



BHARAT HEAVY ELECTRICALS LIMITED
ELECTRO PORCELAINS DIVISION
BANGALORE : 560 012

TENDER DOCUMENT
(PART-B)
(Price Bid Format)

Construction of warehouse for Solar PV modules

DEPARTMENT : WORKS ENGINEERING
SECTION : CIVIL

Construction of Warehouse Solar PV Modules

<u>S. No.</u>	<u>Item</u>	<u>Unit</u>	<u>Quantity</u>	<u>Rate</u>	<u>Amount</u>
1	Dismantling existing structures comprising of masonry, concrete, wood work. Steel work (minor) including T & P and scaffolding wherever required, sorting the dismantled materials, disposal of unservicable materials safely to the bins identified by Engineer-in-charge inside the factory premises and stacking the servicable materials with all leads upto 1000m and lift 1.5m etc complete. (By mechanical means)	cum	20.00		
2	Dismantling of existing steel structures by cutting into such shape and sizes that it can be reused, stacking it properly at the identified locations inside the factory premises and disposing unusable materials to the metal scrap bin including the cost of gas cutting, welding, scaffolding etc and including cost of all materials, labour, HOM of machinery etc complete.	MT	10.00		
3	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 3.5m and above in width, in hard soil working depth upto 7m including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking the clods etc complete. Excavation to be done by using mechanized equipment	cum	1895.00		
4	Filling available earth (excluding rock) in sides of foundation upto plinth in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5m including cost of all labour etc complete.	cum	1359.77		
5	Providing and filling red earth brought from outside and compacting, ramming after settling the soil with water including the cost of transportation, all materials, labour etc complete.	cum	233.10		
6	Providing and filling in foundation soling with granite broken metal 100mm and downsize, with approved sand including hand packing, ramming, watering includnig cost of all materials and labour with all lead and lift etc complete.	cum	423.80		
7	Providing and laying in position plain cement concrete M 7.5 1:4:8 using 40mm and downsize graded granite metal coarse aggregate, machine mixed, concrete laid in layers not exceeding 15cms thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing etc complete. Excluding the cost of cement, the required cement will be supplied by BHEL at free of cost.	cum	225.40		

<u>S. No.</u>	<u>Item</u>	<u>Unit</u>	<u>Quantity</u>	<u>Rate</u>	<u>Amount</u>
8	Providing and constructing granite size stone masonry in superstructure and substructure with cement mortar 1:6, edges of stones chistle dressed in course not less than 15cms high, bond stones at every 2m apart in each course including cost of materials, labour, scaffolding, curing etc complete. Excluding the cost of cement, the required cement will be supplied by BHEL at free of cost.	cum	25.00		
9	Providing and laying in position plain cement concrete of mix M20 (1:1.5:3) using 20mm and downsize graded granite metal, machine mixed, concrete laid in layers not exceeding 15cms. thick, well compacted, in foundation, plinth and cills, including the cost of all materials, labour, HOM of machinery, curing etc complete. Excluding the cost of cement, the required cement will be supplied by BHEL at free of cost.	cum	20.00		
10	Providing and constructing burnt brick masonry with approved quality class designated 5.0 N/sqmm with cement mortar 1:4 for basement and superstructure including cost of materials, labour charges, scaffolding, curing etc complete. The sample of brick should be certified by Engineer-in-charge before construction work. Excluding the cost of cement, the required cement will be supplied by BHEL at free of cost.	cum	162.40		
11	Providing and laying (RMC) ready mix cement concrete with M-25 strength using 20mm and down size granite course aggregates and fine aggregates for RCC works laid in 15cm thick layers and well compacted including vibrating curing etc. with all lead and lift etc. complete (excluding cost of steel and fabrication charges) for all works upto plinth level. Make: ACC, Birla Super or Ultratech. The RMC should be only obtained only from plants certified by the quality council of India as per letter No. CE, C&B, AE-2, 2015-16 Dt. 02.09.2015.	cum	543.41		
12	Vacuum dewatering with vacuum pump and suction mat and compaction skin floater clubbed with floating disc including cost of generator, HOM of machinery, screed vibratory, Power floater, blade and disc etc. with all lead and lift for flooring	sqm.	1750.00		

<u>S. No.</u>	<u>Item</u>	<u>Unit</u>	<u>Quantity</u>	<u>Rate</u>	<u>Amount</u>
13	Providing and laying in position reinforced cement concrete (RCC) of design mix M20 (1:1.5:3) using 20mm and downsize graded granite metal, machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation, plinth and ground floor level for slabs, staircases, lintels, retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing etc complete. Excluding the cost of cement, the required cement will be supplied by BHEL at free of cost.	cum	15.00		
14	Labour charges for providing TMT steel reinforcement for RCC work including straightening, cutting, bending, hooking, placing in position, lapping and/ or welding wherever required, tying with binding wire and anchoring to the adjoining members, wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery etc complete. The design of reinforcement should be certified by Engineer-in-charge before commencement of bar binding work. The required steel reinforcement will be supplied by BHEL at free of cost. Supply of binding wire also will come under the scope of contractor.	MT	69.75		
15	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for flat surface such as suspended floors, roofs, landings, balconies and likes, thickness above 200mm including cost of all materials, labour etc complete.	sqm	810.00		
16	Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry and concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding including cost of all materials, labour, curing etc complete. Excluding the cost of cement, the required cement will be supplied by BHEL at free of cost.	sqm	685.00		

<u>S. No.</u>	<u>Item</u>	<u>Unit</u>	<u>Quantity</u>	<u>Rate</u>	<u>Amount</u>
17	Providing and fixing 4 kg / sqcm HDPE rain down water pipes with 4" (110mm) outer dia. of approved make and brand (Aashirwad, Prince, Astral or Oriplast) with necessary specials like shoes, bends, offsets fixed with iron clamps, wall plugs, screws, including cost of all materials, labor.	RMT	198.00		
18	Labour charges for fabricating of truss column, purlins, fencing members/gates/doors etc as shown in drawing (tender drawing enclosed), with available new steel or by collecting from released structural members by welding/ gas cutting and applying two coats of enamel paint over a coat of red oxide primer including necessary scaffolding, tools and plants up to working height of 13.00 mtrs. Fabrication to be done as per IS - 800 & and as per approved drawing unless otherwise specified. The tolerance of fabrication steel structure shall be in accordance with BIS:7215 unless otherwise specified.	MT	125.00		
19	Providing and installing of pre painted Galvalume iron Trapezoidal profiles sheet of approved make 1060mm width (1000mm cover width), 28-30mm crest height with crest distance of 200mm c/c with two ribs at the centre for stiffening. The total coated thickness (TCT) of the sheet should be 0.47mm +/- 0.02mm tolerance Zinc-Alu Alloy coating AZ150 gsm as per ASTM 1397/ A755-550 mpa steel grade, 5-7 microns epoxy primer on both sides of the sheet and polyester top coat 20-22 microns using self drilling/ self tapping screws of 25mm length, to be fixed over the existing purlins, rafters, channels and trusses etc complete.	sqm	3374.10		
20	Providing and installing of approved make pre painted Galvalume iron Accessories, like plain, ridges, plain gutter, plain flashing, corner Trim, etc. The total coated thickness (TCT) of the sheet shall be 0.47mm +/- 0.02 tolerance mm Zinc0Alu Alloy coating AZ 150gsm as per ASTM 1397/ 755-550mpa steel grade, 5-7 microns epoxy primer on both sides of the sheet and polyester top coat 20-22 microns using self drilling/ self tapping screws of 25mm length. (width upto 500-600 mm or as per requirement) to be fixed over the existing purlins, rafters, channels and trusses.	sqm	225.34		
21	Providing and installing of transparent polycarbonated sheets (2mm thick) over existing galvalume sheets (point no. 19). Profile of polycarbonated sheet to match with galvalume sheets.including cost of labor and all materials upto a working height of 11 metres	sqm	330.00		

<u>S. No.</u>	<u>Item</u>	<u>Unit</u>	<u>Quantity</u>	<u>Rate</u>	<u>Amount</u>
22	Providing and applying two coats of paint (Distemper / enamel paint / exterior wall paint / emulsion / all type of primers) of Asian make in two coats with one coat of primer on wall surface to give an even approved shade after thoroughly brushing the surface, free from mortar drops and other foreign materials including preparing the surface even and paper smooth, cost of all materials, labour complete	sqm	680.00		
Sub Total					
Taxes, if any (i)					
ii)					
(iii)					
GRAND TOTAL					
(Rupees _____)					

Note: 1. Taxes, if any may be quoted saperately at the space provided, otherwise the rate quoted by the contractor will be concluded as inclusive of all taxes. Any other changes in this
2. Contractors are advised to meet the engineer - in - charge and understand the scope of work clearly before quoting.

Signature of the contractor
Name:
Address: