

# TENDER

TENDER NOTIFICATION NO. - **FCX/19201064**

FOR

**Bed Plate Foundation & other allied civil works at  
Golden Jubilee Block and other areas inside factory  
premises.**

**PRICE BID**



**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION**

**BHARAT HEAVY ELECTRICALS LIMITED**

**(A Government of India Undertaking)**

**BHOPAL – 462 022 (M.P)**

## PREAMBLE OF PRICE BID

**1.0** This Price Bid consists of Three Schedule:

### **1.1 Schedule A**

Schedule A consists of Two Annexure:

Total price of the package combining **Annexure I & Annexure II** to be quoted by the bidders which shall form the basis for comparison for deciding lowest bid. For further processing and award, total quoted amount by the L1 (lowest) bidder for the package shall be used for deriving individual item rate by BHEL based on % (percentage) weightage specified at Annexure I , Annexure II & Annexure III of Price Schedule.

### **1.2 Schedule B**

It consists of details of free issue materials by BHEL.

### **1.3 Schedule C**

It consists of details of tools & tackles provided by BHEL either on higher basis or on free of cost basis which are mentioned in price bid.

**2.0** The work to be carried out under the contract shall, except as otherwise provided in tender conditions, include all labour, materials, tools, plant, equipment, and transport which may be required in preparation of and for full & entire execution and completion of the Works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include waste on materials, carriage and cartage, carrying in return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion as aforesaid in accordance with good practice and recognized principles as laid down in Technical Specification & elsewhere in Tender Specification.

**3.0** The price bid should not contain any condition. Conditional price Bids shall be summarily rejected.

**4.0** The bidder should not leave any column blank in Price Schedules.

**5.0** Price Quoted shall include all taxes, & duties except **GST**.

**6.0** Unless otherwise specified in the items involving cement, reinforcement steel or structural steel, these items shall be issued free of cost by BHEL.

**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION****TENDER NOTIFICATION NO. - FCX/19201064****Price Schedule**

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

**SUMMARY**

	Details ANNEXURE	Total Amount (Rs.)
	Total price of the package combining of Annexure-I & Annexure-II.	

Amount in words: Rs.

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Total price of the package combining of Annexure-I & Annexure-II to be quoted by the bidders which shall form the basis of comparison for deciding lowest bid.

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 Annexure-I & Annexure-II of Price Schedule.

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
1		Carriage of material up to 1 km lead by Mechanical transport including, loading, unloading & stacking -1 Km lead			
	1.1.1	a) Lime, Moorum, building rubbish	200.00	cum	0.4486
	1.1.2	b) Earth	465.00	cum	1.3036
	1.1.4	c) Excavated Rock	59.00	cum	0.2646
	1.1.11	d) Steel	5.00	Tonne	0.0100
2		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 disposal of excavated earth, lead up to 50 m and lift up to 1.5 m; disposed earth to be levelled and neatly dressed.			
	2.6.1	All kinds of soil.	465.00	cum	2.0370
3		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 disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed:			
	2.7.1	a) Ordinary rock.	59.00	cum	0.3951
4		Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.			
	2.8.1	All kinds of soil.	59.00	cum	0.2614
5	2.24	Extra rate for quantities of work, executed:			
	2.24.1	In or under water and/or liquid mud including pumping out water as required.	5.00	metre depth	0.0067
5	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations, etc. in layers not exceeding 20 cm in depth : consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5m	117.00	cum	0.3320
6	**	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:(Cement free issue by the Deptt.)			

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
a)	4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size ).	5.00	cum	0.4363
b)	4.1.6	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size ).	5.00	cum	0.4290
7	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	10.00	per 50kg cement	0.0105
		Note: - Difference in dosing of water proofing compound as per the manufacturer's recommendation from the one indicated against the item shall not attract any extra claim by the contractor.			
8	4.15	Extra for laying concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	5.00	cum per metre depth	0.0550
9	**	Providing and laying in position ready mixed plain cement concrete, using with cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for plain cement concrete work, including pumping of R.M.C. from transit mixer to site of laying and curing, excluding the cost of centering , shuttering and finishing, including cost of curing, admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the engineer-in-charge. (Cement free issue from BHEL store)			
	4.20.1	Note : 1) Excess / less cement used than specified in this item is payable / recoverable separately.			
	4.20.1.2	M-10 grade plain cement concrete (cement content considered @ 220 kg / cum)	39.00	cum	6.1005
10	**	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work upto plinth level.(Cement free issue by the Deptt.)			
	5.1.2	a) 1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size).	21.00	cum	1.9175
	5.1.3	b) 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	5.00	cum	0.4684

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

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Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
11	**	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement : (Cement free issue by the Deptt.) <b>(Note: The payment shall be made against this item only if work is done above plinth level and upto floor five level.)</b>			
	5.2.2	a) 1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size).	42.00	cum	4.7465
	5.2.3	b) 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	13.00	cum	1.5000
12	** 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement with 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). (Cement free issue by the Deptt.) <b>(Note: The payment shall be made against this item only if work is done above plinth level and upto floor five level.)</b>	5.00	cum	0.6023
13		Centering and shuttering including strutting, propping, etc. and removal of form for:			
	5.9.1	a) Foundations, footings, bases of columns, etc. for mass concrete.	106.00	sqm	0.5455
	5.9.2	b) Walls (any thickness) including attached pilasters, buttresses, plinth and string courses, etc.	53.00	sqm	0.4917
	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	18.00	sqm	0.1532
		<b>(Note :- The contractor is supposed to bring shuttering materials for the work. If due to any urgency ,BHEL shuttering materials are used , deduction @ 50 % of schedule rate of this item.)</b>			
14		Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level :			
	5.22.5	a) Hard drawn steel wire fabric.	10.00	kg	0.0213
15	Ana. 5.22A.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. <b>(Reinforcement bars will be supplied free of cost from BHEL store).</b>			
		b) Thermo-Mechanically Treated bars.(TMT bars)	32920.00	kg.	8.2500

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
16	5.28	Providing and fixing in position 12 mm thick bitumen impregnated fibre board conforming to IS : 1838 including cost of primer, sealing compound in expansion joints.	36.00	per cm depth per 100m	0.4487
17	5.31	Extra for laying reinforced cement concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc., complete.	10.00	cum	0.1101
		<b>Note :</b>			
		The quantity will be calculated by multiplying the depth measured from the subsoil water level up to the centre of gravity of the R.C.C. under subsoil water with the quantity of R.C.C. in cubic metre executed under subsoil water. The depth of centre of gravity shall be reckoned correct to 0.1m, 0.05 m or more shall be taken as 0.1 m and less than 0.05 m ignored. No extra payment shall be made for placing reinforcement or centering & shuttering under sub-soil water conditions.			
18	5.35	Add or deduct for using extra cement in the items of design mix over and above specified cement content therein.	165.00	Quintal	0.0506
19	5.37**	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). Note: Cement shall be free issue by department free of cost)			
		(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).			
	5.37.1	All works upto plinth level	330.00	cum	40.0956

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
20	10.1 Ana	Structural steel work in single section fixed with or without connecting plate including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.(Structural steel & Primer free issue from BHEL stores).	544.00	kg	0.1465
21	10.2 Ana	Structural steel work welded /riveted/ bolted in built up sections, trusses and framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete. (Structural steel & primer will be issued free of cost from BHEL store)	1632.00	kg	0.7213
22	** 11.4	52 mm thick cement concrete flooring with concrete hardener topping under layer 40 mm thick cement concrete 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener concrete consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume. Hardening compound is mixed @ 2 litre per 50 kg of cement or as per manufactures specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.(excluding cost of cement)	400.00	sqm	3.8052
23	**	12 mm cement plaster of mix:(Cement free issue by the Deptt.)			
	13.4.2	1 : 6 (1 cement : 6 coarse sand) .	80.00	sqm	0.2688
24	**	15 mm cement plaster on the rough side of single or half brick wall of mix:(Cement free issue by the Deptt.)			
	13.5.2	1 : 6 (1 cement : 6 coarse sand).	80.00	sqm	0.3097
25		Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in-charge.			
	15.2.1	a) 1:3:6 or richer mix.	10.00	cum	0.2273
	15.2.2	b) 1:4:8 or leaner mix.	40.00	cum	0.5603
26	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	146.00	cum	4.8404
27		Demolishing brick work 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.			
	15.7.4	In cement mortar.	2.00	cum	0.0384



## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
28		Demolishing stone rubble masonry 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:			
	15.9.2	In cement mortar	2.00	cum	0.0458
29		Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:			
	15.17.2	Channels, angles, tees and flats	1000.00	kg	0.0220
30	15.19	Dismantling steel work manually/ by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of Engineer-in-charge.	1000.00	kg	0.0356
31	**	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground levels for underground structures as directed by Engineer-in-Charge and consisting of:			
		I) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1 : 3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS: 2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound.			
		II) 2nd layer of 25 mm thick cement mortar 1 : 3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions.			
		III) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8cudm/sqm thoroughly embedded in the 2nd layer:			
	22.1.1	Using rough kota stone (Cement free issue by Deptt.)	10.00	sqm	0.1669
32	**	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement:3 coarse sand) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by engineer -in-charge.			
	22.2.1	Using rough kota stone (Cement free issue by Deptt.)	10.00	sqm	0.1988

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
33		Providing and placing in position suitable PVC water stops confirming to IS: 12200 for construction / expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete:			
	22.4.2	Dumb bell with central bulb (180mm wide , 8mm thick)	10.00	metre	0.1190
		Total:			82.9977

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: II

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
1	Making holes in the existing concrete floor/pedestal through core cutting up to the required depth and as per the instruction of Engineer-in-charge. <b>(All equipment like core cutter etc. to be arranged by the contractor.)</b>			
	Diametre upto 100 mm	10.00	per metre depth	1.1271
2	Brick work with Ghol bricks of class designation 50 and above in foundation and plinth in cement mortar 1:6 (1 cement : 6 coarse sand) : <b>(Cement free issue by the Deptt.)</b>	2.00	cum	0.3668
3	Brick work with Ghol bricks of class designation 50 and above 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). <b>(Cement free issue by the Deptt.)</b>	2.00	cum	0.3960
4	Fabrication & Erection of temporary barricade with structural steel members in single/built up sections , fixing them with non-AC/A.C./G.S. sheets along with all necessary fittings/ fixtures for construction of machine foundation so as to prevent fouling of adjoining / nearby areas with dirt/dust/earth etc., followed by dismantling the above complete including dismantling and stacking within a lead of 50m. (Supply of non-AC/ AC/GS sheets and structural steel free issue by BHEL) <b>(Unit: Peripheral length multiplied by height)</b>	528.00	sqm	2.9804
5	Supplying and filling in plinth with stone dust under floors, including watering, ramming, consolidating and dressing complete.	121.00	cum	2.7131

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: II

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
6	Providing & fastening chemical capsule Anchoring in RCC member using HILTI, FISCHER or equivalent, adhesive capsule & Galvanised anchor rod steel grade 5.8 complete with nuts & washer including drilling holes of required dia & depth using hammer drill etc complete. To arrest dust & dirt generated during drilling operation, vaccum dust collector should be deployed area of operation should be cordon-off by making temporary enclosure for which enclosure material shall be supplied by BHEL free of cost. The rate should be inclusive of all material, labour, tools & tackles etc. complete except specified otherwise. The job is to be carried out by a authorized applicator only of the concerned company of which anchors are proposed.			
	M24 x 210 mm	100.00	each	4.3738
7	Grouting below base plate, around foundation bolts, including pockets with GP2 grouting cement from M/S FOSROC / Sikadur grouting cement from M/S SIKA/Dr. fixit Pidigrout 10 M grouting cement from M/S PIDILITE or equivalent including cost of grout ,cleaning, vibrating etc.complete.	4.00	Cum	5.0451
	<b>Total :</b>			17.0023
	<b>Total : Annexure-I + Annexure-II</b>			100.0000

Note.1 . Making of pocket for bolting of machines to foundation shall be under the contractor's scope. Materials(wood/pipe) for making of pocket shall be provided/arranged by BHEL

**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION****Price Schedule B**

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

The following material free issue from BHEL stores.

- 1 Cement
- 2 Reinforcement steel
- 3 Red Oxide primer
- 4 Structural steel

**Price Schedule C**

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

- |   |                             |
|---|-----------------------------|
| <ol style="list-style-type: none"> <li>1 Hire charges.               <ol style="list-style-type: none"> <li>i) Drill machine @ 252.00/- per day</li> <li>ii) Jack Hammer @ 108.00/- per day</li> </ol> </li> <li>2 Drill machine/jack hammer rod Rs. 100.00 per rod</li> <li>3 Electricity charges at Rs.66.00/- per M.T. of fabrication of structural steel</li> </ol> | } (Subject to availability) |
|---|-----------------------------|

Sr.Engineer(FCX/PLG)

Dy. Engineer(FCX/PLG)

## FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION

### Scope of work

Name of work : Bed Plate Foundation & other allied civil works at Golden Jubilee Block and other areas inside factory premises.

The scope of work shall broadly comprise of the following:-

1. Work is to be executed in phased manner as per site availability.
2. Dismantling existing floor with proper barricading, safety procedures and disposal of debris to a pre defined location as informed as per instruction of Engineer-in-charge.
3. Preparation of site as per drawing and checking all levels at base stage .
4. Laying of base concrete as per specification upto pre defined level as per foundation drawing.
5. Binding of reinforcement steel as per foundation drawing with pre placement of pockets.
6. Laying of specified grade of concrete as per Drawing and CPWD specifications.
7. All other necessary and enabling works as per direction of Engineer in charge.
8. The above work is indicative in nature and not exhaustive. Any other allied civil works & structural works which shall be required for completion of this work shall be covered under scope of work and as per the instructions of the Engineer- in-charge.

Sr.Engineer (FCX/Plg.)

Dy. Engineer (FCX/Plg.)