



इरकॉन इन्टरनेशनल लिमिटेड
(भारत सरकार का उपक्रम)
IRCON INTERNATIONAL LIMITED
(A Govt. of India Undertaking)
An integrated Engineering and Construction Company

ED4082697701N

इरकॉन

No. IRCON/2060/CGRP/23-24/Gevra-Pendra /2

Date: 06.05.2024

To,

M/s Shree Balaji Engicon Limited
PO BELPAHAR
Dist. Jharsuguda
Odisha-768217



Dear Sir,

Sub: "Civil works including Earthwork for Railway formation, Blanketing work, drain works, RE wall between Gevra Road (Km 0) to Pendra Road (Km 135) including one Major Bridge and five ROBs between Sendurgarh (67 Km) to Bhadi (95 Km) Double line in connection with the construction of New BG Electrified Double Railway Line for Chhattisgarh East West Rail Corridor from Gevra Road (Km 0) to Pendra Road (Km 135) via Dipka, Kathghora, Sendurgarh and Pasan in the state of Chhattisgarh over South East Central Railway" - Letter of Acceptance

Ref: (i) e-Tender No.: IRCON/2060/CGRP/e-TENDER/23-24/Gevra-Pendra Dated:02.03.2024
(ii) Corrigendum No. 1 Dated 13.03.2024.
(iii) Your offer dated: 20.03.2024 and opening of financial Bid on dated: 26.04.2024.

1.0 The Competent Authority has accepted your offer for the work of, "Civil works including Earthwork for Railway formation, Blanketing work, drain works, RE wall between Gevra Road (Km 0) to Pendra Road (Km 135) including one Major Bridge and five ROBs between Sendurgarh (67-Km) to Bhadi (95 Km) Double line in connection with the construction of New BG Electrified Double Railway Line for Chhattisgarh East West Rail Corridor from Gevra Road (Km 0) to Pendra Road (Km 135) via Dipka, Kathghora, Sendurgarh and Pasan in the state of Chhattisgarh over South East Central Railway" at your offered cost of Rs. 123,76,15,909.13/- (Rupees One Hundred twenty Three crore seventy six lacs fifteen thousand nine hundred nine and thirteen paise only) including all taxes, duties, etc. & GST @ 18% . (BOQ attached as per Annexure A).

2.0 The completion period of work is 06 (Six) months from the date of issue of letter of acceptance including monsoon period as per clause no 10 of SCC. This LOA shall be treated as notice of commencement of work.

3.0 It is requested to submit a Performance Security for an amount of Rs. 6,18,80,795/- (Rs Six crore eighteen lacs eighty thousand seven hundred ninety five only in the prescribe form as per clause no 8.0/13.0 of GCC/SCC in favour of IRCON INTERNATIONAL Limited., within 21 days of issue of this letter.

4.0 This letter will constitute a legal and binding contract between IRCON International limited and M/s Shree Balaji Engicon Limited, till such time the contract Agreement is signed. You will enter into and execute the contract Agreement within 28 days from the date of issue of this letter as per clause no 15/12.5 of SCC/GCC on the stamp Paper of the requisite value as per the prevailing laws to be arranged at your cost.

[Signature] 06/05/24



- 5.0 All other terms and conditions shall be as per Tender documents, which shall form an integral part of this contract and shall be binding on you.
- 6.0 This letter is being issued to you in duplicate as per clause No. 23 of Instructions to Tenderer of Tender document, one copy of which may please be returned within 7 (seven) days of the issue of the LOA. Duplicate copy shall be duly stamped and signed and returned as a token of your unconditional acceptance.
- 7.0 You are requested to contract Project Director, Bilaspur, Chhattisgarh for further instructions.

Encl.: BOQ as Annexure A.

Yours faithfully,
For and on behalf of
Ircon International Limited

(Surender Singh)
Executive Director/Project

Copy to :

- (i) Project Director, CGRP, Bilaspur
- (ii) CGM/Civil, Bilaspur office.

ANNEXURE-A

Name of Work:- Civil works including Earthwork for Railway formation, Blanketing work, drain works, RE wall between Gevra Road (Km 0) to Pendra Road (Km 135) including one Major Bridge and five ROBs between Sendurgarh (67 Km) to Bhadi (95 Km) Double line in connection with the construction of New BG Electrified Double Railway Line for Chhattisgarh East West Rail Corridor from Gevra Road (Km 0) to Pendra Road (Km 135) via Dipka, Kathghora, Sendurgarh and Pasan in the state of Chhattisgarh over South East Central Railway.

IRCON/2060/CGRP/23-24/Gevra-Pendra

Date: 06.05.2024

Sr. No.	Schedule	Description	Basic Amount (Rs.)
1	Schedule-A	Earthwork in formation (Earthwork and Blanketing)	18,49,66,812.70
2	Schedule-B	Bridge Work (Other than steel items)	16,78,54,002.40
3	Schedule-C	Pile foundation works	1,33,38,170.44
4	Schedule-D	Steel Items	53,88,58,612.24
5	Schedule-E	Road Works	89,01,425.46
6	Schedule-F	RE Wall (Facia Panel)	5,86,08,873.56
7	Schedule-G	Other items of work not covered by above schedules (SECR-USSOR-2021)	2,63,55,000.00
		Total Amount without GST	Rs.99,88,82,896.80
		Quoted rate (5% above)	Rs. 49,944,144.84
		Total	Rs. 104,88,27,041.64
		Total quoted amount with GST @ 18%	Rs. 123,76,15,909.13
		Total Quoted Amount (in Words)	(Rupees One Hundred twenty Three crore seventy six lacs fifteen thousand nine hundred nine and thirteen paisa only).

Note: Items covered under SECR-USSOR-2021 (i.e. under Schedule G above) are inclusive of GST @ 12%, therefore items executed under Schedule G will be paid by deducting GST @12% therefore adding escalation on quoted rate and thereon adding prevalent GST rate (i.e. @18%).

BILL OF QUANTITIES:

Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	<u>SCHEDULE (A) : Earthwork in Formation (Earthwork & Blanketing)</u>				
1	Earthwork in filling in Embankment Fill and Top Layer of formation including trolley refuges etc. with earth of approved quality as per "Comprehensive guidelines and specifications for Railway Formation" Specification No. RDSO/2020/GE:IRS-0004 September-2020, Corrected upto ACS No.1 issued by RDSO, Lucknow (with latest amendments upto date correction slips) including all leads, lifts, ascents, descents, site clearances, setting out and demarcation of profile, benching, initial compaction of subsoil after levelling the surface after site clearance, spreading loose earth in 30CM layers using grader up to extra width of 0.5 M beyond designed profile, compaction (mechanical Means) using vibratory compactors so as to achieve in-situ dry density not less than 98% of MDD, top and side dressing and removal of extra earth from sides to provide final formation as a complete job as per RDSO Guidelines & designed profile. The rate shall include cutting of trees with girth up to 30 cm and separate payment will be made for cutting of trees if girth is more than 30 cm. The minimum Ev2 Criteria as mentioned in the guidelines is not applicable. Work shall be executed in strict compliance of "Comprehensive guidelines and specifications for Railway Formation" Specification No. RDSO/2020/GE:IRS-0004 September-2020, Corrected upto ACS No.1 issued by RDSO, Lucknow (with latest amendments upto date correction slips). The rate includes royalty/taxes, all Labour, tools/Plants etc.				
(a)	With contractors earth of approved quality and specification from outside railway land	cum	162241.56	220.01	35694766.12
(b)	with suitable material available at site from excavation (Item 2 of Sch-A and Item 1 of Sch-B) with all leads & lifts	cum	122063.45	37.78	4611557.00

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
2	Earthwork in excavation by mechanical means (Hydraulic excavator) in cutting in formation, trolley refuges, side drains, yard drains, catch water drains, etc. including leading usable cut spoils and utilise it for formation in filling (as per Item 1(b) above) and disposal of surplus unsuitable earth, site clearances, setting out and demarcation, lift, ascents, descent, loading, unloading, tools & plants, Royalty/all taxes, bailing/pumping out of water and all incidental charges as per specifications of Item 1 above, disposing off surplus unusable cut spoils with all lead as per directions of the Engineer incharge and top & side dressing to providing final formation as per designed profile. The rate shall not include cutting of trees with girth above 30 CM, which shall be paid separately. Note: 1. Rock spoils such as stones, boulders, pebbles, gravels, etc available from excavation, if are found suitable for use in works as per required specifications even after modifications etc., can be used free of cost but the legally payable royalty and taxes are to be paid by the contractor to the concerned authorities. 2. Rain cuts, slips and washings in the cutting and side drains will have to be cleared/rectified manually/mechanically and no extra cost will be payable. 3. Contractor has to arrange suitable land for disposal/stacked of unusable excavated material from cutting at his own cost.				
a)	Soil excluding rock	cum	55978.80	133.48	7472050.22
b)	soft Rock with UCS 1.25 MPa to 12.5 Mpa, not requiring blasting	cum	49304.56	191.22	9428018.44
c)	Hard rock with UCS more than 12.5 MPa requiring blasting but blasting not permitted, hence to be excavated by chiselling. Note:- 1- in case blasting is permitted accepted basic rate will be reduced by 10%.	cum	231900.92	534.63	123981187.26
3	Extra for making trolley refuges in cutting or filling by manual finishing, ramming, making up for extra volume of earth in cutting or filling, repair till handing over as per standard drawings.	Each	100.00	352.46	35246.00
4	Extra for manually finishing unlined side drains.	RM	500.00	17.30	8650.00

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
5	Filling suitable, well graded contractor's coarse sand of approved quality in weak formation/ sandwich construction in Embankment, in layers not exceeding 300 mm depth in loose state, in the entire width of the formation in cutting, below or above natural ground level, or as directed to dimension and slopes shown in cross section sheets or as directed by the Engineer in charge with Compaction by Vibratory Roller up to the required relative density (min.70% of the relative density obtained as per IS:2720 part.IV- 1983) as a complete job.	cum	2016.00	935.28	1885524.48
6	Turfing/planning. Including all leads and 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)	Turfing with sods 10cm thick and 20cm square closely laid	sqm	16056.10	18.22	292542.10
7	Providing and laying blanketing materials of specifications as per latest RDSO Guidelines and Specifications and procedures by spreading in layers not exceeding in 30 cm in loose state and leveling by graders and compaction using vibratory compactors, including all leads, lift, ascent/descent, loading, royalty/taxes, octroi, tools and plants, testing charges, top and side dressing to provide final formation as per designed profile as a complete job inclusive all other incidental charges. NOTE: 1) If naturally available materials do not meet the laid down specifications, blanket material has to be produced by mechanical process using mechanical crushing or mechanical blending method or combination of these two methods as given in "Comprehensive guidelines and specifications for Railway Formation" Specification No. RDSO/2020/GE:IRS-0004 September-2020, Corrected upto ACS No.1 issued by RDSO, Lucknow (with latest amendments upto date correction slips) . The quoted rates are deemed to include the production of material by mechanical process. 2) The filter criteria and minimum EV2	cum	2876.75	541.33	1557271.08

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	Criteria as mentioned in the guidelines is not applicable.				
	Total of Schedule - (A)				184966812.70
	<u>SCHEDULE (B): Bridge Work (Other than steel items)</u>				
1	Earth work in excavation in foundation of bridges/structures by mechanical means (hydraulic excavation) to desired profile including ramming of bottom, backfilling, compaction of back fill, getting out excavated usable surplus materials and utilise it for formation in filling (as per Item 1(b) of Schedule-A) and disposal of surplus unsuitable soil as per directions of the Engineer in charge. The rate inclusive of all labour, material required, manual work for achieving desired profile, wet excavation, shoring, strutting, trenches and leading the surplus unsuitable soil to any other place as directed by Engineer incharge with all lead, lift, Ascent,descent , loading, un-loading ,tools & plant and removing slush, making protection bunds for diverting water wherever necessary, pumping out/balling out water with contractor's pump or by any other means complete as required. Note: 1. Rock spoils such as stones, boulders, pebbles, gravels, etc available from excavation, if are found suitable for use in works as per required specifications even after modifications etc. can be used free of cost but the legally payable royalty and taxes are to be paid by the contractor to the concerned authorities. 2. Rain cuts, slips and washings in the cutting and side drains will have to be cleared/rectified manually/mechanically and no extra cost will be payable. 3. Contractor has to arrange suitable land for disposal/stacked of unusable excavated material from cutting at his own cost.				
a)	Soil excluding rock	cum	12368.71	246.09	3043814.92
b)	soft Rock with UCS 1.25 MPa to 12.5 Mpa, not requiring blasting	cum	4411.38	260.28	1148193.34

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08/05/24

Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
2	Providing and laying of Levelling Course (P.C.C M-15) cement concrete in foundation and flooring using well graded stone aggregate of 20 MM normal size, Corrective course of flooring etc with all required Labour and material including cement, royalty, taxes, leads, lifts, ascent/descent, loading, un-loading, shuttering, shoring, strutting, curing, pumping out/balling out water from foundations where required, fuel electricity etc as a complete job as per Direction of Engineer incharge..	cum	1645.93	4,694.75	7727240.20
3	Providing and laying Design mix concrete M20 in toe wall, drain, retaining wall wing walls, return wall of Box, RUB, Abutment etc. using well graded stone aggregate of 20MM nominal size as per direction of Engineer- in-Charge. The rate is inclusive of cement, all labour and other required material, royalty taxes, leads, lifts, Ascent/descent, loading, un-loading, centring and shuttering, shoring, strutting, curing pumping out/balling out water where required, fuel, electricity etc as a complete job as required .(Rate Excluding steel reinforcement)	cum	535.72	4,938.12	2645459.52
4	Providing and laying Design mix concrete M25 in coping and wearing course works and other miscellaneous works, etc. using well graded stone aggregate of 20MM nominal size as per direction of Engineer- in-Charge. The rate is inclusive of cement, all labour and other required material, royalty taxes, leads, lifts, Ascent/descent, loading, un-loading, centring and shuttering, shoring, strutting, curing pumping out/balling out water where required, fuel, electricity etc as a complete job as required.(Rate Excluding steel reinforcement)	cum	161.40	5,176.21	835455.82
5	Providing and laying Design mix control concrete M30/M35 in cast-in-situ RCC works in foundation of bridges, pile cap, approach slab, bottom slab of RCC boxes, foundation of retaining walls/wing walls and other miscellaneous works, etc using well graded stone aggregate of 20 MM nominal size as per direction of Engineer incharge. The rate is inclusive of cement, all labour and other required material, royalty taxes, leads, lifts, Ascent/descent, loading, un-loading, centring and shuttering, shoring, strutting, curing pumping out/balling out water where required, fuel, electricity etc as a complete	cum	6475.01	5,425.98	35133294.29

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 26/05/20

Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	job as required . (Rate Excluding steel reinforcement)				
6	Providing and laying Design mix control concrete M35/M40 in cast-in-situ RCC works in substructure, pier, superstructure, abutment, pier cap, jacketing, dirt wall, return wall, wing wall, retaining wall, foot path slab, bridge deck, ballast retainers, RCC railing, inspection platform, pedestal, RCC boxes excluding bottom slab and other miscellaneous works etc using well graded stone aggregate of 20 MM nominal size as per direction of Engineer incharge. The rate is inclusive of cement, all labour and other required material, royalty taxes, leads, lifts, Ascent/descent, loading, un-loading, centring and shuttering, shoring, strutting, curing pumping out/balling out water where required, fuel, electricity etc as a complete job as required . (Rate Excluding steel reinforcement)	cum	15779.17	5,601.11	88380866.88
7	Applying two coats of coal tar or bitumen conforming to IS 3117 - 1965 on the top and sides of RCC box/slabs @1.70 kgs/sqm after cleaning the surface with all labour and materials complete job as directed by the engineer.	sqm	5286.88	148.54	785312.56
8	Providing and laying boulder backing behind abutment, wing wall, boxes, return wall, etc. with all leads, lifts, Ascent/descents, labours, material, tools & plants royalty/taxes, octroi etc all as a complete job as per drawing & direction of Engineer in charge. The boulder backing shall be as per IRS Bridge & Sub-Structure Code/IRC 78/relevant RDSO guidelines and as per direction of Engineer in Charge.	cum	6351.18	1,419.98	9018546.70
9	Providing and laying backfill material behind abutments, wing walls, return walls , below stone pitching, etc with all leads, lifts, Ascent/descents, labours, material, tools & plants royalty/taxes, octroi etc all as a complete job. The back fill material shall be as per IRS Bridge & Sub-Structure Code/IRC 78/relevant RDSO guidelines and as per direction of Engineer in Charge	cum	9889.08	575.66	5692747.79
10	Providing and laying pitching with stone boulders weighing not less than 35 kg each with the voids filled with spalls on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment etc. as a complete job as per drawing and	cum	1352.29	1,102.13	1490403.14



Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	technical specifications. (filter media to be paid separately under the relevant item)				
11	Providing and laying pitching with stone boulders weighing not less than 35 Kg 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 etc with all leads, lifts,labours, material, tools & plants, Ascent/descents, royalty/Taxes, octroi etc complete job as per drawing and as directed by Engineer incharge. (Filter media to be paid separately under the relevant item).(Rate includes cost of cement).	cum	1352.29	1,622.67	2194325.95
12	Supply and filling of coarse sand in foundations for boxes and in case of loose slush is encountered at site of Foundation and before laying the filter media with contractors material and labour including its compaction and watering with all lead lift ,taxes, royalty etc. Complete in all respect as per instruction of Engineer-in-charge.	cum	12543.89	599.65	7521941.18
13	Random rubble masonry (CM 1:6) with hard stone for toe wall, including cost of all materials including cement , labour, tools, plant all leads and lifts, curing etc complete as per specifications and as directed by engineer-in-charge	cum	1000.00	1,732.42	1732420.00
14	Providing and fixing of 80/100 mm dia PVC pipe for weep holes in abutments, wing walls, return walls, face wall, retaining wall etc at suitable intervals with all leads, lifts, Ascent/descents, ascents etc with contractor's labours, material tools & plants as per drawing and as directed by Engineer. The weep holes shall be measured in running meter. The rate shall be inclusive of cleaning of weep holes.	meter	3341.60	150.82	503980.11
	Total of Schedule - (B)				167854002.40
	<u>SCHEDULE (C): Pile Foundation works</u>				

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
1	Boring in all kind of soils and rocks, providing & installing reinforced cement concrete cast-in-situ bored piles in M35 design mix control concrete using contractor's concrete with well graded stone aggregate of nominal size 20 mm, cement, sand etc. Extra payment will be made for boring in rock having Uniaxial Compressive Strength more than 5 N/mm ² (i.e. 'moderately-weak' and stronger rock as per table 2 of IRC: 78-2014) or big stone boulders larger than 30cm size by any means i.e. by hydraulic rig or mechanical chisel and hammer method as per the item 2 of this schedule. No extra payment will be made for boring in coal and weathered rock. Regarding the classification of rock, decision of Engineer will be final and binding. Length of pile for payment shall be measured up to the bottom of pile cap & no payment shall be made for boring and concreting from ground level to bottom of pile cap level. The rate is inclusive of all labour and required material, royalty, taxes, leads, lifts, Ascent/descent, loading, un-loading, shuttering, shoring, strutting, cutting disposal, curing, pumping out/balling out water wherever required, fuel electricity etc complete as required except cost of steel liner & steel reinforcement which will be paid separately under relevant items of this BoQ.				
a	1200 MM dia pile (working and test pile)	meter	796.40	13,285.19	10580325.32
2	Extra for chiselling over item no.1 in addition to boring of piles, if chiselling is resorted to in rock having Uniaxial Compressive Strength more than 5 N/mm ² (i.e. 'moderately-weak' and stronger rock as per table 2 of IRC: 78-2014) or big stone boulders larger than 30cm depth by any means i.e. by hydraulic rig or mechanical chisel and hammer method. No extra payment will be made for boring in coal and weathered rock. Regarding the classification of rock, decision of Engineer will be final and binding.				
a	1200 MM dia pile (working and test pile)	meter	557.00	3,187.26	1775303.82
3	Pile load test				
	Conducting pile load testing on single pile or on separate test pile in accordance with IS: 2911 (Part IV) including installation of loading platform and preparation of pile head, kentledge, construction and dismantling of test cap, etc.				

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06/09/14

Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	Note: Boring and installing of test piles shall be paid under item No. 1 of Schedule C)				
a)	Initial Pile Load Test	nos.	1.00	517,628.05	517628.05
b)	Routine vertical load test on working pile	nos.	1.00	115,675.56	115675.56
c)	Lateral Load test	nos.	1.00	59,974.03	59974.03
(d)	Non-destructive integrity testing of cast-in-situ piles of 1200mm dia as per specifications and submitting reports in the approved format, as approved by Engineer in Charge.	nos.	89.00	2,508.87	223289.43
(e)	Conducting Dynamic Load Testing on selected piles for routine pile load test, all as per specifications and the direction of Engineer in charge	nos.	1.00	65,974.23	65974.23
	Total of Schedule - (C)				13338170.44
	SCHEDULE (D): Steel items				
1	Providing ,Fabricating Trial Assembly, Transporting and launching in position on piers/abutments as per drawing- duly applying protective coating(metalizing) on all parts of structural steel of bridge structure; complete with contractors own steel (conforming to IS 2062:2011, E250(B0 Quality),all materials,machineries,tools and tackles, consummables,energy/power, all leads and lifts labour etc. complete in all Respect(including shear stud connector etc) except concrete (including its reinforcement) item as per approved drawings & specifications ,relevant clauses of the contract and RDSO guidelines .The fabrication & erection cost shall include all the types of stiffeners, packing diaphragm HSFG bolts, steel drifts shop welds, shop and field rivets/bolts, templates, jigs,fixtures, back up supports, accessories etc. The job includes preparation of fabrication drawings, fabrication of steel girders, erection of girders and launching in position on piers/abutments as per drawing. The elements should be Aluminium metalized (as per cl.: 39.2.1 of RDSO:B1 and as per the RDSO stipulation vide letter No. CBS/MPP/Meeting; dt. 10.4.14) preceded by surface preparation by compressed air blasting/certrifugal blasting with suitable abrasive material (as per c.: 39.2.1 Appendix VII of RDSO; B1). The metalizing				

Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	shall be followed by, one coat of etch primer to IS: 5666 and one coat of zinc primer to IS: 104. This shall be followed by two coats of aluminium paint to IS:2339 - one coat shall be applied before the fabricated steel work leaves the shop; After the steel work is erected at site, the second coat shall be applied after touching up the primer and finishing coat if damaged in transit (as per RDSO; IRS B-1; cl;39.2.1). The above Painting/Oiling/Metalizing scheme is a brief outline - but these will be guided by all the provisions as detailed in cl. 39.2 and 39.2.1 of RDSO; B-1 along with relevant appendices and other codes mentioned therein. The rate shall include all material testing, preparation of QAP and getting it approval by RDSO or any other agency as decided by the client. No part of the work shall be painted or coated, packed or dispatched until it has been finally inspected and approved by the inspecting officer as per QAP - The rate shall also include the cost of approval by RDSO/any other agency as decided by the client. All other relevant guidelines of (RDSO; B-1) shall be followed. Rate shall include all activities for delivering the end product except bearings & RCC (including its reinforcement) which shall be paid separately. Note: STUD SHEAR Connector:- Supplying manufacturing, fabrication, testing and welding with welded by STUD welding machine (with all contractor consumable) compatible with type of STUD on composite steel girder, conforming to IS : 3935 – 1966 of diameter 25 mm and height 200 mm and as per RDSO drawings with all alteration and as per approved drawing of railway and as per direction of Engineer – in – charge inclusive all. The stud should pass the test prescribed in above mentioned drawing. Note :1. The tensile strength of STUD steel should be 4600 Kg/CM (Min.) , Yield strength -3500 Kg/CM 2 (Min.) Elongation – 20 % (Min.) 2. The STUD welding should be done by "Drawn ARC STUD welding ceramic ferrules" technique. 3. The STUD shear connector and ceramic ferrules confirm to type SD3/UF as per BS EN ISO13918 4. The mechanical properties of STUD shear connector shall be as per ISO 6892/BS EN				

[Signature]
06/05/24

Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	ISO13918 5. The shape of tip of STUD may be chosen by manufacture the stud tip shall be supplied with flux in the form of press – fitted aluminium bar or aluminium spray coating. 6. The diameter of ceramic ferrule D7 as per figure-13/table-18 of BS EN ISO13198 shall be 26MM (+0.5 mm & -0.0 mm)				
a)	composite Plate girder/Plate Girder/Open web Girder varying span from 12.2 m to 76.2m as per RDSO Drawing with up to date corrections/alterations)	MT	2239.69	103,543.56	231905682.98
2	Supplying and fixing in position neoprene/ elastomeric bearing pads of approved quality under the steel Girders as per RDSO drawings inclusive of all labour and materials, cutting and drilling holes and lead, lift, loading, unloading, ascent, decent, etc. complete. The size and thickness of the bearing pad shall conform to the detailed design calculation and drawing approved by the Railway. The rate includes the reinforcement plates/laminates in the bearing pad and the entire bearing acts as a single homogeneous block etc. complete. The elastomeric bearing should conform to the provisions of IRC: 83 (Part-II) with latest amendments. The rate also includes fixing of the bearing with adhesive mortar (if required) on bed block/pedestal and Contractor has to supply the bearing(s) for testing at nominated/approved source and submit test certificate before supply of bearing. Testing, transportation, handling charges are to be borne by contractor and no payment shall be made for Test bearings. Note: Testing of elastomeric/POT-PTFE bearings a) Testing of elastomeric bearings/ POT-PTFE bearings shall be done as per IRC: 83 Part II & Part III respectively with latest amendments. b) Payment for plates above and below bearing pad will be done as per item no. 1a of sch-4 Respectively. ii) It is deemed that the contractor will supply the elastomeric bearing in a single lot so that one test each is necessary. If due to some reasons contractor supplies the material in different lots at different period of time then the cost of all these tests will have to be borne by the contractor. iii) If after test results, the material is not found confirming to any of the required	Cuc ms.	3960320.00	0.74	2930636.80



Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	specification, the whole lot will be rejected & the contractor will have to arrange all materials & their testing at his own cost till the material supplied confirm to the required specifications. (Drawing nos. are only indicative and may change as per RDSO guidelines)				
3	Supply TMT Fe500 reinforcement steel conforming to IS: 1786-2008 including decoiling, straightening, cutting, bending, hooking as per procedure specified in IS 2502, placing in position, binding with 1MM dia. G.I. binding wire. Note: Reinforcement, shall be measured in length for different diameters used in the works and then paid as per standard weights as per IS 1732. Wastages, overlaps, coupling, welded joints, spacebars, chairs and binding wire shall not be measured and cost of these items shall be deemed to be included in the rates.	MT	4220.51	68,738.45	290,111,260.62
4	Supplying & providing steel liner with steel plates of 6/8mm thickness as per the drawing. The contract unit rate for permanent steel liners i.e. liner up to cut off level shall include cost of all labour, supply of materials, fabrication, moulding, cutting & welding, placing the steel liner to the required depth and cutting of liners at cut off level as shown on the drawings and as per instructions by the Engineer.(Drawing nos. are only indicative and may change as per RDSO guidelines)	MT	155.93	65,521.63	10216460.16
5	Load testing of one or more spans of bridges 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 material, recording and analysing the load testing results including all leads & lifts etc. complete as required. The rates are inclusive and will be paid after load test is finished and girder is cleared of kentledges/loading material etc. the load shall be 1.25 times the stipulated design load based on design load & not span. (one complete job)				

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
a	for span design load up to 100MT	Each	8.00	94,474.48	755795.84
b	Extra for every increase of 100 MT or part thereof in the span load capacity up to 800 MT	Each 100 MT	8.00	92,945.98	743567.84
6	POT-PTFE bearing on piers and abutments conforming to relevant standard codes including, design, manufacture, supply, testing and fixing in position true to line and level as per RDSO Drawings with all alteration/correction.				
	capacity of each bearing up to 100 MT (capacity over 100 mt will be paid @ Rs 426.86/MT capacity)	No.	48.00	45,733.50	2195208.00
	Total of Schedule - (D)				538858612.24
-	<u>Schedule (E) :Road Works</u>				
1	Construction of sub-grade with Material Obtained from Borrow Pits/Borrow Area (Construction of sub-grade with approved material/selected soil having C.B.R.>8 (unless specified otherwise in the contract) obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2 as a complete job.the rate includes Royalty,octroi, taxes etc, labour machine & Plants,handling/unhandling leads and lifts etc all.	cum	1871.10	288.31	539456.84
2	Granular Sub-base as per Table:- 400-1 Construction of granular sub-base by providing graded Material, , carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface watering, rolling and compacting with vibratory power roller at OMC to achieve the desired density, complete as per clause 401 as per MORTH specifications.				
A	Plant mix method (with Mechanically crushed stone only)				
(a)	For Lower Sub-base with				
(i)	Grading-IV Material	cum	935.55	1,670.82	1563135.65
3	Wet Mix Macadam (Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve	cum	779.63	1,643.32	1281173.36

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	the desired density as per clause 406 as per MORTH specifications.)				
4	Prime coat : (Providing and applying primer coat with oil based bitumen emulsion (SS-1, grade confirming to IS:8887) on prepared surface of granular Base including clearing of road surface and spraying primer using mechanical means as per clause 502 as per MORTH specifications.				
	(i) on WBM/WMM surface @0.85 Kg/sqm.	sqm.	2835.00	70.64	200264.40
5	Dense Bituminous Macadam (Providing and laying dense bituminous macadam with minimum 40-60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5% by weight of total mix of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No.505 complete in all respects as per MORTH specifications.)				
A	With sensor paver finisher				
(i)	for Grading-II(26.5 mm nominal size bitumen content 4.50%)	cum	283.50	8,993.33	2549609.06
6	Tack coat Providing and applying tack coat with bitumen emulsion (RS-1, grade confirming to IS:8887) using emulsion pressure distributor on the prepared bituminous/granular surface cleaned with mechanical broom and as per clause 503 as per MORTH specifications. (i) Bituminous surface @ 0.25 kg /Sqm	sqm.	2835.00	16.55	46919.25



Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
7	Bituminous Concrete (Providing and laying bituminous concrete with minimum 40-60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder @ 5.0 to 6.0% by weight of total mix of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects)				
A	With sensor paver finisher				
(i)	for Grading II (13.2 mm nominal size) with bitumen 6.0 %	cum	85.05	11,139.01	947372.80
8	Type - A, "W" : Metal Beam Crash Barrier (Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 811.3 as per MORTH specifications)	meter	630.00	2,815.07	1773494.10
	TOTAL OF SCHEDULE (E)				8901425.46
	Schedule (F) :RE Wall (Facia Panel)				
1	Dismantling manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in charge :				
a	Bituminous road	Sqm	643.50	240.96	155057.76
2	Earth work in excavation				
a	All Kind of Soil	cum	1816.89	182.32	331255.75
3	Carriage of Materials by mechanical transport including loading, unloading and stacking : Earth (upto 5kms)	Cum	23058.78	158.59	3656892.08
4	Shoring with 'Z' section MS sheet piles side by side in all kinds of soil mechanically or manually as per approved drawing with contractor's own arrangement complete in all respects and removal of sheet piles after completion of the work as directed by	Sqm	1276.00	788.81	1006521.56

Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
	engineer in-charge {Note - Payment will be made as per actual driven length of pile}				
5	Providing and laying Plain Cement Concrete 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 : RE WALL APPROACHES				
a	PCC Grade M -15 (levelling course below approach slab & Friction slab)	cum	513.98	2700.65	1388066.58
b	PCC Grade M -20 (Levelling pad for RE wall & RE wall protection)	cum	317.96	2700.65	858688.14
6	Designing, providing and erection of Precast RCC fascia panels of minimum thickness 180mm made with M-35 Grade concrete batching plant, transit mixer, concrete pump and vibrator for retaining earth with all elements and accessories including reinforcing element, complete as per approved drawing and clause 3100 of MoRT&H specifications including all material, labour, machinery etc. (Scope of work includes designing, getting approval, casting in yard including reinforcement, curing, storing, transporting, lifting, placing in position, erection with all necessary fasteners etc complete excluding cost of excavation, RCC/CC for foundation, filter media and earth filling in RE portion) Payment shall be released as follows:- 1) On completion of casting of Facia Panel = 30% 2) On final erection at site and final acceptance = 70%	sqm	6280.05	4238.05	26615176.61

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
7	Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) Wall panels as per approved drawings as per clause 3103 of MoRT&H specification The soil should be predominately coarse grained not more than 10% of particle should pass 75 micron sieve The item shall be measured and paid for the finished volume of backfill and sub-grade placed in position excluding the volume of filter media at base and behind the RS walls.	cum	21753.57	422.64	9193927.56
8	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRT&H specifications with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification including all material, labour, machinery as per clause 710.1.4 of IRC:78 and clause 2200 of MoRT&H specification.	cum	3776.06	1525.23	5759356.74
9	Providing and laying in position machine batched, machine mixed and machine vibrated Design Mix Cement Concrete of specified 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 10 m from foundation top level, including finishing, using Admixtures in approved proportions (as per IS:9103), to modify workability & other properties 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	RCC M-30 (Approach Slab & Footpath Slab)	cum	30.49	2659.53	81094.39
b	RCC M-30 (Pylon & parapet wall)	cum	16.50	2912.83	48061.70
c	RCC M-40 (Friction Slab with Crash Barrier)	cum	1443.08	2912.83	4203435.79

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Item No.	Description of item	Unit	Quantity	Basic Rate (In Rs.)	Basic Amount (In Rs.)
10	Providing and fixing railing used in rows for footpath or anti crash barrier railing with B class G.I. pipe 65/50 mm nominal dia including cost of M.S. angle and channels in vertical posts, welding / bolting, priming painting with one coat ready mix Zinc Chromate conforming to IS:104 with DFT of 25-30Microns, followed by one coat of Zinc Chrome red oxide conforming to IS:2074 with DFT of 25 Microns with all material, labour, T&P as a complete job. Extra over item for working under running traffic	kg	62997.73	84.31	5311338.90
Total of Schedule (F)					5868873.56

Sl. No.	Description of Items	Unit	Qty.	% Escalation on Basic rate	Basic Value (in Rs.)
	Schedule-G : Other items of Work not covered by above schedules (SECR-USSOR-2021)				
1	Any item of SECR-USSOR-2021 not covered by any other item of Schedules - A,B,C,D,E & F but required to be executed for successful completion of the work as deemed necessary by the Engineer.	Basic value	2,50,00,000.00	5.42%	26355000.00
Total Schedule-G					26355000.00

Note:- Items covered under SECR-USSOR-2021 (i.e. under Schedule G above) are inclusive of GST @12%, therefore items executed under Schedule G will be paid by deducting GST @12% thereafter adding escalation on quoted rate and thereon adding prevalent GST rate (i.e. @18%)

Signature Not Verified

Digitally signed by SANJAY SHARMA
Date: 2024.05.20 15:26:29 IST
Location: eProcurement System for Central PSUs

