



**Tender for Construction of Road, Drain and Misc.
Works at CS & FP, BHEL Jagdishpur**

Tender Enquiry No: BHE/CS&FP/CVL/17-18/08

SECTION – IV: BOQ & Price Schedule

This Document shall also consists of following sections: -

- **Annexure PB – I**
- **Annexure PB – II**

BHARAT HEAVY ELECTRICALS LIMITED

(A GOVERNMENT OF INDIA UNDERTAKING)

CS & FP Industrial Area,

Jagdishpur, Amethi (UP) 227817

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Centralised Stamping & Fabrication Plant (CS & FP), BHEL Jagdishpur
Name of Work : Construction of Road, Drain and Misc. Works at CS & FP BHEL Jagdishpur

Annexure PB - I
Bill of Quantities & Price Schedule

S.No.	DESCRIPTION OF WORK	UNIT	Total Qty	Rate	Amount
1	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer -in-charge.	Cum	2679.50	125.95	337483.03
2	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m in width or 10 Sqm on plain) including dressing of sides and ramming of bottom, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m. All kinds of soil	Cum	1021.50	166.40	169977.60
3	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.	Sqm	5811.00	90.10	523571.10
4	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density).	Cum	1744.00	10.70	18660.80
5	Supplying and filling in plinth with sand including watering, raming consilidating, dressing complete.	Cum	944.50	917.75	866814.88
6	Providing and laying in position cement concrete of specified grade including the cost of centring and shuttering - All work up to plinth level 1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40 mm nominal size).	Cum	166.50	4478.15	745611.98
7	Providing 90 mm to 45 mm size stone aggregate along with Stone screening 13.2 mm nominal size (Type A) with Laying, spreading and compacting stone aggregate of specified sizesto WBM specifications in uniform thickness, hand picking, rollingwith 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming ,interstices of coarse aggregate, watering and compacting to the required density.as per direction by engineer in charge.	Cum	872.00	2206.72	1924259.84
8	63 mm to 45 mm size stone aggregate along with Stone screening 11.2 mm nominal size (Type B) with Laying, spreading and compacting stone aggregate of specified sizesto WBM specifications in uniform thickness, hand picking, rollingwith 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming ,interstices of coarse aggregate, watering and compacting to the required density.as per direction by engineer in charge.	Cum	581.00	2190.81	1272860.61



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9	53 mm to 22.5 mm size stone aggregate along with Stone screening 11.2 mm nominal size (Type B) with Laying, spreading and compacting stone aggregate of specified size to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming, interstices of coarse aggregate, watering and compacting to the required density as per direction by engineer in charge.	Cum	436.00	2283.76	995719.36
10	Providing and applying tack coat using hot straight run bitumen of grade VG - 10 , including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications On W.B.M. @ 0.75 Kg per sqm	Sqm	5586.00	36.40	203330.40
11	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with aver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge. 60 mm average compacted thickness with bitumen of grade VG-30 @5% (percentage by weight of total mix) and lime filler @ 2 % (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity	Cum	335.50	7140.45	2395620.98
12	Providing and applying tack coat using hot straight run bitumen of grade VG - 10 , including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications On bituminous surface @ 0.50 Kg per sqm	Sqm	5586.00	27.50	153615.00
13	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge. 40 mm compacted thickness with bitumen of grade VG-30@5.5% (percentage by weight of total mix) and lime filler @3% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	Cum	223.50	7754.35	1733097.23
14	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.	Sqm	1800.00	13.95	25110.00



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S.No.	DESCRIPTION OF WORK	UNIT	Total Qty	Rate	Amount
15	Supplying and stacking of good earth with at site [including royalty and carriage upto site] (good earth measured in stacked will be reduced by 20% for payment.)	Cum	600.00	332.55	199530.00
16	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	Cum	600.00	125.75	75450.00
17	Providing and laying non-pressure NP2 class (light duty) 600 mm dia R.C.C. Pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete	Meter	748.00	1397.10	1045030.80
18	Providing and laying non-pressure NP-3 class (Medium duty) 300 mm dia R.C.C. Pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete	Meter	125.00	1296.00	162000.00
19	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	3740.00	615.70	2302718.00
20	Manufacturing, supplying and fixing retro reflective overhead signage boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type - III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC : 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the corners, lowering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in-charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment). Overhead informatory road signage.	Sqm	9.00	4722.20	42499.80

Signature BHEL

Signature Bidder



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S.No.	DESCRIPTION OF WORK	UNIT	Total Qty	Rate	Amount
21	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cum	135.00	5012.65	676707.75
22	Providing and placing in position 100 mm thick factory made machine batched & machine mixed Precast RCC Rectangular Covers on drains of footpath of various sizes, of M-25 grade cement concrete for RCC work, including cost of centering, shuttering, reinforcement of 8 mm dia TMT bars of Fe 500 grade @ maximum 100mm c/c on both ways , neat cement punning on finished surface, properly encased on all edges with 1.6 mm thick , 100 mm wide MS sheet duly painted over priming coat , reinforcement to be welded at edges with MS sheet and providing 2 Nos. 12 mm dia bar for hooks etc i/c cost of cartage, all leads & lift, handling at site etc. all complete as per direction of Engineer-in-Charge.	Sqm	55.50	1907.95	105891.23
23	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	52.00	4751.65	247085.80
24	15 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement on the rough side of single or half brick wall	Sqm	187.00	265.95	49732.65
25	Brick edging laid lengthwise with half brick depth including excavation, refilling and disposal of surplus earth lead upto 50 metres : with common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Metre	1496.00	36.20	54155.20
26	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	20.00	4043.10	80862.00
27	Providing and laying in position 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size) of reinforced cement concrete, including the cost of centering , shuttering, finishing and reinforcement - All work up to plinth level	Cum	47.00	6215.35	292121.45

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S.No.	DESCRIPTION OF WORK	UNIT	Total Qty	Rate	Amount
28	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level with Thermo-Mechanically Treated bars of grade Fe-500D or more	Kg	3654.00	56.60	206816.40
29	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	56.00	5582.85	312639.60
30	12 mm cement plaster of mix 1:4 (1 cement: 4 coarse sand)	Sqm	240.00	180.85	43404.00
31	Finishing walls with Acrylic Smooth exterior paint of required shade on New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	Sqm	240.00	96.05	23052.00
32	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	Sqm	263.00	744.80	195882.40
33	Total Amount (Excluding GST) in Rs				174,81,312.00
Note : i). GST Payable extra as applicable					
ii). Bidder to quote in Annexure PB-II '% above' or '% below' or 'At par' over sl. no. 33 above i.e. Total Amount (Excluding GST)					



Centralised Stamping & Fabrication Plant (CS & FP), BHEL Jagdishpur

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Annexure PB - II

Summary of Price Schedule

Percentage (%) to be quoted by bidder over Total Estimated Amount by BHEL (Excluding GST) i.e. sl.no.33 of Annexure PB-I

	% Above	% Below	At par
% Quoted by the Contractor (in Figures) :			
% Quoted by the Contractor (in Words) :			

Note:

- 1 Total price of the package to be quoted by the bidders which shall form the basis of comparison for deciding lowest bid.
- 2 In case of any discrepancy between 'Total Quoted % (in Figures)' and 'Total Quoted % (in Words)', lower of the two 'percentage (%)' shall be considered for evaluation purpose
- 3 For further processing & award total quoted Amount for the package by the L1 (lowest) bidder shall be used for deriving Individual item rate by BHEL based on % (percentage) weightage specified at BOQ & Price Schedule (Annexure PB-I).

In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers. In case any of such contractor refuses to submit revised offer, then it shall be presumed that the said party is not interested to work & their offer shall not be consider further for deciding L1. If the revised tendered amount of two or more contractors received in revised offer is again found to be equal, the lowest tender among such contractors, shall be decided by draw of lots in presence of finance representative, tendering authority & the lowest contractors those have quoted equal amount of their tenders
- 5 GST Payable extra as applicable

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Signature & Seal of Bidder