Rate payable to contractor = $(X) \times 1.2230 \times 0.95$
 - c) If percentage quoted by the contractor is at par, Rate payable to contractor = $(X) \times 1.2230$
 - 2) Similarly updation factor for Schedule B-II, B-VI, B-VII, B-XII, C-I and C-II is 1.2020, 1.3078, 1.4773, 1.1863, 1.1102 and 1.16902 respectively.
 - 3) In case of NS items i.e. Schedule A-I, A-II, A-III, A-IV, A-V and A-VI the updation factor shall be 1.0

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Sch - A-I Non Schedule Item

SN	Ref. Item no.	Description	Unit	Qty	Rate	Amount	
1	NS - 1	Providing and laying in position with batching plants mixed, transporting by transit mixer and placing by concrete pump machine vibrated, design mixed cement concrete/ RCC M30/M35/M40/M50/M55 (Cast in situ) Controlled Concrete with 20mm size chip of approved quality and grading including mechanical mixing and placing in position of concrete vibrating tamping, cutting finishing etc. complete in all portion of the foundation and substructure viz open/raft foundation pier/abutment, pile cap, toe wall, drop-wall/cutoff wall and retaining wall etc. with hard coarse aggregate of approved quality (max size 20mm) and sand of suitable grade fixing and carriage of mixed concrete with all leads, lifts and descents, tamping, vibrating, curing, finishing, keeping holes etc. complete with contractor's own materials lie coarse sand, stone aggregate and admixture etc of appropriate specification with all necessary construction plants and machinery, layout etc. complete as per drawing, specification and as directed by engineer the shall be arranged by the contractor at his own coast. The rate shall include shuttering, cutting, bending and binding of reinforcements with binding of reinforcements and placing in proper position dewatering with pump sets, shoring (if required) and dowel grouting as per approved drawing, curing up to specified period, de shuttering, running expenses of all equipment material, tools & plants and consumables complete in all respect as per BIS 456-2000 (and up to date corrected if any). (1. Cement and Reinforcement steel shall be paid separately vide items under schedule – C-I & C-II respectively)	1	Cum	14506.341	6526.29	94,672,588.20
Total Amount						94,672,588.20	

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Sch - A-II Non-Schedule Item

SN	Ref. Item no.	Description	Unit		Qty	Rate	Amount
1	NS - 1	Supply, fabrication and erection (within traffic block hours in IR portion) of welded type open web girders of span 45.7 m & 76.00 m span as per RDSO standard drg (DFCCIL Loading) / approved drawing and as per Indian Railway Standard specification for fabrication and erection of steel girder bridges and locomotive turnable (Fabrication Specification) etc Serial No B1 - 2001 (amended up to date) including all incident works etc, Supplying and fixing in position of shop welding/shop bolting with nuts and washers, field bolts, required for complete fabrication of the girders and transportation of the fabricated material at site and stacking of the same at place 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 , consumable, machinery, loading, unloading, tools and plants, material, lead and lift complete job as per specifications and as directed by Engineer and Notes approved in GAD of the RFO.	1	MT	1400	139,972.80	195,961,923.58
		Notes					
		(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 basis raw material and having in house iron rolling facilities, followed by production of liquid steel and 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					

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	<p>(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 included in this item including metalizing and finishing complete.</p> <p>(vii) No deduction for holes and no addition for riverts / bolts/ welds etc Shall be made</p> <p>(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.</p> <p>(ix) Temporary support if any required for the election / launching shall be erected after the approval of Engineer. Nothing extra shall be payable on this account</p> <p>(x) The contractor shall take all safety precautions with engineer as per extant rules/ guidelines nothing extra shall be payable on this account</p> <p>(xi) Not with standing above, the contractor shall be fully responsible for any mishap that make 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.</p> <p>(xii) The rate includes launching under traffic blocks wherever required. However, tha rate does not include the cost of possession of traffic / OHE block.</p> <p>(xiii) The block required shall be arranged by DFCCIL at the request of contractor. The duration of the blocks shall be as approved by Engineer. if the block granted is not made available due to unavoidable reason, nothing extra/ no compensation shall be paid.</p> <p>(xiv)However penalties, if any, levied by Indian Railway caused due to any careless working or otherwise of violation of the Terms and condition of the track/ OHE block, shall be payable by the contractor</p> <p>(xv) The Cost of all tests as per prevailing code for acceptance shall be borne by Contractor</p>					
	Total Amount	195,961,923.58				

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Sch - A-III Non-Schedule Item

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount	
1	NS - 1	<p>Earthwork in embankment fill as per specifications given in RDSO/2007/GE:0014 for two layer system for axle load of 32.5 T with minimum SQ1 type of soil (Minimum CBR 5) including clearing and grubbing from approved borrow area, compacting to minimum 97% of MDD with earth excavated from outside Railway boundary entirely arranged by the contractor at his own cost including all leads, royalty, lifts, Ascents, descents, crossing of nallahs or any other of 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 vegetation 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 DFCCIL and to be deposited in the DFCCIL godown unless specified otherwise in the</p> <p>Note: - (i) Quantity for this item shall be calculated on finished compacted cross sectional areas of the desired final profile. The payment will be made @ 90% of the net quantity of the earth work in bank. Balance 10% payment will be made progressively on completion of turfing which will be certified by Engineer in-charge before releasing the balance payment.</p> <p>(ii) the outside soil shall preferably be as per specification or preferred field material given as under (a) Fine particles (less than 75 micron size less than 50% (b) Liquid limit under 35% and plasticity index under 15.</p> <p>(iii) The following soil will not be allowed for earth work in Embankment: (a) Peat and Organic solid (b) Chalk etc. which are likely to disintegrates (c) Poorly graded sands with cu less than 2 Highly compressible clay and silty soil i.e. CH & MH type of soil in top 1 m of Embankment.</p> <p>(iv) Earthwork shall be done strictly in accordance provision of RDSO Guidelines, GCC & additional condition and specifications given in the tender document.</p>	1	Cum	625405	354	221,393,370.00

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Sch - A-III Non-Schedule Item

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount
		(v) Payment royalty, taxes, cost of earth and any other incidental charges are to be borne by the Contractor and the quoted rate should include all such charges.				
		(vi) The Contractor shall establish field laboratory with all equipment for conducting required soil tests and compaction tests at site.				
		(vii) Samples of earth along with its test results as prescribed and slope analysis results shall be submitted to the Engineer in-charge for approval before making the Embankment.				
		(viii) The suitability of the ground/subsoil strata shall be tested as per RDSO/2007/GE:0014. The Contractor shall take undisturbed samples as per IS 2132 1986 of the parent soil over which the Embankment shall rest and shall conduct prescribed laboratory test to enable analysis of stability of the base to asses its long term stability and distance of borrow pits etc. test results and technical observation should be submitted for approval of the Engineer in-charge.				
		(ix) The temporary service road, if required for transportation of earth to be prepared and maintained by the contractor at his own cost.				
		(x) Before quoting the contractor should inspect the site to assess the lead, site condition etc.				
		(xi) The contractor shall assist DFCCIL in taking physical possession of land for construction of formation. For this purpose, they shall deploy required number of machineries namely JCB, Hywa, Roller, Tractor, Grader etc. as and when program is fixed in consultation with District Administration and the contractor shall carryout the work in shortest possible time at the acquired land. On few occasions, such deployments may not yield successful possession, for which a mutually agreed idling charge of Rs. 25,000 (Rs. Twenty Five Thousand) per occasion and nothing extra shall be payable to the contractor.				

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Sch - A-III Non-Schedule Item

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount	
2	NS - 2	<p>Supplying at site approved quality of sub-grade material as per specifications given in RDSO/2007/GE:0014 for two layer system for axle load of 32.5 T with minimum SQ2 type of soil (Minimum CBR 8), spreading, watering and compacting in layers such that compacted thickness will not more than 200 mm. The rates shall include cost of material, labour, tools and plants, transporting it to the site, including all lead and lift, royalty, watering & compacting to minimum 98% of MDD and testing of material in laboratory for MDD, OMC and CBR etc as well as MDD & OMC in field and all other charges required to complete the work.</p> <p>Note: - (i) Quantity for this item shall be calculated on finished compacted cross sectional areas of the desired final profile. The payment will be made @ 90% of the net quantity of the earth work in bank. Balance 10% payment will be made progressively on completion of turfing which will be certified by Engineer in-charge before releasing the balance payment.</p> <p>(ii) the outside soil shall preferably be as per specification or preferred field material given as under (a) Fine particles (less than 75 micron size) less than 50% (b) Liquid limit under 35% and plasticity index under 15.</p> <p>(iii) The following soil will not be allowed for earth work in Embankment: (a) Peat and Organic solid (b) Chalk etc. which are likely to disintegrates (c) Poorly graded sands with cu less than 2 Highly compressible clay and silty soil i.e. CH & MH type of soil in top 1 m of Embankment.</p> <p>(iv) Earthwork shall be done strictly in accordance provision of RDSO Guidelines, GCC & additional condition and specifications given in the tender document.</p>	1	Cum	101662	404	41,071,448.00

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Sch - A-III Non-Schedule Item

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount
		(v) Payment royalty, taxes, cost of earth and any other incidental charges are to be borne by the Contractor and the quoted rate should include all such charges.				
		(vi) The Contractor shall establish field laboratory with all equipment for conducting required soil tests and compaction tests at site.				
		(vii) Samples of earth along with its test results as prescribed and slope analysis results shall be submitted to the Engineer in-charge for approval before making the Embankment.				
		(viii) The temporary service road, if required for transportation of earth to be prepared and maintained by the contractor at his own cost.				
		(ix) Before quoting the contractor should inspect the site to assess the lead, site condition etc.				
					Total Amount	262,464,818.00

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Sch - A-IV Non-Schedule Item

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount	
1	NS - 1	<p>Supplying, stacking, spreading in 200 mm (compacted thickness) and compacting with about 04 passes of 10-12 ton capacity roller, machine crushed track Ballast as per specifications in RDSO IRS-GE-1, June' 2004 with up to date correction slips, if any, and from approved quarry/source, Stacking in trapezoidal shape as per standard profile-complete in all respect. The rate includes levelling/surface preparation of track-bed /stacking-ground, transportation of all lead,</p> <p>Notes-1: (a) 70% of the quoted rate will be after supplying and stacking of ballast at the location approved by Engineer. (b) The balance 30% of the payment will be paid after spreading, compacting of ballast over formation including all lead, lift, rehandling complete in all respect.</p> <p>Note-2: 1/12 th voids will be deducted from stacked measurement</p> <p>Note-3: Quantity of 200 mm thick (Difference of Initial level and final level) compacted ballast will be calculated by multiplying with length and width of spreaded and compacted ballast and if there is difference noticed in quantity supplied in stack and quantity calculated after spreading and compaction, payment will be made for minimum of the two measurements</p>	1	Cum	13400	3400	45,560,000.00
2	NS-2	<p>Supplying and stacking, machine crushed track Ballast as per specifications in RDSO IRS-GE-1, June' 2004 with up to date correction slips, if any, and from approved quarry/source, Stacking in trapezoidal shape as per standard profile- complete in all respect. The rate includes levelling/surface preparation of stacking-ground, transportation of all lead, lift, taxes, royalties etc.</p> <p>Note: 1/12 th voids will be deducted from stacked measurement for payment.</p>	1	Cum	15933	2380	37,920,540.00
Total Amount						83,480,540.00	

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Sch - A-V Non-Schedule Item

SN	Ref. Item no. of ECR SOR 2012	Description	Unit		Qty	Rate	Amount
1	NS - 1	Supplying and spreading at site approved quality blanketing material (Minimum CBR 25) mixed with job mix formula (JMF) designed in laboratory for minimum 600mm thickness compacted in layers up to 200mm as per RDSO GE-14 for heavy axle load of 32.5 ton loading with 100% compaction after rolling, watering and Compacting such that compacted thickness will not be more than 200 mm on top of newly constructed embankment compacting the same by Mechanicals means including sprinkling of water if required complete in all respect. The rate shall include cost of material, labour, tools and plants transporting it to the side including all lead and lift, royalty and testing of material and all other charges required to complete the work.	1	Cum	45533	2515	114,515,495.00
					Total Amount		114,515,495.00

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Sch - A-VI Non-Schedule Item

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount
1	NS - 1	Transporting, Launching / placing of pre-cast RCC box bridge segments / Slabs as per approved drawing with the help of crane of adequate capacity and linking track fit for 20 KMPH with initial packing etc. during traffic block period with all labour, tools & plants, crane, equipment, lead & lift, handling, making arrangements for propping of crane, cutting rails, drilling holes etc to complete the work as per approved drawing or instruction of Engineer in-Charge. The work will be done in Conjunction with other item of this schedule. The work will be done during traffic Block/without traffic block (as case may be) of suitable duration. RCC box / slab will be casted at nearest of bridge site. The rate includes transportation of segments/slabs from the casting place. If required, removal of existing track and ballast and then putting back of ballast and re-linking of track is included in the rates. The contractor will submit the scheme of execution of work for approval before starting of the work. The faces of the segments/slabs shall be properly matched and aligned. The gaps between the segments shall be filled/ grouted with suitable epoxy grout to make it water tight. Railway/DFCCIL will try to arrange traffic block in time, but in case of delay/non-Granting of block, no any extra payment will be made.	1 MT	7535	2900	21,851,500.00
					Total Amount	21,851,500.00

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Annexure of Sch B-I

SN	Ref. Item no. of ECR SOR 2012	Description	Unit		Qty	Rate	Amount
1	14050	Turfing / planting, including all lead & lift and watering as required until properly rooted with. Note - Initially payment of only 40% will be made. Balance 60% will be paid only after 3 months of maintenance period, if the turfing is properly rooted.					
(a)	14051	Turfing with sods, 10cm thick and 20cm square closely laid	100	Sqm	788.2	5160.4	40,673.08
						Total Amount	40,673.08

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Annexure of Sch B-II

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount
1	31020	Providing and laying cement concrete, up to plinth in retaining walls, walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc, excluding the cost of cement and of shuttering, centering. (M-20)				
(a)	31023	1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size)	1 Cum	1387.53	2911.03	4,039,126.90
2	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)	1 Cum	71	729.06	51,763.26
					Total Amount	4,090,890.16

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Annexure of Sch B-VI

SN	Ref. Item no. of ECR SOR 2012	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	All kinds of soils	1	Cum	20860.85	292.93	6,110,769.38
2	194020	Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Mass Cement Concrete M-20 / M-25 grade (cast in-situ) using 20mm graded crushed stone aggregate and coarse sand of approved quality in Drop and curtain wall and alike structures below bed level, including the cost of centring, shuttering and finishing complete as per drawings and technical specifications as directed by Engineer. Payment for cement & reinforcement shall be paid extra.	1	Cum	1848.252	2745.77	5,074,874.89
3	221060	Providing and laying pitching with stone boulders weighing not less than 35kg each with the voids filled with cement sand mortar 1:4 on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications (filter media to be paid separately under the relevant item).	1	Cum	156.267	1623.52	253,702.60
4	221070	Providing and laying Filter Material as per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical specification.	1	Cum	163.9	2626.05	430,409.60

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Annexure of Sch B-VI

SN	Ref. Item no. of ECR SOR 2012	Description	Unit		Qty	Rate	Amount
5	222040	Supply and laying of coarse sand including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or before laying the filtering media	1	Cum	17442.52	1386.33	24,181,094.30
6	222290	Providing Boulder Backing behind wing wall, return wall, retaining wall with hand packed boulders & cobbles with smaller size boulders toward the back including all lead, lift, labour & other incidental charges as complete work in all respect. Payment for boulder/cobbles will be done extra.	1	Cum	4053.814	168.19	681,810.98

Amit

Name of Work: Construction of double line Rail Flyover including approach portion between Ganjkhwaja – Mughalsarai Railway Stations and construction of bridges, road under bridges and other miscellaneous works in Mughalsarai- Sonenagar section of East Central Railway in Connection with construction of Eastern Dedicated Freight Corridor

Annexure of Sch B-VI

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Qty	Rate	Amount	
7	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	1000mm diameter	1	meter	1722.5	8244.28	14,200,772.30
8	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)	192102	Initial load test above 50 ton capacity upto 100 ton capacity pile.	1	Each	0	58452.49	-

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Annexure of Sch B-VI

SN	Ref. Item no. of ECR SOR 2012	Description	Unit		Qty	Rate	Amount
(b)	192107	Routine Load Test above 100 ton capacity upto 250 ton capacity pile.	1	Each	2	76386.05	152,772.10
9	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.					
(d)	192113	Piles with lateral load capacity of above 20 ton.	1	Each	1	56648.87	56,648.87
10	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 fit with contractor own materials, labour, equipment 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	12	135257.1	1,623,084.72

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Annexure of Sch B-VI

SN	Ref. Item no. of ECR SOR 2012	Description	Unit		Qty	Rate	Amount
11	222140	Providing, cutting, fabricating, treating, fixing structural steel as per IS:2062 in access ladders (top of girder/slab to pier cap), inserts, platforms, railing, trolley refuges, drain pipes etc. by drilling holes and grouting with C.C. as per specifications including painting with two coats of approved paint over two coats of primer. (cement for grouting shall be paid separately)	1	MT	12	78577.85	942,934.20
Total Amount							53,708,873.93

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Annexure of Sch B-VII

SN	Ref. Item no. of ECR SOR 2012	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 (300 MT capacity of Bearing).	1 MT Bearing Capacity	2400	412.94	991,056.00
2	211110	Supplying, fitting and fixing in position true to line and level forged steel roller bearing conforming complete as per IS:7666, IS:9565, IS:1030, IS:919, IS:3073 and as per Bridge Code including all accessories as per drawing and Technical Specifications.				
(a)		Roller Bearing (300 MT capacity of Bearing).	1 MT Bearing Capacity	2400	412.27	989,448.00
3	211100	Supplying, fitting and fixing in position true to line and level cast steel rocker bearing complete as per IS :7666, IS:9565, IS:1030, IS:919, IS:3073 and as per Bridge Code including all accessories as per drawing and Technical Specifications.				
(a)		Rocker Bearing (300 MT capacity of Bearing).	1 MT Bearing Capacity	2400	388.01	931,224.00
Total Amount						2,911,728.00

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Annexure of Sch B-XII

SN	Ref. Item no. of ECR SOR 2012	Description	Unit	Basic cost	Rate	Amount
1		Unforeseen items not cover in items in schedule of B-I, II, VI, VII, C-I & C-II of ECR SOR 2012	LS	5000000		5,000,000.00
Total Amount						5,000,000.00

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Annexure of Sch C-I

SN	Ref. Item no. of ECR SOR 2012	Description	Unit		Qty	Rate	Amount
1	252040	Ordinary Portland Cement Grade-43	1	MT	7493.462	6631.36	49,691,844.17
					Total Amount		49,691,844.17

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Annexure of Sch C-II							
SN	Ref. Item no. of ECR SOR 2012	Description	Unit		Qty	Rate	Amount
1	45011	Supplying reinforcement for R.C.C work including straightening, Cutting, bending, placing in position and binding all complete. High yield strength deformed bars.					
(a)	45016	Thermo-Mechanically Treated bars	1	Kg	1,656,596	64.46	106,784,178.16
					Total Amount		106,784,178.16

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.

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