
TENDER SPECIFICATION

TENDER NO. BHEL/ NR/ SCT/ BAWANA/ CIVIL AND STRUCTURAL /980

FOR

**Balance work of “Civil, Structural and Architectural works for Main Plant,
Balance of Plant (BOP) & various buildings at 2X750 MW CCPP, PPCL-
Bawana, Delhi”**

PART- II - PRICE BID



Bharat Heavy Electricals Limited

(A Govt. Of India Undertaking)

Power Sector – Northern Region,

Plot No. 25 , Sector - 16A ,

Distt. Gautam Budh Nagar,

NOIDA – 201 301 (INDIA)

PRICE BID



ISO 9001, ISO 14001,
OHSAS 18001 & SA 8000
certified company
SubContract and Purchase
Deptt.

Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northern Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301(INDIA)
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IMPORTANT NOTE

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THIS TENDER SPECIFICATION ISSUED TO:

M/S-----

RATE SCHEDULE

Tender No.-: BHEL/ NR/ SCT/ BAWANA/ CIVIL AND STRUCTURAL /980

Job-: BALANCE WORK OF " CIVIL, STRUCTURAL AND ARCHITECTURAL WORK FOR MAIN PLANT, BOP AND VARIOUS BUILDINGS AT 2X750 MW CCPP, PRAGATI POWER CORPORATION LTD., BAWANA, DELHI"

ITEM NUM	DESCRIPTION OF WORK	TOTAL VALUE 'A' IN INR (IN FIGURES AND WORDS)
1.0	TOTAL LUMSUM PRICE FOR BALANCE WORK OF " CIVIL, STRUCTURAL AND ARCHITECTURAL WORK FOR MAIN PLANT, BOP AND VARIOUS BUILDINGS AT 2X750 MW CCPP, PRAGATI POWER CORPORATION LTD., BAWANA, DELHI"	

Notes:-

1. The rates of individual item for the entire scope of work as define in BOQ shall be arrived as per Calulation defined in Annexure- 'D'

2. The derived item rate will remain firm through out the contract period.

Name -:

Place -:

Date-:

**Signature of
the Bidder
With Stamp**

SITE: 1500 MW CCPP PRAGATI-III, BAWANA, DELHI

BOQ cum Rate Schedule for Balance Work of "Civil, Structural and Archtectural works for Main Plant, BOP and Various Buildings at 2X750 MW CCPP, Pragati Power Corporation Ltd. - Bawana, Delhi."

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*/F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
100	EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION, DRAWINGS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING.					
101	Earth work in excavation upto 2m depth below ground level for foundation, trenches, pile line, strom water drains, etc. including setting out, clearing and grubbing removal of debris, dewatering if required, strutting, shoring / sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking / disposal of excavated material including levelling the earth if requird within the lead of 1 km etc. complete for all types of soils including laterrite, moorum etc. which can be excavated by means of crow bar, pick axe etc. but does not require chiseling or blasting.	Cum	974.000	0.057		
103	Earth work in excavation for depth exceeding 2m but not exceeding 4m below ground level for foundation, trenches, pipe line, strom water drains, etc. including dewatering if required, strutting, shoring / sheet piling if required, dressing the sides, levelling to grade and ramming the bottom, stacking / disposal of surplus excavated material including levelling the earth if required within a lead of 1 km etc. complete for all types of soils including laterrite, moorum etc. which can be excavated by means of crow bar, pick axe etc. but does not require chiseling or blasting.	Cum	228.000	0.077		
105	Earth work in excavation for depth exceeding 4m but not exceeding 6m below ground level for foundation, trenches, pipe lines, strom water, drains, etc. including dewatering if required strutting, shoring/sheet piling if required, dressing the sides, leveling to grade and stacking/disposal surplus excavated materials with in a lead of 1 km etc. complete for all types of soils including laterite, morum etc. which can be excavated by means of crow bar, pick axe etc. but does not require chiseling or blasting.	Cum	15.000	0.101		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
107	Earth work in excavation for depth exceeding 6m but not exceeding 8m below ground level for foundation, trenches, pipe lines, storm water, drains, etc. including dewatering if required strutting, shoring/sheet piling if required, dressing the sides, leveling to grade and ramming the bottom stacking/disposal surplus excavated materials including leveling the earth if required within a lead of 1 km etc. complete for all types soils including laterite, morum etc. which can be excavated by means of crow bar pick axe etc. but does not require chiseling and blasting.	Cum	5.000	0.114		
116 (a)	Disposal of surplus excavated earth beyond an initial lead of 1 km and upto a lead of 2 km dumping and leveling the dumped soil and leveling the areas from where the material is transported, complete with all lifts as specified and directed by Engineer.	Cum	100.000	0.020		
116 (b)	Extra disposal over 116(a) of surplus excavated earth/rock beyond an initial lead of 2 K.m and upto 3 K.m dumping and leveling the dumped soil and leveling the areas from where the material is transported, complete with all lifts as specified and directed by Engineer.	Cum	50.000	0.020		
116 (c)	Extra disposal over 116(b) of surplus excavated earth/rock beyond an initial lead of 3 K.m and upto 4 K.m dumping and leveling the dumped soil and leveling the areas from where the material is transported, complete with all lifts as specified and directed by Engineer.	Cum	50.000	0.020		
116 (d)	Extra disposal over 116(c) of surplus excavated earth/rock beyond an initial lead of 4 K.m and upto 5 K.m dumping and leveling the dumped soil and leveling the areas from where the material is transported, complete with all lifts as specified and directed by Engineer.	Cum	50.000	0.020		
118 (a)	Back filling around foundations in plinths etc. to proper grade and level with specified soil within a lead beyond 1 k.m but not exceeding 5 K.m from available excavated materials including re-excavating loose thickness, watering and ramming / compacting in layers of 15 cm thickness to atleast 90% of its maximum dry density for cohesive soils and to 75% relative density for non-cohesive soils by manual / mechanical means, dressing etc. complete including transportation.	Cum	10.000	0.088		
118 (b)	Back filling around foundations 2nd plinths etc to proper grade and level with selected excavated soil directly from excavation area within a lead of 1Km including watering and ramming/compacting in layers of 15cm thickness to at least 90% of its maximum dry density for cohesive soils and 75% relative density for non-cohesive soils by manual/mechanical means, dressing etc complete including transportation.	Cum	4211.659	0.047		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
120	Providing and injecting chemical emulsion (1 part chemicals * 20 parts water * 1% emulsion) for preconstructional antitermite/weed treatment as per IS:6313 with chemicals conforming to IS:8963 and creating a chemical barrier under and around the column pits, wall trenches, basement excavation, backfeed, top surface of plinth filling, junction of wall along external perimeter of building floor together with plinth protection, expansion joints, surrounding of pipes and conduits etc. as per specification and as directed by Engineer In-charge. For treating the bottom surface and sides of excavation, emulsion @ 5 liters/Sqm of surface area & for treating the back fills around columns, walls, etc. emulsion @ 7.5 liter/Sqm of the surface shall be used and treatment shall be done in stages following the compaction of each in layers (plinth area of building at ground floor only shall be measured).	Sqm	150.000	0.042		
121	Supply and filling sand under floors, in foundation and plinths including cost of sand, transporting for all leads, loading, unloading, spreading in layers in 25 cm loose thickness at all depths, watering, compaction with mechanised compaction machine or manually to minimum 80% of relative density, dressing and leveling etc complete.	Cum	68.000	0.339		
122	Providing and laying rubble soiling with specified sizes of approved quality hard rock or hard broken hard metal of sizes ranging from 63 mm and down aggregates, at all positions and depths below or above finished ground floor level below foundations, below flooring and for providing hard standing etc. in one layer of approximately 225 mm thickness, hand packing, filling in interstices with sand including watering, thoroughly compacting the layer all complete as per specifications and the directions of the Engineer.	Cum	169.990	0.964		
200	PROVIDING AND PLACING CONCRETE WORK INCLUDING COST OF LABOUR, MATERIALS AND EQUIPMENT FOR HANDLING, TRANSPORTATION, BATCHING, MIXING, PLACING, VIBRATING AND CURING (EXCLUDING COST OF CENTERING, SHUTTERING AND REINFORCEMENT) COMPLETE AT ALL ELEVATIONS AS PER DRAWING SPECIFICATIONS UNLESS SPECIFIED OTHER WISE AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING . (CEMENT WILL BE ISSUED AS FOC* ITEM)			-		
201	Plain cement concrete of grade M 7.5 as leveling course for filling, underwater structures, foundations, trenches etc all complete.	Cum	100.000	1.273		
202	Plain cement concrete of grade M 10 as leveling course for filling, underwater staining structures, equipment foundations etc all complete.	Cum	500.000	1.400		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
203	Plain Cement concrete of grade 1:2:4 as plinth protection etc. all complete.	Cum	50.000	1.513		
204	Concrete of M30 conforming to IS :456 with coarse sand and gadded hard stone agg. 20 mm nominal size for all major equipment foundations at all heights/ depths form finished ground floor level including addition of suitable plasticizer/supper plasticizer conforming to IS :9103 (latest) to achieve required slump in concrete to all complete.	Cum	10.000	2.445		
205	Concrete of grade M-25 conforming to IS:456 with coarse sand and graded hard stone agg. 20mm nominal size in all foundation, underground works, water retaining structures annd outdoor works, floors etc. at any level below finished floor level, any shape, position and thickness etc. complete including use of plasticizer/supper plasticizer conforming to IS :9103 (latest) to achieve required slump in concrete to all complete.	Cum	1250.000	1.934		
206	concrete of grade M-25 conforming to IS:456 with coarse sand and graded hard stone agg. 20mm nominal size in super structure at all height from finished floor level at any level, shape, position or thickness complete including use plasticizer /super plasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete.	Cum	1400.000	2.055		
207	Concrete of grade M-35 conforming to an IS:456 with coarse sand and graded hard stone aggregate 20mm nominal size for foundation of steam turbine & gas turbine at all height/ depth form finished ground floor level including addition of suitable plasticizer / super plasticizer conforming to IS:9103 (latest) to achieve a slump >125mm in concrete as per manufacture's recommendation etc. all complete. The rate shall also include conducting non destructive ultrasonic plus velocity test as per specification to find out soundness of concrete including all equipments, tools, plants scaffolding required for testing preparation of test report etc. all complete as directed by engineer. CL 15.19.01	Cum	175.000	2.507		
208	Concrete of grade M-25 conforming to IS:456 with coarse sand and graded hard stone aggregate 20 mm nominal size in precast works like trench covers, lintels, etc including formwork / moulds for thickness varying from 50 mm to 250 mm including transportation, erection, fixing in position at all elevations and use of plasticizer whatever required all complete excluding the cost of reinforcement.	Cum	200.000	3.430		
209	Concrete of grade M-20 conforming to IS:456 with coarse sand and graded hard stone aggregate 20 mm nominal size in in paving, etc. complete.	Cum	1400.000	1.501		
210	Breaking existing concrete work at any level including reinforced concrete, removing the rubbish within a lead of 1 K.m including transportation, loading, unloading, etc. all complete.	Cum	25.000	1.030		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
211	Breaking existing concrete work at any level including cutting reinforcements removing the rubbish within a lead of 1 K.m including making good the broken edge/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding / supporting at any level all complete and as directed by Engineer.	Cum	10.000	1.454		
213	Providing underbed for paving and ground floor for all buildings by preparation and consolidation of sub grade to required level, laying of stone solling of 225 mm compacted thickness with 63 mm and down aggregate, filling the interstices with selected sand followed by 75 mm thick 1:4:8 PCC with (one part cement: 4 parts sand and 8 parts stone aggregate) with 40 mm nominal size aggregate for all lifts all complete as per specification and instruction of Engineer In-charge.	Sqm	8704.410	0.354		
300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATION INCLUDING ALL LABOUR, MATERIAL, SCAFFOLDING COMPLETE INCLUDING POCKETS ETC. AS PER SPECIFICATIONS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:			-		
301	Ordinary form work below finished ground floor level for foundation, footings, base of columns, walls, columns, plasters, beams, mass concrete, trenches etc.	Sqm	5143.483	0.087		
302	Fairface form work below finished ground floor level for foundation, footing, base of columns, walls, columns, plasters, beams, mass concrete, trenches etc. for exposed concrete works.	Sqm	783.232	0.176		
303	Ordinary form work above finished ground floor level for columns, beams, suspended floors, roots, lintels, cantilevers, staircases, landings, balconies, domes, arches etc. for all heights.	Sqm	1196.000	0.152		
304	Fairface form work above finished ground floor level for columns, beams, suspended floors, roots, lintels, cantilevers, staircases, landings, balconies, domes, arches etc. for all heights.	Sqm	9793.211	0.223		
306	Fairface formwork for TG superstructure (above raft top level).	Sqm	195.652	0.758		
307	Providing, fixing and removing formwork in block-out/pockets and openings (below 0.1 sqm contact surface area with concrete) at elevations including cutting, formation of all shapes and all other operations required for making the required shape & size all complete as per specification, drawing and instruction of engineer In-charge.					
(i)	Upto 300 mm depth.	Nos.	36.000	0.218		
400	REINFORCEMENT (REINFORCEMENT STEEL WILL ISSUED AS FOC* ITEM)					
402	Providing, straightening, cutting, bending , placing in position at any level, binding in position of steel reinforcements shall be TMT HYSD bars of grade Fe-415 and/or Fe-500 confirming to relevant IS codes, including cost of binding wire, labour, transportation to and from stores etc. complete all as per specifications, drawings and as directed by Engineer.	MT	285.000	4.266		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
403	Providing, straightening, cutting, bending , placing in position at any level, binding of mild steel reinforcements in brick work including cost of binding wire, labour, etc. complete all as per specification, drawings.	MT	4.000	4.266		
500	WATER PROOFING AS PER SPECIFICATIONS (CEMENT WILL BE ISSUED AS FOC* ITEM)					
502	Providing under bed over roof slab, floors to achieves the specified slope with 1:4 cement motar plaster (by volume) of minimum 25 mm thickness at all elevation including all labour, material, equipment, handling, preparation of surface, transportation, batching, mixing, placing, leveling, cutting, testing, etc. complete as per specification, drawing and instruction of engineer.	Sqm	19242.140	0.064		
503	Screed concrete 1:2:4 conforming IS:456 with coarse sand and graded hard stone aggregate 12.5 mm / 6 mm nominal size on the roof at any level or thickness to maintain the required grade complete.	Cum	1122.257	1.898		
505	Providing and lying protective wearing course of 25 mm thick PCC (1:2:4) with 6 mm down aggregate laid in 1200 x 1200 sqm panels alternatively cast reinforced with 0.56 mm dia galvanised chicken wire mesh with a gap of 6 mm between two adjacent panels, gaps shall be filled with silicon sealant/elastomeric water proofing membrane, all complete with labour, materials, equipment and as per specification/drawing and to the satisfaction of engineer in charge.	Sqm	19307.255	0.150		
506	Providing, laying and fixing water proofing treatment using high solid content liquid applied based elastomeric water proofing membrane minimum 1.5 mm thick with separate wearing course (as per ASTM C898 and 836) including application of polymerised mastik to achieve smooth surface and primer coat at all elevation in vertical and horizontal surface etc, including all labour, material, equipment, handling, scaffolding, transporting, testing etc, complete as per drawing, specification and instruction of the engineer (Wearing coat to be paid separately).	Sqm	19309.255	0.403		
507	Providing and laying pressed precast chequered concrete tiles over water proofing of minimum size 250 x 250 and minimum thickness 22 mm conforming to IS:13801 including 15 mm thick cement mortar (1:4) bedding inclusive of provision for thermal expansion for each roofing tile filled with polysulfide joint sealant (water proofing paid else where).	Sqm	560.000	0.308		
600	SUPPLYING & INSTALLATION OF PREMOULDED JOINT FILLER IN BETWEEN EQUIPMENT FOUNDATION, MAT FOUNDATIONS, PILE CAPS, WALLS, BASEMENT SLABS ETC. COMPLETE INCLUDING LABOUR, EQUIPMENT AND MATERIALS, SEALING OF JOINTS INCLUDING COST OF SEALING COMPOUND (POLYSULFIDE BASE SEALANT AS PER IS:12118) ETC. COMPLETE AS PER SPECIFICATIONS AND DRAWINGS OR AS DIRECTED BY ENGINEER FOR THE FOLLOWING.					

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
601	Preformed bitumen impregnated fiber board conforming to IS: 1838 as per specifications and as directed by engineer.					
601-a	12mm thick joints	Sqm	5.000	0.562		
601-b	20mm thick joints	Sqm	5.000	0.744		
601-c	25mm thick joints	Sqm	5.000	0.904		
601-d	50mm thick joints	Sqm	20.000	1.172		
602	Supplying and filling in position hot applied bitumen sealing compound (Grade A) conforming to IS:1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints at all levels including application of primer, labour, material, equipments etc. all complete as per specification/drawing, instruction of engineer in charge.	KG	10.000	0.022		
604	Supply & installation of bitumen impregnated fiber board confirming to IS:1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch / bitumen, labour, materials, equipments etc. all complete at all levels as per specification, drawing and instruction of engineer in charge.			-		
604-a	12mm thick joints	Sqm	5.000	0.562		
604-b	20mm thick joints	Sqm	5.000	0.744		
604-c	25mm thick joints	Sqm	5.000	0.904		
700	M.S. EMBEDMENT		0.000	-		
701	Supply, fabricating and fixing of embedment, MS inserts, pipe sleeves, guide rails, angle pieces, rungs of various diameters, plates of dimension as required including cost of all labour, materials and equipment, transportation, loading, unloading, handling, welding, cutting, drilling, scaffolding and setting complete as per specifications, drawings and as directed by Engineer. (Structural Steel will be issued as FOC* item).	MT	115.092	17.981		
702	Supply, fabrication, transportation, delivery at site and erection, installation and alignment of MS Foundation bolts (grade-1 of IS:432 & IS:2062) assembly in concrete along with nuts, lock nuts (IS:1363, IS:1364 & IS:3138), washers, anchor plates, stiffeners plates, protective tapes etc. upto & inclusive of 63 mm diameter and upto 2000 mm long, for columns, templates including furnishing of labour, materials, equipments, welding, cutting, girding, threading, drilling, pipe sleeves wherever necessary etc. all complete as per specification and as directed by engineer.	MT	6.489	48.724		
703	Transportation from stores, delivery at work spot and erection, installation and alignment of embedment, MS inserts, pipe sleeves, rails, guide rails, angle places, anchor bolts, foundation bolts of various diameters, plates of dimensions, as required including cost of all labour, equipment material, loading, unloading etc. all complete as per specifications, drawing and as directed by Engineer.	MT	2.500	8.290		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
704	Providing, fabricating, transporting, erecting and installing at all elevations miscellaneous steel/PVC pipes, expansion fasteners in concrete/brick wall, for all kind of works, including the cost of labour, materials and equipment, setting material in concrete, layout, scaffolding, handling at site, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc all complete as per drawings and specifications and instructions of engineer.					
(i)	MS pipes of all diameters	Quintal	10.000	4.943		
(ii)	PVC conduits of all sizes	Quintal	5.000	10.019		
	Expansion fasteners (galvanised) of HILTI make or equivalent of safe tension capacity as specified below					
(iii)	250 kg	Each	25.000	0.184		
(iv)	500 kg	Each	25.000	0.280		
(v)	750 kg	Each	25.000	0.440		
800	GROUTING AS PER SPECIFICATION FOR THE FOLLOWING :					
801	Providing & grouting cement slurry mix at any elevation/depth with pressure pump for water retaining concrete structures, including fixing nozzles, cost of approved cement, admixture, cutting etc all complete as per specification and as directed by Engineer.	Sqm	500.000	0.265		
802	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection of necessary structural steel work, machinery with minimum M30 nonshrink flowable grout at any elevations including roughening surface, cleaning ramming, curing, etc. complete (nonshrink flowable grout as per specifications using approved admixture) as per specification and as directed by engineer.	Cum	1.000	7.417		
804	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection and alignment if necessary of main structural steel work at any elevations including roughening surface, cleaning ramming, curing, etc. with Conbextra GP-1 or equivalent all complete as per specifications. (cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	Cum	0.500	30.194		
805	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plate after erection and alignment if necessary of secondary structure, machinery and pipe supporting structure at any elevations including roughening surface, cleaning, ramming, curing, etc. with 1:1:2 cement-sand- 6 mm down stone chips all complete as per specifications. (cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	Cum	1.000	7.417		
900	DOORS, WINDOWS, VENTILATORS, LOUVERS, ROOF VENTILATORS, ROLLING SHUTTERS, PARTITIONS ETC. COMPLETE INCLUDING FRAMING, KICK PLATES, STOPPERS AS PER SPECIFICATION, DRAWINGS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-					

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
901	Providing and fixing of 40 mm thick solid core flush door shutters (single or double) with commercial faces and hard board edges, core of solid core doors shall be of block board or wood particle board of approved make with glazed vision panel including all fixtures, Godrej make Mortice lock with handle on both sides, shop painting/polishing as per specification all complete including test certificates.	Sqm	99.875	2.169		
902	Providing and fixing steel windows of fixed type with steel sections as per IS : 1038, IS:1361 & IS : 7452 latest revision, Glazing shall be of 6.0 mm thick multiwall polycarbonate plain / tinted sheets including all fittings, metal beadings, hold fasts, primer painting as per specification all complete.	Sqm	148.000	2.465		
903	Providing and fixing steel openable windows/ ventilators with steel sections as per IS : 1038, IS:1361 & IS : 7452 latest revision, Glazing shall be of 4.0 mm thick float glass (plain) panes including all fittings, metal beadings, hold fasts, primer painting as per specification all complete.	Sqm	443.760	1.819		
904	Providing and fixing steel openable windows/ ventilators with steel sections as per IS : 1038, IS:1361 & IS : 7452 latest revision, Glazing shall be of 4.0 mm thick float glass (tinted) panes including all fittings, metal beadings, hold fasts, primer painting as per specification all complete.	Sqm	10.000	1.819		
905	Providing and fixing anodized extruded aluminum windows (single or double shutter) including aluminum frame conforming to IS:1948 , IS:1949 fabricated from extruded sections of JINDAL or approved equivalent having minimum 1.5 mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be clear float glass of 4.0 mm thickness including snap fit type beading, concealed screws, fixtures. Approved make Mortice lock with handle on both sides etc. complete. Aluminum section shall be smooth free of stains, straight, mitered & jointed mechanically wherever required.	Sqm	10.000	3.330		
906	Providing and fixing anodized extruded aluminum windows (single or double shutter) including aluminum frame conforming to IS:1948 , IS:1949 fabricated from extruded sections of approved makes having minimum 1.5 mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be tinted float glass of 4.0 mm thickness including snap fit type beading, concealed screws, fixtures. Approved make Mortice lock with handle on both sides etc. complete. Aluminum section shall be smooth free of stains, straight, mitered & jointed mechanically wherever required.	Sqm	51.760	3.330		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
907	Providing and fixing anodized extruded aluminum windows (single or double shutter) including aluminum frame conforming to IS:1948 , IS:1949 fabricated from extruded sections of approved makes having minimum 1.5 mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be wired glass of 6.0 mm thickness including snap fit type beading, concealed screws, fixtures. Approved make Mortice lock with handle on both sides etc. complete. Aluminum section shall be smooth, free of stains, straight, mitered & jointed mechanically wherever required.	Sqm	10.000	3.427		
908	Providing and fixing anodized extruded aluminum ventilators conforming to IS:1948 , IS:1949 fabricated from extruded sections of approved makes having minimum 1.5 mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be clear float glass of 4.0 mm thickness including snap fit type beading, concealed screws, fixtures, etc. complete. Aluminum section shall be smooth, free of stains, straight, mitered & jointed mechanically wherever required.	Sqm	9.410	3.330		
909	Providing and fixing anodized extruded aluminum ventilators conforming to IS:1948 , IS:1949 fabricated from extruded sections of approved makes having minimum 1.5 mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be tinted float glass of 4.0 mm thickness including snap fit type beading, concealed screws, fixtures, etc. complete. Aluminum section shall be smooth, free of stains, straight, mitered & jointed mechanically wherever required.	Sqm	5.000	3.330		
910	Providing and fixing anodized extruded aluminum ventilators conforming to IS:1948 , IS:1949 fabricated from extruded sections of approved makes having minimum 1.5 mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness. Glazing shall be wired glass of 6.0 mm thickness including snap fit type beading, concealed screws, fixtures, etc. complete. Aluminum section shall be smooth, free of stains, straight, mitered & jointed mechanically wherever required.	Sqm	78.480	3.427		
911	Providing and fixing steel single or double door shutters. Shutter shall be 35 mm thick flush design comprising of two outer sheets of 1.2 mm thickness rigidly connected and reinforced inside with continuous vertical 1 mm stiffeners shall be reinforced by continuous pressed steel channel with minimum 1.2 mm the door shall be sound deadened by filling the inside void with mineral wool, spot welded in position at not more than 150 mm on centres including all fittings. Approved make Mortice lock with handle on both sides, primer painting complete as per specification.	Sqm	88.420	3.289		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
912	Providing and fixing fire proof steel door shutters (single or double shutter) conforming to IS:3614 (part-1 & part-2). Shutters shall be minimum 60mm thick flush design comprising of two outer sheets of 18 gauge steel rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150 mm on centres with mineral wool insulation, primer and epoxy based painting including door frame, all fittings complete as per specification, and shall be TAC approved with minimum 2 hrs. fire rating.	Sqm	73.420	8.320		
913	Providing and fixing anodized extruded aluminum doors (single or double shutter) conforming to IS:1948, IS:1949 fabricated from extruded sections of approved make having minimum 3mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness, Glazing shall be clear float glass of 6.0mm thickness including snap fit type beading, concealed screws, fixtures, Approved make Mortice lock with handle on both sides etc complete, Aluminum section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Frames shall be measured and paid under separate item)	Sqm	382.910	3.775		
914	Providing and fixing in position anodized aluminum frame for doors, windows, ventilators having minimum 3mm wall thickness as per IS:1285 and electro colour coating of minimum 15 micron thickness including holdfast, filling up of gapes at junctions, at top, bottom and sides etc all complete as per specification.	KG	2178.300	0.257		
915	Providing and fixing anodized aluminum work in doors, windows, ventilators and partions etc with extruded standard tubular and other sections including all fittings and fixtures and accessories of approved make confirming to IS:733 and IS:1285, anodised and alectrocoloyr dyed to required shape according to IS:1868 (min anodic coating of grade AC15), fixed with roll pluks, expansion fasteners, screws or with fixing clips including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bimetallic protection etc. including preparation of (like tower bolts, handles, door stoppers with rubber shoes "L" drops, stays, floor springs, hydrolic door closer etc), C.P. brass/stainless steel screws, providing and fixing hinges/pivots, and making provisions for fixing of fittings where ever required including the cost of PVC/neoprene gas fits all complete as per drawings, specifications and instruction of engineer (glazing and paneling to be measured else where)	KG	100.000	0.257		
916	Providing and fixing aluminum glazed partition, Aluminum sections shall be of extruded sections of approved make having minimum 3mm wall thickness as per IS:1285, IS:733 and electro color coating of minimum 15 microns thickness, Glazing shall be clear float glass of 5.5mm thickness including snap fit type beading, concealed screws, hold fast, fixtures, Godrej make Mortice lock with handle on both sides, necessary filling up of gaps at the junctions, at top, bottom and sides, etc complete. Aluminum section shall be smooth, rust free, straight, mitred & jointed mechanically wherever required.	Sqm	423.700	3.510		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
917	Providing and fixing aluminum glazed partition with double glazing. Aluminum sections shall be extruded sections of approved make having minimum 3mm wall thickness as per IS:733 and electro color coating of minimum 15 microns thickness. Double glazing shall be of two clear float glass of 6 mm thickness sealed and separated by 12mm air-gap including colour anodised aluminum beading, concealed screws, hold fast, fixtures, PVC/neoprene gasket, necessary filling up of gaps at the junctions, at top, bottom and sides, etc complete. Aluminum section shall be smooth, rust free, straight, mitred & jointed mechanically wherever required. Minimum anodising thickness shall be 15micron.	Sqm	40.000	4.733		
918	Providing aluminum grill for windows and ventilators of approved quality and design as directed by engineer.	Sqm	51.780	1.951		
919	Providing steel grill for windows and ventilators of approved quality and design as directed by engineer.	Sqm	50.000	2.602		
920	Electrically operated, self operable/closing aluminum framed hollow extruded section of minimum 3mm thickness as per IS:1285 and with 12 mm thick tinted glass sliding doors of approved quality as per specifications and as directed by engineer.	Sqm	10.000	23.898		
921	Providing and fixing of over head hydraulic door closers of approved make & quality as directed by Engineer.	Nos.	10.000	0.869		
921 a	Providing and fixing floor mounted Hydraulic door closer of approved make & quality as directed by Engineer.	Nos.	10.000	1.480		
922	Providing and fixing pressed steel frames fabricated from 1.6mm M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustment floor anchors, floor tiles/weather bars etc complete as per specifications.	KG	220.300	0.063		
923	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc. all complete as per specification and of approved make - Mechanically operated conforming to IS:6248. The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and security riveted with stiffening angles.	Sqm	71.510	2.185		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
924	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs top cover, primer & shop coats of approved enamel paint etc, all complete as per specification and of approved make - Hand operated conforming to IS:6248. The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely riveted with stiffening angles.	Sqm	315.250	1.771		
925	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs top cover, primer & shop coats of approved enamel paint etc, all complete as per specification and of approved make - electrically operated conforming to IS:6248. The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely riveted with stiffening angles.	Sqm	500.000	3.714		
1000	BRICKWORK MASONRY INCLUDING SUPPLY OF MATERIAL, COST OF LABOUR ETC. COMPLETE, AS PER SPECIFICATIONS. (CEMENT WILL BE ISSUED AS FOC* ITEM)					
1001	Providing brick work in cement mortar 1:6 (1 part cement : 6 part coarse sand) in walls, chambers etc. in thickness varying from 230 mm to 460 mm at all depth, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.					
(i)	Using fly ash lime bricks conforming to IS:12894 with crushing strength of 75 Kg/cm ² .	Cum	10.000	1.490		
(iii)	Using ordinary bricks of class designation 7.5 of nominal dimension.	Cum	5.000	1.873		
(iv)	Using locally available first class bricks of required crushing strength of nominal dimension approved by engineer in charge/customer.	Sqm	5.000	0.307		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1002	Providing brick work in cement mortar 1:6 (1 cement : 6 coarse sand) in walls, chambers etc. in thickness 230 mm at all heights, places and position above plinth including raking out joints, cutting, scaffolding etc complete excluding plastering and painting.					
i)	Using fly ash lime bricks confirming to IS:12894 with crushing strength of 75 kg/cm2.	Cum	1533.814	1.969		
ii)	Using clay ash bricks shall be as per IS:13757 with crushing strength of 75 kg/cm2 and minimum percentage of fly ash shall be 25%.	Cum	26.620	1.897		
iii)	Using ordinary bricks of class designation 7.5 of nominal dimension.	Cum	100.000	2.056		
iv)	Using locally available first class bricks of required crushing strength of nominal dimension approved by engineer in charge/customer.	Cum	100.000	1.798		
1004	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115 mm at all heights, places and position above or below plinth/graded level including providing H.B. wetting at every third layer, raking out joints, curing, scaffolding etc complete using fly ash lime bricks confirming to IS:12894 with crushing strength of 75 kg/cm2 and clay ash bricks shall be as per IS:13757, minimum percentage of fly ash shall be 25% excluding plastering and painting as per specification.					
(i)	Using fly ash lime bricks conforming to IS:12894 with crushing strength of 75 Kg/cm2.	Sqm	577.400	0.278		
(iii)	Using ordinary bricks of class designation 7.5 of nominal dimension.	Sqm	100.000	0.335		
(iv)	Using locally available first class bricks of required cursing strength of nominal dimension approved by engineer in charge/customer.	Sqm	100.000	0.307		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1008	Breaking of existing brick work at all level including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	Cum	10.000	0.488		
1009	Breaking of existing brick partition wall at all level including plastering, cutting of reinforcement, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	Cum	2.000	0.489		
1011	Providing and laying 75mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	Sqm	15.000	0.092		
1012	Making opening in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	Cum	15.000	0.654		
1100	DAMP PROOF COURSE INCLUDING AL MATERIALS, LABOUR, SHUTTERING, CENTERING, CURING ETC., COMPLETE WITH THICKNESS AS SPECIFIED/SHOWN ON DRAWINGS OR AS DIRECTED BY ENGINEER FOR THE FOLLOWING :- (CEMENT WILL BE ISSUED AS FOC* ITEM)					
1101	Damp proof Course 50mm thick 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7kg./sqm shall be applied before & after the DPC as per specification.	Sqm	10.000	0.179		
1200	CEMENT MORTAR PLASTER INCLUDING MAKING GROOVES WHEREVER REQUIRED, ALL MATERIALS, SCAFFOLDING, CURING ETC. COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:- (CEMENT WILL BE ISSUED AS FOC* ITEM)			-		
1201	Providing 18mm thick plaster in two layers outside the building wall in cement mortar 1:6 on walls, finished to a smooth finish as per specification including providing 3mmx3mm size grooves at junctions of two dissimilar materials.	Sqm	15881.418	0.073		
1202	Providing 12mm thick plaster in two layer inside the building in cement mortar 1:6 on walls finished to a smooth finish as per specification.	Sqm	10241.788	0.057		
1204	Providing 6mm thick plaster on ceiling in cement mortar 1:4 finished to a smooth as per specification.	Sqm	1763.590	0.052		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*/F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1206	Forming groove of uniform size from 12x12 mm upto 20x15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battons, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge.	RM	100.000	0.018		
1207	Providing drip coarse on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.	RM	100.000	0.014		
1209	Providing Plaster of Paris/white putty (birla white) 2mm thick punning over finished plaster surface and finished with smooth surface as per specification.	Sqm	1800.000	0.038		
1210	Providing screed/grading plaster of average 20mm thickness in ratio 1:6 nominal by volume including finishing smooth and even etc. all complete at all levels above or below grade level.	Sqm	100.000	0.073		
1300	FINISHES, PAINTING TO CONCRETE, PLASTERED SURFACES, SURFACE PREPARATION INCLUDING ALL MATERIALS, LABOUR, SCAFFOLDING ETC. ALL COMPLETE AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:					
1301	Two or more coats of white wash/colour wash as per IS:627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	Sqm	100.000	0.009		
1303	Providing and applying two or more coats of oil bound distemper as per IS:428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline including plaster of Paris punning minimum 2 mm.	Sqm	33827.304	0.043		
1304	Two or more coats of dry distempering of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	Sqm	168.410	0.043		
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS:5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufactures guideline plaster of Paris punning minimum 2 mm.	Sqm	3562.000	0.067		
1306	Providing and applying 2 or more coats of acid/alkali paint of approved brand and colour to floors walls and ceiling including preparation of surface to receive paint, providing and applying bitumen primer conforming to IS:158 complete all as per manufacture's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	Sqm	1216.660	0.179		
1310	Providing and applying 3 coat of water proof cement paint of approved make and color on exterior surface at all heights including materials, labour, scaffolding, coring etc including primer coat complete as per specification.	Sqm	200.000	0.032		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1314	Providing and applying resin bonded granular textured finish, for external application shall consist of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on coured and dried plaster surface with a dry film thickness of minimum 2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	Sqm	22170.948	0.253		
1315	Providing and applying 2 mm thick plaster of Paris punning on walls including preparation of surface, staging etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	Sqm	100.000	0.039		
1316	Providing and applying ready made Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 150 micron thickness over epoxy primer.	Sqm	720.000	0.197		
1400	FLOORING AND SKIRTING INCLUDING BASE LAYER AND ALL MATERIALS, LABOUR, CURING, POLISHING ETC. COMPLETE IN ALL RESPECTS AS SHOWN ON DRAWINGS, DESCRIBED IN SPECIFICATIONS AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING: (CEMENT WILL BE ISSUED AS FOC* ITEM)					
1401	Providing and laying 50mm thick heavy duty cement concrete flooring with metallic hardener pigment topping of 12 mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 part cement, 2 parts sand and 4 parts stone chips 12.5 mm well graded).	Sqm	27336.711	0.169		
1402	Providing and laying 50 mm thick heavy duty cement flooring with metallic hardener pigmented topping of 12 mm pick uniform graded treated iron particles in skirting under layer of 38 mm thick cement concrete mix 1:2:4 (1 part cement, 2 parts sand and 4 parts stone chips 12.5 mm well graded) and top layer of 12 mm thick metallic concrete complete.	Sqm	336.800	0.169		
1403	Providing and laying precast polished heavy duty cement tiles (Caborundum) of size 300X300X25 thick of approved shade as per IS 1237, laid in floors and landings, jointed with neat cement slurry with pigment to match the shade of the tiles including, minimum 25 mm thick underbed of 1 part cement, 2 part sand : 4 parts stone chip by volume mixed with sufficient water to form a stiff workable mass and brought to proper level. The tiles laid over underbed, with cement mortar pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, polishing etc. complete with laying as per IS:1443.	Sqm	500.000	0.442		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1406	Providing and laying polished Kota stone 20 mm thk in flooring jointed with neat cement slurry with pigment to match the shade of the tiles including, medium 30 mm thick underbed of 1 part cement, 2 part sand : 4 parts stone chip by volume mixed with sufficient water to form a stiff workable mass and brought to proper level. The Kota stone laid over under-bed, with cement mortar pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, cutting, grinding, polishing etc. complete as per specification.	Sqm	1177.000	0.540		
1407	Providing polished Kota stone 20 mm thick in skirting projecting 6 mm from adjacent plaster all complete.	Sqm	66.000	0.523		
1408	Providing and laying polished Granite stone of approved color and texture 20 mm thick in flooring. Under bed shall average 30mm thick of 1 part cement, 2 part sand : 4 parts stone chip by volume and brought to proper level. The granite stone slabs/tiles laid over under bed with cement mortar, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, cutting, grinding, granite polishing etc complete.	Sqm	395.000	1.913		
1409	Providing and laying polished Granite stone 20 thick in skirting and dado including pigments, curing, grinding, granite polishing etc. complete.	Sqm	50.000	1.975		
1411	Providing and laying 7 mm thick vitrified ceramic tiles (Mat or Mirror) of size 600X600 from reputed manufacturer, complete as per specification.	Sqm	2355.197	0.635		
1412	Providing and laying 7 mm thick vitrified ceramic tiles (Mat or Mirror) of size 400X400 from reputed manufacturer, for skirting up to specified height complete as per specification.	Sqm	279.000	0.639		
1414	Providing and laying Heavy Duty dust pressed Ceramic Tiles of size 300X300X7 mm thick, Group-V conforming to IS:13755, of reputed manufacturer of approved finish shade and colour.	Sqm	798.700	0.590		
1417	Providing & fixing chemical resistant (Acid & Alkali) Tiles as per IS:4860 of minimum thickness 38 mm thick in flooring/Dado. The tiles shall be abrasion resistant and durable. The potassium silicate as per IS:4832 used for setting or for under bed shall be durable strong and chemical resistant epoxy mortar including pointing etc. after laying bitumen primer as per IS:158 and 12 mm thick bit mastic as per IS:9510 and IS:412 complete as per specification.	Sqm	1223.466	1.897		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1420	Providing and laying marble flooring / dado of minimum 20 mm thickness projecting 6mm from adjacent plaster all complete including underbed mortar, labour, material, scaffolding, etc as per specification.	Sqm	270.480	1.864		
1422	Providing and laying granite stone slab of 12 mm thickness single piece for wash basin slab of black or approved colour with cutting and opening complete.	Sqm	25.000	1.231		
1423	Providing and laying granite stone slab of 20 mm thickness for platforms in pantry slab of black or approved colour with cutting and opening complete.	Sqm	30.000	2.051		
1424	Providing and laying glazed ceramic tiles of approved color and design in dado of approved size of reputed manufacturer topped with 50 mm wide matching ceramic trims, complete as per specification including all material, labour etc.					
(i)	5 mm thick	Sqm	377.750	0.367		
(ii)	7 mm thick	Sqm	2500.000	0.432		
1426	Providing and laying wooden panel flooring and wall PERGO or equivalent all complete as per specification.	Sqm	150.000	2.387		
1500	Providing and erecting roofing / side cladding including laps, scaffolding hooks, washers, corner pieces, etc. cost of all material, labour, equipment, cleats, sheeting runner, rails mild steel wind ties (horizontal/vertical) and any other steel works etc. at all elevations complete as per specification, drawing and as directed by the engineer for the following:					

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1501	Designing, providing and fixing permanently color coated (on exposed face) galvanized M.S. trough metal sheet decking plate of approved color over roof purlins for In-situ roof slab as per IS:14246. Thickness of deck plate shall be minimum 0.8mm and minimum trough depth of 38 mm with minimum yield strength of 250 Mpa. Silicon modified polyester paint shall be used for permanent coating over galvanized surface with minimum rate of galvanization 275 gm/sqm. DFT of permanent color coating shall be 20 microns. It shall serve as permanent shuttering for roof slab 50 mm thk measured over crest of metal decking and 25 mm thick layer of screed concrete and a layer of 25 mm thick wearing course mortar over it. It should have adequate strength to support weight of green concrete and imposed load during concreting as well as in service condition of 150 kg/sqm with purlin spacing of around 1400 mm.	Sqm	20.000	0.726		
1503	Design supply & erection of permanent colour coated thermally insulated sandwiched metal cladding for external wall with troughed galvanised MS sheeting of 0.6mm thickness and 275 gm/sqm of galvanisation or Hi tensile steel (350 Mpa) 0.5 mm thick, coated with zinc aluminium alloy @ 150 gm/sqm. Outer exposed face shall have silicon modified polyester coating of DFT 20 microns over primer having life span sustenance against weathering action, inner sheeting shall have 7 micron of precoating, sandwiched Insulation of minimum 50 mm thick bonded mineral wool blanket conforming to IS:8183 (minimum density of 32 kg/cum for glass wool and 48 kg/cum for rock wool or 40-45 kg/cum for polyurethane foam (fire retardants and non-toxic) confirming to IS:12436, cladding shall be fixed to supports/rails by concealed fixing system with corrosion resistant self tapping/self drilling type fasteners provided with suitable cap. Flashing shall have the same material and minimum overlap of 100 mm. Flashing shall not be paid separately.	Sqm				
	Against 1st Sheet	Sqm	500.000	0.678		
	Against 2nd Sheet	Sqm	700.000	0.932		
	Handing Over	Sqm	1000.000	0.085		
1504	Design supply & erection of permanent colour coated non insulated metal cladding for external walls toughed galvanized MS sheeting of 0.6mm thickness and 275 g/sqm of galvanization or Hi tensile steel (350 Mpa) 0.5 mm thick, coated with zinc aluminum alloy @ 150 g/sqm. Outer exposed face shall have silicon modified polyester coating of DFT 20 microns over primer having life span sustenance against weathering action, inner side shall be coated with same paint of minimum DFT 20 microns over primer. Cladding shall be fixed to supports/rails by concealed fixing systems with corrosion resistant self tapping/self drilling type fasteners provided with suitable cap. Flashing shall have the same material and minimum overlap of 100 mm. Flashing shall not be paid separately.	Sqm	3719.089	0.786		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1600	Providing and fixing false ceiling including supply of ceiling material, suspension system and all other materials required for the work including polishing/paintings, labour etc., all complete as per specification, drawing and as directed by Engineer for the following.					
1601	Providing 50 mm thick fibre glass under deck insulation having min. density 24kg/cum with 0.05 mm thick aluminum foil & 0.6 mm x 25 mm mesh wire netting and shall be fixed to the ceiling with 2 mm wire ties, all complete as per specifications and drawings.	Sqm	150.000	0.248		
1602	Providing, fixing and laying permanently colour coated aluminum false ceiling approved colour and Luxalon make or approved equivalent (Type-84C, Interior) with corrosion resistant aluminum alloy panels of minimum thickness 0.5 mm including 50 mm thick mineral wool insulation (as per IS:8183) bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided above the false ceiling level for movement of personal to facilitate maintenance of lighting fixtures, AC ducts etc.	Sqm	2140.000	1.338		
1603	Providing, fixing and laying light weight mineral fiber tile false ceiling of minimum thickness 15 mm and exposed surface semi-perforated with depth of perforation as 4 mm and humid resistance of 95% RH and fire performance of class 0/1 as per BS 476 with metal suspension grid system with galvanized Tees of section 24 X 38 mm for main runners of approved colour and make as per specification including 50 mm thick mineral wool insulation (as per IS:8183) bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc. suitable M.S. channel (minimum MC 75 @ 1.2m) grid shall also be provided above the false ceiling level for movement of personal to facilitate maintenance of lighting fixtures, AC ducts etc. complete with cut-outs etc. The size of tiles shall be 600 X 600 mm or 600 X 1200 mm.	Sqm	50.000	0.354		
1604	Providing and Fixing 12mm thick Gypsum plaster board for false ceiling conforming to IS:2095 approved make in plan or elevation with aluminum grid, metal suspension system, anchor fastener adjustable hangers, etc. all complete with smooth finish as per specification, drawing and as directed by Engineer.	Sqm	63.407	0.644		
1700	Providing and fixing rain water down take pipes including 2 coats of approved paint over a primary coat, all specials and accessories etc. complete as per specification.					
1703	HCl down take pipes of 150 mm dia as per specifications	RM	376.000	1.023		
1706	Galvanised MS down take pipes of 150 mm dia-Medium quality as per IS:1239 (part-I) / IS:3589 with welded joints	RM	50.000	1.063		
1800	MISCELLANEOUS					
1801	Providing and fixing PVC water stops - 225 mm wide	RM	144.000	0.235		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1805	Supply and laying of rounded gravels 40mm thick in transformer yards etc. as directed by Engineer.	Cum	110.000	1.018		
1810	Supply, Providing, laying and fixing transformer rails including guide rails in concrete including joining of rails, anchoring lugs etc. complete as per specifications and as directed by Engineer.	MT	0.500	46.994		
1811	Laying of earthing mats/rods including transportation from yards/stores, loading, unloading, cutting to length, welding etc. complete as per specification and as directed by Engineer.	MT	30.000	6.945		
1812	Providing removable metallic false flooring system with nominal height of the false flooring 600 mm. The same shall comprise of special grade steel panels (of size 600X600 mm). Without any dimensional tolerance 1.2 mm thick die cast to shape having 1 mm thick top MS sheet spot welded together to form a composite steel panel, sitting on aluminum diecasted heads & mounted on steel pedestals of 25 mm dia rod of adjustable height and supporting 1.2 mm thick channel frame work at-top and 2 mm thick 150X150 mm base plate. The top finish shall be 2 mm thick antistatic PVC sheet or High pressures laminate. Cavity area below the false flooring shall be made dust proof by using Polyurethane paint.	Sqm	40.000	3.452		
1820	Design, supply, fabrication of stoplog gates in CW Pumps as per specification with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, csating, all materilas such as structural steel, cast steel, stainless steel, barss used for seals, rubber seal, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc, cleaning, sand balsting, hot double dip galvanised with minimum coating of zinc 750 gms/sqm., following by an application of etching primer and dipping in black bitumen as per B.S. 3416, erection along with second stage concreting to true plumb and levels, submission of drawings/fabrication drawings for engineers approval etc., all complete as per specifications & approved drawings. The leakage through rubber seal shall not be more than 5 lit./min/metre length of seal under maximum head. (Only wt. of structural steel including embedments shall be considered for payment purpose)	MT				
	I. Fabrication	MT	2.000	48.778		
	II. Erection	MT	28.000	16.259		
	III. Handing Over	MT	42.000	16.259		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
1821	Supplying, fabricating, erecting in position and testing / examining bolted and/or welded structural steel work at all levels for stationary screens made out of rolled sections and/or plates including cutting, straightening if required, edge preparation, bolting/ welding of joints, cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc as 750 gms/sqm, followed by application of an etching primer and dipping in black bitumen as per B.S. 3416, complete as per drawing and directed.	MT				
	I. Fabrication	MT	2.000	44.520		
	II. Erection	MT	28.000	11.130		
	III. Handing Over	MT	72.000	18.550		
2000	FENCING AND GATES					
2001	Supplying and fixing G.I. barbed wire in fencing including G.I. clips etc. complete as per specification.	MT	1.000	37.993		
2002	Supply, fabrication and installing in position and testing galvanised MS Gates out of channels, joists, angles, flats, plates, pipes & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, ball bearing arrangements, castor wheels, etc. all complete as per drawing, specification and as directed by Engineer-in-charge with 600 mm high GI barbed wire fencing at top all complete.	MT	1.000	54.989		
2003	Supplying and erecting in position fencing, with gate, shall comprise of PVC coated G.I. welded wire mesh fencing of minimum 4 mm diameter (including PVC coating) of mesh size 75mmX75mm of height 2.4 above the toe wall with a 600 mm high galvanised concertina at the top, total fence height of 3.0 m above the toe wall. The diameter of the steel wire for chain link fence (excluding PVC coating) shall not be less than 2.5 mm. The tensile serrated galvanised wire (HTSW) concertina made with wire diameter of 2.5 mm will be stretched to 6m and attached to two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5 mm diameter by means of clips at 1m intervals. These two HTSSW strands will be attached to the fence posts with 12 mm security fasteners. All nuts, bolts, fasteners, clamping strips, clamps, clips, etc., shall be galvanised. The toe walls of brick massonary with plastering, painting, fence posts with 75X75X6 MS angles spaced at 2.5 m c/c with suitable RCC foundations, complete as per specifications etc.	Sqm	602.712	0.336		
2100	WATER SUPPLY					
2101	Providing and fixing in position tested heavy duty type chromium plated brass long neck bib cocks including sockets, union, nut etc complete - 15 mm nominal bore.	Nos.	72.000	0.431		
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc complete as directed by Engineer - 15mm nominal bore.	Nos.	34.000	0.372		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality- 25 mm nominal bore.	Nos.	12.000	0.666		
2104	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality 50 mm nominal bore.	Nos.	2.000	1.656		
2105	Providing and fixing GI pipes Class B medium class conforming to IS:1239 pipes shall be concealed and painted with anti-corrosive paint, complete with GI sockets, union, elbows, tees, nipples etc and clamps including cutting and making good the walls etc complete - 15 nominal bore.	RM	50.000	0.148		
2107	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete with GI sockets, unions, elbows, tees, nipples, etc. and clamps including cutting and making good the walls complete 25 mm nominal bore.	RM	70.000	0.218		
2108	Providing and fixing GI pipes class B complete with GI sockets, unions, elbows, tees, nipples, etc. including trenching & refilling, anti-corrosive paint etc. all compete (for external work) - 15 mm bore (N.B).	RM	200.000	0.168		
2109	Providing and fixing GI pipes class B complete with GI sockets, unions, elbows, tees, nipples, etc. including trenching & refilling, anti-corrosive paint etc. all compete (for external work) - 20 mm bore (N.B).	RM	10.000	0.186		
2110	Providing and fixing GI pipes class B complete with GI sockets, unions, elbows, tees, nipples, etc. including trenching & refilling, anti-corrosive paint etc. all compete (for external work) - 25 mm bore (N.B).	RM	580.000	0.233		
2111	Providing and fixing GI pipes class B complete with GI sockets, unions, elbows, tees, nipples, etc. including trenching & refilling, anti-corrosive paint etc. all compete (for external work) - 50 mm bore (N.B).	RM	274.000	0.370		
2112	Providing and fixing 600mm x 450mm x 5.5mm thick float glass mirror with bevelled edge from reputed mirror manufacturer. Miorr shall be mounted with glass adjustable revolving CP brackets, etc. complete with CP screws as per specification.	No.	18.000	0.534		
2112-a	Providing and fixing 5.5mm thick wall to wall float glass mirror with minimum height of 900 mm from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable CP brackets, etc. complete with CP screws as per specification.	No.	35.000	0.801		
2113	Providing and fixing 610mmx127mmx6mm thick clear glass shelf with CP Guard rails and mounted on CP brackets, etc. complete as per specification.	No.	10.000	0.439		
2114	Providing and fixing 25mm dia stainless steel towel rails (600 mmx20 mm) complete as per specification.	No.	33.000	0.527		
2115	Providing and fixing stainless steel soap holder cum dispenser complete as per specification.	No.	34.000	0.230		
2116	Providing and fixing CP liquid soap dispenser. Dispenser shall be round and easily removing with removable threaded nozzle and mounted on C.P. brackets etc. complete as per specification.	No.	44.000	0.351		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2117	Providing & fixing P.V.C. water tank of 1000 liters capacity (Syntex or approved equivalent make) in position. The work to include making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification and at all heights and levels.	No.	13.000	4.554		
2118	Providing & fixing P.V.C. water tank of 2000 liters capacity (Syntex or approved equivalent make) in position. The work to include making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification and at all heights and levels.	No.	1.000	8.987		
2118A	Providing & fixing P.V.C. water tank of 5000 liters capacity (Syntex or approved equivalent make) in position. The work to include making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification and at all heights and levels.	No.	1.000	22.845		
2119	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. complete as per specification.	No.	48.000	0.321		
2120	Providing and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete.	No.	1.000	0.508		
2121	Providing and fixing approved stainless steel sink with integrated drain board complete including painting the fittings, cutting and making good the wall where required as per specification. The work to be complete as per specifications, drawing and direction of engineer.	No.	1.000	2.676		
2200	SANITARY WORKS					
2201	Supplying and fixing Wash basin (oval shape) with photo-voltaic control fittings as per IS:2556 to be fixed on concrete platform finished and under fixed with 20mm thick polished granite stone as per specifications and as directed by engineer.	No.	52.000	8.515		
2202	Providing and fixing approved vitreous china acid / alkali resistant laboratory sink of size 600X400X200mm conforming to IS:2556 (Part 5) complete including painting the fittings, cutting and making good the wall where required as per specification.	No.	3.000	3.276		
2202a	Providing and fixing stainless steel kitchen sink of size 610X510X200 as per IS:13983 and specifications.	No.	1.000	2.343		
2203	Providing and fixing European WC as per IS:2556 with all fittings including photo-voltaic sensor operated flushing system of appropriate capacity and type, complete as per specification and directed by Engineer.	No.	39.000	5.307		
2204	Providing and fixing WC (Indian type, Orissa pan (580 X 440 mm) as per IS:2556 with all fittings including photovoltaic sensor operated flushing system of appropriate capacity and type, complete as per specification and directed by Engineer.	No.	11.000	5.047		
2205	Providing and fixing wall type glazed vitreous china urinals with photo voltaic control flushing system as per IS :2556 with flush pipes, lead pipes, grating, traps and necessary C.P. brass fittings all complete as per specifications.	No.	43.000	5.158		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2206	Supply, laying and jointing 75 mm dia heavy duty cast iron pipes including bends, branches and all other necessary fittings lead caulking, a coat of bituminous paint, M.S. holder bats/clamps, cutting and making good the walls and floors, jointing, testing, etc. all complete as per specifications.	RM	514.000	0.849		
2207		RM	430.000	1.004		
2208	Supply, laying and jointing 150 mm dia heavy duty cast iron pipes including bends, branches and all other necessary fittings lead caulking, a coat of bituminous paint, M.S. holder bats/clamps, cutting and making good the walls and floors, jointing, testing, etc. all complete as per specifications.	RM	50.000	1.890		
2209	Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-200 mm dia, as per specification.	RM	25.000	0.448		
2210	Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-300 mm dia, as per specification.	RM	25.000	0.693		
2211	Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-450 mm dia, as per specification.	RM	25.000	1.343		
2212	Providing, laying light duty non-pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-600 mm dia, as per specification.	RM	25.000	1.585		
2214	Providing, laying light duty non-pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-200 mm dia, as per specification.	RM	25.000	0.374		
2215	Providing, laying light duty non-pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-300 mm dia, as per specification.	RM	25.000	0.560		
2216	Providing, laying light duty non-pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-450 mm dia, as per specification.	RM	25.000	1.196		
2217	Providing, laying light duty non-pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete-600 mm dia, as per specification.	RM	25.000	1.615		
2219	Providing and fixing C.I. Manhole cover of size 600mmx450mm including frame from reputed manufacturer all complete as per specification.	Nos.	16.000	3.137		
2220	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame all complete as per specification.	Nos.	8.000	5.987		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2221	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300X300mm (inside) the weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg as per drawing and specifications etc all complete size - 100X100 mm P or S type	Nos.	31.000	1.107		
2222	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300X300mm (inside) the weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg as per drawing and specifications etc all complete size - 150X100 mm P or S type	Nos.	31.000	1.205		
2223	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300X300mm (inside) the weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg as per drawing and specifications etc all complete size - 150X150 mm P or S type	Nos.	10.000	1.290		
2224	Construction of road / yard gullies in 250 mm Thick brickwork - 750mm deep with cement concrete M-20 grade foundation, including reinforcement, 12mm cement mortar (1:3) plastering both inside and outside, M.S. rungs @ 250 c/c, C.I. Grating along with frames as per IS standards including necessary earthwork in excavation, backfilling etc complete as per drawings/specifications.	Nos.	10.000	1.970		
2225	Providing and fixing C.I. floor traps with C.P jali complete as per specification.	Nos.	101.000	0.414		
2226	Providing and laying cinder filling in the toilets complete as directed by engineer in charge.	CUM	51.200	0.690		
2227	Construction of RCC manholes with cement concrete M-20 grade circular upto dia 1200 mm or square of size upto 1000mmX1000mm and upto 3000 mm deep including necessary earthwork in excavation, backfilling, lean concrete M7.5 (excluding manhole covers which are to be paid separately under separate item), with M.S. rungs @ 250 c/c all complete as per drawings and specifications.	Nos.	4.000	12.541		
2228	Providing and installing approved brand single tap water cooler of 80L cooling capacity complete in all respect.	No.	4.000	16.109		
2230	Providing and installing hand dryers.	No.	14.000	5.726		
2231	Providing and fixing vitreous urinal partitions all complete as per specifications.	No.	17.000	1.029		

ST. NO.	DESCRIPTION	UNIT	Qauntity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2300	STRUCTURAL STEEL WORKS ALL items for fabrication should include supply, fabrication, errection, preparation of fabrication drawings, as per specifications including painting with a coat of primer and also inclusive of all necessary quality test to the satisfaction of engineer/customer for the following. (Structural Steel will be issued as FOC* item)			-		
2301	Supply, Fabrication, erection, alignment, welding, primer painting (primer coat consisting of 3 coats of redoxide zinc-chromate (total DFT 75 Microns) as per IS:2074 & IS:1477 (Parts I & II). One coat to be applied at shop and other two after erection) of structural steel made from Mild Steel (Rolled Sections and Platers) shall conform to Grade 'A' of IS:2062 for thickness upto and including 20mm and shall conform to Grade 'B' of IS:2062 for thickness beyond 20mm thickness. Medium and High Strenth steel shall confirm to grade Fe-490 B of IS 8500 or equivalent. Rolled sections and plates up to and including 20 mm thickness shall be semikilled condition. Plates beyond 20 mm thickness shall be killed condition. All steel up to and including 40 mm thickness shall be in as Rolled condition. Plates beyond 40 mm Thickness shall be normalised and Ultrasonically tested. Pipes shall conform to IS: 1161, hollow (square and rectangular) steel sections shall be Hot Formed confirming to IS: 4923 and shall be of minimum grade Yst 240. Chequered Plate shall conform to IS:3502 and shall be..			-		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
	minimum 6mm thick excluding projection, Steel for chequered Plates shall conform to Grade 'A' of IS:2062, at all elevations involving rolled sections (including mild steel rounds), built up sections fabricated out of plates, rolled sections and combination of plates and rolled sections, in columns, beams, gantry girders, silos, roof trusses, portals, laced purlins, space frames, shear connectors, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, chequered plate flooring, decking and seal plates, diaphragm, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, toeplates, MS Rungs, insert plates, edge angles, embedments, lugs, posts, stays, louves, lacings, gusset plates, safety chains for walkways adjacent to crane grids etc, collection of steel from stores, transportation, straightening, making cutting plan, cutting, bending, rolling, grinding, drilling, bolting, erection bolts & nuts (weight of erection bolts & nuts not payable, supply of permanent bolts of grade C mild steel bolts & nuts to be paid separately under ST. NO. 2309 (i), assembly, edge preparation, preheating (minimum preheat and interpass temperature of 20 degree for welding over 20 mm and upto 40 mm & 66 degree centigrade for welding over 40 mm and upto 63 mm & 110 degree centigrade for thickness over 63 mm) & use of low hydrogen/ radiogenic electrodes as per specification, post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installaton of temporary structures (scaffolding, Access lader, working platforms etc) setting columns bases, surface preparatition by means of mechanical power tools as per IS:1477 part I, touch up painting, dismantaling and removal of all temporary structures (weight of temporary structures not payable) ...			-		
	complete with all labour, material, eletrodes and other consumables equipment testing (mechanical and non-destructive) preparation of fabrication drawings, joints design calculation and all other general and special requirment including apointment of a seperate agency approved by BHEL, for review and approval of fabrication drawings, in consultation with BHEL, prepared by the bidder and all other activities required for complete of the work including return of surplus/waste steel materials to store etc. as per specification, drawings and instructions of the Engineer. Approval of fabrication drawings does not relieve the bidder from the responsibility of its correctness and accuracy.	MT				
	Against Fabrication	MT	100.000	7.581		
	Against Erection	MT	160.000	3.790		
	Against Alignment	MT	250.000	3.032		
	Against Handing over	MT	6726.034	0.758		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2301c	Providing & application of anti corrosive synthetic enamel paint of Berger or approved equivalent make and colour in three coats of 25 micron thickness (DFT) per coat already having primer coats (as per ST NO. 2301) at all elevations to achieve an even shade with all materials, labour, equipment, handling, including protection and cleaning, scaffolding etc. complete as per specification, drawings and instructions of the Engineer. (Total thickness (DFT) including primer shall not be less than 100 micron.	MT				
	Against 1st coat	MT	500.000	0.276		
	Against 2nd coat	MT	1500.000	0.276		
	Against 3rd coat	MT	13000.000	0.368		
2303	Supplying, fabrication, transportation, erection and alignment of factory made electroforged gratings 40 mm thick with steel conforming to IS:2062 at all elevations including preparation of design drawings and fabrication drawings in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads, fixing clamps etc. complete with other fittings and fixtures including all taxes, duties, transportation, packing, grinding, drilling, bolting (supply of permanent grade 'C' mild steel bolts and nuts to be paid separately under ST NO. 2309(i)), all welding, edge preparation, blast cleaning of steel surfaces to near white metal surface (Sa 2 1/2) and shall be hot dip galvanised at the rate of 610 gm/sqm, complete as per specifications, drawings and instructions of the Engineer.	MT	20.000	63.593		
2304	Supply, fabrication and delivery at site, transportation, loading/unloading of various sizes, GI pipe hand railing (1000 mm high) of 50 mm dia (Medium Grade) including painting and fixing, conforming to IS:1161 as per specification, labour and material complete for heavy duty class.	MT	11.000	48.865		
2306	Supply, fabrication and delivery at site, transportation, loading/unloading of various sizes, polished stainless 32 NB steel pipe hand railing 1000 mm high including fixing as per specification, labour and material complete.	MT	4.000	97.006		
2309	i) Supplying and fixing in position of permanent mild bolts (class 4.6 as per IS:1367 and grade 'C' as per IS:1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300 mm long of structural steel work complete as per specification, drawings and instructions of the Engineer.	Quintal	3.000	5.318		
	ii) Supplying and fixing in position of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS:1367) and conforming to IS:3757 and high strength structural hardened and tempered nuts (of property class ' 8 ' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work complete as per specification, drawings and instructions of the Engineer.	Quintal	6.000	12.703		

ST. NO.	DESCRIPTION	UNIT	Quantity	Factor (F)	Rate= A*F/100000 (Rs.)	Amount = Rate* Quantity (Rs.)
2310	Dismantling of steel structure at any elevation, lowering of material and carriage of the dismantled material up to field fabrication shop, or, return to projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct positions all temporary dismantled members, re-alignment of the adjacent connected members to their correct position (weight of such adjacent members and temporarily dismantled members not payable) including scaffolding, staging, tools & trackless, gas cutting, welding, consumables, etc complete as per specification drawings and instructions of the Engineer.	MT	2.000	4.580		
2312	Re-erection of dismantled fabricated structural steel members requiring additions, modifications, (dismantling and additions to, alterations in and/or modification to be paid separately under ST NO. 2310 and 2310a respectively) including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required position, alining in position ,tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, re-alignment of adjacent connected members, (weight of such temporarily dismantled members and adjacent member not payable) including scaffolding, staging, tools & trackless, gas cutting, welding, consumables, etc complete as per the specifications, drawings and instructions of the Engineer.	MT	2.000	4.730		
2317	Supply, fixing and placing of poly tetra floor ethylene bearing of reputed manufacturer for loading as specified below and displacement of (±) 50mm, complete with fixtures as per specification.					
	i) Vertical Load of 20 Tons	Nos.	19.000	8.465		
	ii) Vertical Load of 30 Tons	Nos.	1.000	9.641		
A						
E-01	Providing and laying 9 mm thick vitrified ceramic tiles (Mat or Mirrior) of size 600X600 from reputed manufacturer, complete as per specification.	Sqm	2185.000	0.114		
E-06	Providing earthingpits as per drawing and specifications including boring ,backfilling with coal& salt , installation of 40mm MS electrode (supplied by BHEL), Disposal of surplus earth, making chamber with brick work, plastering etc.all complete as per instructions of engineer.	NOS.	5.000	5.404		
	Total Amount (Rs.)					
	FOC*- Free of Cost					