

**TENDER NO. BHEL:NR(SCT):PARICHA – 5 6 : CIVIL:459**  
**2 X 250 MW PARICHA TPS UNIT 5-6**  
**BILL OF QUANTITIES AND RATE SCHEDULE FOR GENERAL CIVIL WORKS**

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ) ( RS . )	AMOUNT ( RS . )
	100	<b>EARTH WORK IN EXCAVATION INCLUDING DEWATERING IF REQD, BACKFILLING AND DISPOSAL AS PER SPECIFICATION AND DRAWINGS</b>				
1	101	Earth work in excavation <b>upto 2.5m depth</b> below ground level for foundation, trenches, pipe lines,roads,storm water drains etc., <b>allowing no under mining</b> , dressing of sides, levelling to grade and ramming of bottoms, stacking/disposal of surplus excavated material with in a lead of 1.0 KM etc. complete for <b>all types of soils,ordinary rocks(CPWD Specs)</b> including morrum etc. except hard rocks.	CUM	11012		
2	102	Earth work in excavation for depth <b>exceeding 2.5m but not exceeding 4.5m</b> below ground level for foundation, trenches, pipe lines, storm water drains etc. including dewatering, shuttering and shoring if required, allowing no under mining, dressing of sides levelling to grade and ramming of bottoms, stacking/disposal of surplus excavated material with in a lead of 1.0KM etc. complete for <b>all types of soils,ordinary rocks (CPWD Specs)</b> including morrum etc. except hard rocks.	CUM	4229		
3	103	Earth work in excavation for depth <b>exceeding 4.5m but not exceeding 6.5m</b> below ground level for foundation, trenches, pipe lines, storm water drains etc. including dewatering, shuttering and shoring if required, allowing no under mining, dressing of sides levelling to grade and ramming of bottoms, stacking/disposal of surplus excavated material with in a lead of 1.0KM etc. complete for <b>all types of soils,ordinary rocks(CPWD Specs)</b> including morrum etc. except hard rocks.	CUM	100		
4	104	Earth work in excavation for depth <b>exceeding 6.5m but not exceeding 8.5m</b> below ground level for foundation, trenches, pipe lines, storm water drains etc. including dewatering, shuttering and shoring if required, allowing no under mining, dressing of sides levelling to grade and ramming of bottoms, stacking/disposal of surplus excavated material with in a lead of 1.0KM etc. complete for <b>all types of soils,ordinary rocks(CPWD Specs)</b> including morrum etc. except hard rocks.	CUM	50		
5	105	<b>Disposal of surplus</b> excavated earth/rock/dismantled rubbish beyond an initial lead of <b>1km and upto a lead of 5 Km.</b> , dumping and levelling the dumped soil all as specified and directed by Engineer-in-charge.	CUM	2711		
6	106	Extra for <b>Disposal of surplus</b> excavated earth/rock/dismantled rubbish beyond an initial lead of <b>5km and upto a lead of 10 Km.</b> , dumping and levelling the dumped soil all as specified and directed by Engineer-in-charge. (Rate for every 1 Km or part thereof).	CUM	2180		
7	107	<b>Back filling</b> around foundations and plinths to proper grade and level <b>with selected excavated soil</b> including watering and ramming in layers of 25 cm. thickness to <b>90% max dry density</b> by manual/ mechanical means in saturated condition, dressing etc. complete including transportation.	CUM	4875		

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8	108	<b>Supply and Back filling</b> around foundations in plinths, trenches, drains etc.to proper grade and level with <b>selected good soil(NON EXPANSIVE) /River sand/stone dust</b> free from shingle, salts, organic materials, roots, sod or any other foreign substance including re-excavating loose thickness, watering and ramming in layers of 20 cm. thickness to 90% of standard procter Density for cohesive soil and to 75% of relative density for non cohesive soil by manual/ mechanical means, dressing etc. complete as directed by the engineer in charge including cost of material for all leads, loading, unloading, royalty and transportation. (payment for solid measure of the consolidated filling)	CUM	4875		
9	109	<b>Supply and filling coarse sand/Moorum</b> under floors, in foundation and plinths including cost of sand, transporting for all leads, royalties/fees, loading, unloading, spreading in layers in 25 cm loose thickness at all depths, watering, compaction with mechanised compaction machine or manually, if permitted by Engineer-in-charge, dressing and levelling etc. complete.	CUM	2751		
10	110	<b>Filling</b> in trenches, plinths, area paving and other underground structures <b>with stone</b> (63 mm down graded), in layers not exceeding 200 mm thickness including breaking of boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts all complete as per instructions of engineer-in-charge.	CUM	11498		
11	111	Boulder soling with interstices filled with sand etc compacted to 80% of original volume and as per specs	CUM	100		
12	200	<b>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 AS PER DRAWING AND SPECIFICATIONS UNLESS SPECIFIED OTHERWISE FOR THE FOLLOWING: ( ALL PORTLAND CEMENT WILL BE SUPPLIED BY BHEL )</b>				
13	201	<b>Concrete of grade M10 as filling course</b> /screed concrete at any level below finished floor level, under and around foundations/floors, mass dumps etc with 40 mm nominal size graded aggregate.	CUM	1160		
14	202	Concrete of <b>grade M10</b> as <b>levelling course</b> , under and around foundations/floors etc.	CUM	3129		
15	203	Concrete of grade <b>M-25</b> in <b>foundations, under floors</b> etc complete.	CUM	12339		
16	204	Concrete of grade <b>M-25</b> in <b>superstructure</b> from finished floor level complete at all heights:	CUM	8764		

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17	205	Concrete of grade <b>M-25</b> in super structure and <b>T.G. Block</b> at all heights from finished floor level <b>except deck</b> including addition of suitable plasticizer conforming to IS 9103-latest to achieve a slump more than 125mm in concrete as per manufacturer's recommendation.	CUM	500		
18	206	Concrete of grade <b>M-30</b> in <b>T.G. raft ,columns &amp; deck</b> including addition of suitable plasticizer conforming to IS 9103-latest to achieve a slump more than 125mm in concrete as per manufacturer's recommendation.	CUM	2756		
19	207	<b>Screed concrete</b> 1:2:4 conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness complete.	CUM	552		
20	208	Concrete of grade <b>M-25</b> in <b>precast works</b> like roof slabs/trench covers etc.including formwork/moulds for thicknesses varying from 75mm to 250mm including transportation, erection and fixing in position etc. complete.	CUM	142		
21	209	Concrete of grade <b>M25</b> in <b>foundation, superstructure and in water retaining structures</b> either below or above finished floor level including addition of suitable plasticizer conforming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and subsequent reduction in cement content upto a maximum 10% complete etc. as per specification.	CUM	357		
22	210	Concrete of <b>Grade M-20</b> in grade slab ,paving, plinth protection, pipe encasing etc. complete.	CUM	7792		
23	211	<b>Breaking existing concrete</b> work at any level including reinforced concrete, removing the rubbish within a lead of 1Km., including transportation, loading, unloading, etc. all complete as directed by Engineer	CUM	15		
24	300	<b>SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATIONS, AS PER SPECIFICATIONS AND INCLUDING ALL LABOUR MATERIAL, SCAFFOLDINGS COMPLETE INCLUDING POCKETS ETC. FOR THE FOLLOWING:</b>				
25	303	<b>Ordinary form work above finished ground floor</b> level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc. for all heights.	SQM	14495		
26	304	<b>Fairface form work above finished ground</b> floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc. for all heights.	SQM	40829		
27	305	<b>Formwork for TG</b> superstructure-fairface. (above finished floor level)	SQM	6300		
28	400	<b>REINFORCEMENTS( ALL TMT WILL BE SUPPLIED BY BHEL)</b>				

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29	401	Providing, straightening cutting, bending, placing in position at any level, binding of <b>mild steel reinforcements</b> including cost of reinforcement and binding wire, labour etc. complete all as per specifications & drawings.	MT	7		
30	402	Providing, straightening, cutting, bending, placing at any level, binding in position <b>high yield strength steel reinforcements</b> including cost of reinforcement and binding wire, labour etc. complete all as per specifications & drawings.	MT	1624		
31	500	<b>WATER PROOFING AS PER SPECIFICATIONS. ( ALL PORTLAND CEMENT WILL BE SUPPLIED BY BHEL )</b>				
32	501	Providing and <b>mixing</b> approved <b>water proofing compound</b> in concrete or cement mortar for works wherever specified or directed as per specification/manufacturer's instructions, testing of samples for water proofing etc. complete.	KG	10610		
33	502	Providing and grading <b>under bed over roof slab, floors</b> to achieve the specified slope with 1:4 cement mortar plaster (by volume) of average 15 mm thickness at all elevations including all labour, material, equipment, handling, preparation of surface, transportation, batching, mixing, placing, leveling, curing, testing etc. complete as per specification, drawing and instruction of engineer.	CUM	81		
34	503	Providing and laying <b>protective wearing course of 20 mm thick PCC (1:2:4)</b> with 6 mm down aggregate laid in 1200 square mm 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 for expansion and contraction all complete with labour, material, equipment and as per specification/drawing and to the satisfaction of engineer in charge.	SQM	10542		
35	504	<b>Providing, laying and fixing water proofing treatment</b> using high solid content liquid applied urethane based elastomeric water proofing membrane ( 2 component) 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 elevations in vertical and horizontal surface etc. including all labour, material, equipment, handling, scaffolding, transporting, testing etc. complete as per drawing, specification and instructions of the engineer (wearing course to be paid separately)	SQM	11818		
36	505	Providing and laying cement <b>concrete chequered flooring tiles 22 mm thick over roof</b> as per IS 13801. Under bed shall be 20 mm thk wearing course PCC 1:2:4 with 6 mm down aggregate reinforced with 0.56 mm GI chicken wire mesh. Tiles shall be laid over under bed with 8 mm thick 1:3 cement mortar with fine joints including sealing of joints between wearing course and the tiles with silicon sealant all complete with labour, material, equipment, handling, scaffolding, transporting etc. as per drawing and specification.	SQM	1236		
37	506	providing and applying <b>concrete penetrating corrosion inhibitor EPCO-KP 100</b> or equivalent followed by application of a coat of EPCO-2020TX epoxy or equivalent on foundation, retaining walls, trenches, etc complete as per manufacturer recommendation, drawing/specification and to the satisfaction of engineer in charge.	SQM	961		
38	507	Providing and applying <b>3 coats Bitumen paint in foundations</b>	SQM	1719		

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39	600	<b>SUPPLYING &amp; INSTALLATION OF JOINT FILLER AND SEALING COMPOUND:</b>				
40	601	<b>Supplying &amp; installation of bitumin impregnated fibre board</b> confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin, labour, material, equipments etc all complete at all levels as per specification, drawings and instruction of engineer in charge:				
41	a	12mm thick joints.	SQM	61		
42	b	20mm thick joints.	SQM	52		
43	c	25mm thick joints.	SQM	180		
44	d	50mm thick joints.	SQM	293		
45	602	Supplying and filling in position hot applied <b>bitumin sealing compound</b> (Grade A) confirming 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	2684		
46	700	<b>M.S. EMBEDMENTS</b>				
47	701	<b>Supply, fabricating and fixing of embedments</b> , MS inserts, pipe sleeves, guide rails, angle pieces, foundation bolts, anchor bolts, rungs of various diameters, plates of dimensions as required including cost of all labour, materials and equipment, transportation, loading, unloading, handling, welding, rivetting, bolting, cutting, drilling, scaffolding and setting as per specifications and drawings.	MT	189		
48	702	Fixing of <b>embedments, MS inserts, pipe sleeves, rails, guide rails</b> angle pieces, anchor bolts of various diameters, plates of dimensions as required including cost of all labour, materials and equipment for fixing in position, scaffolding and setting in position, transportation from stores within the plant boundary to work spot, loading, unloading etc. complete as per specifications and drawings.	MT	323		
49	i	MS pipes of all diameters	Quintal	21		
50	ii	PVC conduits of all sizes	Quintal	15		

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51		250 kg	Each	546		
52		500 kg	Each	399		
53		750 kg	Each	179		
54	800	<b>GROUTING AS PER SPECIFICATION FOR THE FOLLOWING: ( ONLY PORTLAND CEMENT WILL BE SUPPLIED BY BHEL )</b>				
55	802	Providing and grouting of pocket holes, pipe sleeves of any shape and size under base plates after erection of necessary structural steel work, machinery with <b>mix 1:1:2</b> (one part Cement : 1 part Sand : 2 parts of 6mm down graded stone chips) at any elevation including roughening surface, cleaning, ramming, curing etc. complete ( <b>non-shrink hand grout</b> using approved admixture.)	CUM	23		
56	803	Providing & grouting of pocket holes, pipe sleeves of any shape and size under base plates after erection of necessary structural steel work, machinery with <b>mix 1:1</b> ( 1 part cement : 1 part ) sand at any elevation including roughening surface, cleaning, ramming,curing etc. complete ( <b>non-shrink pressure grout</b> using approved admixture.)	CUM	20		
57	900	<b>DOORS, WINDOWS, VENTILATORS, LOUVERS, ROOF VENTILATORS, ROLLING SHUTTERS, PARTIONS ETC. COMPLETE AT ALL ELEVATION INCLUDING FRAMING, KICK PLATES, STOPPERS,HANDLES,PAINTING AS PER SPECIFICATION AND DRAWINGS</b>				
58	901	Providing and fixing <b>40mm thick solid core flush door shutters</b> (single or double) with commercial faces and hard board edges. Core of solid core doors shall be of fiber block board of approved make including Godrej or equivalent make Mortice lock with handle on both sides, approved ISI mark anodised aluminium fittings like door stoper, 200 mm long tower bolts, 16X200 mm long aldrops, 125 mm long handles on both faces etc complete with shop and final painting/polishing as per specification all complete including test certificates.	SQM	194		
59	902	Providing and fixing <b>steel windows of fixed type</b> with steel sections as per IS:1038 and IS:1361 & IS:7452 Latest Revision. Glazing shall be 6 mm thk wired glass including all fittings, beadings, hold fasts, shop and final painting as per specification all complete(excluding glazing)	SQM	588		
60	903	Providing and fixing <b>steel operable windows</b> with steel sections as per IS:1038 and IS:1361 & IS:7452 Latest Revision. Glazing shall be of 4 mm thk float glass including all fittings, beadings, hold fasts, shop and final painting as per specification all complete(excludinh glazing).	SQM	446		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ) ( RS . )	AMOUNT ( RS . )
61	904	Providing and fixing <b>steel partly fixed and openable windows</b> with steel sections as per IS:1038 and IS:1361 & IS:7452 Latest Revision. <b>Glazing shall be 6 mm thk wired glass</b> on fixed portion and 4 mm thk float glass on openable portion including all fittings, beadings, hold fasts, shop and final painting as per specification all complete(excluding glazing)	SQM	221		
62	905	Providing and fixing <b>steel partly fixed and openable windows</b> with steel sections as per IS:1038 and IS:1361 & IS:7452 Latest Revision. <b>Glazing shall be 5.5 mm thk float glass</b> on fixed portion and 4 mm thk float glass on openable portion including all fittings, beadings, hold fasts, shop and final painting as per specification all complete (excluding glazing).	SQM	478		
63	906	Providing and fixing <b>fixed/openable type steel ventilators</b> with steel section as per IS:1038 and IS:1361 & IS:7452 Latest Revision. Glazing shall be 6 mm thk ground glass on fixed portion and 4 mm thk ground glass on openable portion including all fittings, beadings, hold fasts, shop and final painting as per specification all complete(excluding glazing)	SQM	100		
64	907	Providing and fixing <b>steel louvered window with ISMC 100 frame</b> all round including verticals with 18G pressed steel louvers, painting etc. complete as per specifications.	SQM	378		
65	908	Providing and fixing <b>steel single or double door shutters</b> . Shutters shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral (48 kg/m3) ,all fittings, Godrej or equivalent make Mortice lock with handle on both sides, painting complete as per specification including preperation of working drawings.	SQM	320		
66	909	Providing and fixing <b>steel single or double shutter doors</b> . Shutters shall be of <b>18 gauge M.S. sheets</b> and shall present a flush surface on the outside. The inside shall be stiffened with semitubular edge and central stiffening rail which shall convey the lock. Complete with fixtures, Godrej or equivalent make Mortice lock with handle on both sides, painting as per specification including preperation of working drawings.	SQM	123		
67	910	Providing and fixing <b>fire proof steel doors</b> (single or double shutter) with panic devices shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and rein- forced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum Fire ratings shall be 3 Hrs.	SQM	189		

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68	911	Providing and fixing anodized <b>aluminium work in doors, windows, ventilators and partitions etc</b> with extruded standard tubular and other sections including all fittings and fixtures and accessories of aproved 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 plucks, 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 preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/paneling with all fittings and fixtures (like tower bolts, handles, door stoppers with rubber shoes, "L" drops, stays, floor springs, hydrolic door closers 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	13046		
69	912	Providing and fixing approved make <b>panic exit devise</b> operational from inside on item no. 910 complete in all respect including labour, material, equipment all complete.	Nos.	40		
70	913	Providing, fixing and fitting of <b>glazing</b> of first grade class in steel/aluminium/wooden frames at various elevation, where required, cleaning after fixing with all labour and materials all complete as per drawings, specifications and instructions of engineer.				
71	i)	4 mm thick float glass	SQM	750		
72	ii)	6 mm thick wired glass	SQM	650		
73	iii)	6 mm thick ground glass	SQM	50		
74	iv)	5.5 mm thick clear float glass.	SQM	660		
75	v)	6 mm thick clear toughened safety glass	SQM	50		
76	vi)	4 mm thick ground glass	SQM	50		
77	914	Providing and fixing of <b>over head hydraulic door closers</b> of "Yale" make or equivalent & quality as directed by Engineer.	NOS	180		
78	915	Providing and fixing <b>pressed steel frames</b> fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars, thresh holds etc. complete as per specifications.	Kg	4279		

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79	916	providing, erecting, assembling, fitting and fixing <b>rolling steel shutters</b> and accessories from approved manufacturers including all fittings, fixtures, locking arrangements, manual operation arrangement, gear arrangement (where specified), electric motor drive including motor and associated cabling (where specified), preparation of working drawings, blast cleaning of steel surfaces to near white metal surface (Sa 2 1/2 ) applying inorganic zinc silicate primer of minimum 75 microns (DFT) complete in all respect as per drawings, specifications and instructions of the engineer.				
80	i	For manual operation only	SQM	42		
81	ii	For gear arrangement	SQM	106		
82	iii	For electric motor drive along with cabling	SQM	184		
83	919	Providing and fixing 1 mm thk. <b>MS sheet sliding shutters</b> with frame and diagonal braces of 50X50X6 angle iron, 3 mm MS gusset plates at junction and corners, 25 mm dia pulley, 50X50X6 angle and T-iron guide at the top and bottom respectively including painting etc. complete as per specification.	SQM	53		
84	1000	<b>BRICKWORK MASONRY INCLUDING SUPPLY OF MATERIAL, COST OF LABOUR ETC. COMPLETE, AS PER SPECIFICATIONS. ( ALL PORTLAND CEMENT WILL BE SUPPLIED BY BHEL )</b>				
85	1001	Providing brick work in cement mortar <b>1:6</b> (1 part cement 6 parts coarse sand) in walls, chambers, drains, trenches,soak pits etc. at all depths, places and positions <b>below plinth</b> including raking out joints, curing, scaffolding etc.complete excluding plastering and paintng. Using bricks of class designation 7.5 of nominal dimensions as per specification.	CUM	767		
86	1002	Providing <b>brick work</b> in cement mortar <b>1:6</b> (1 cement 6 coarse sand) in works at all heights, places and position <b>above plinth</b> including raking out joints, curing, scaffolding complete excluding plastering and painting. Using bricks of class designation 7.5 of nominal demensions as per specification.	CUM	8500		
87	1003	Providing brick work in cement mortar <b>1:4</b> (1 cement 4 coarse sand) in partition walls, chambers, fins etc. in half brick thickness at all heights, places and position <b>above or below plinth</b> /graded level including RCC bands or proving 2 nos. of 8 mm dia bars at every 4th layer of bricks, raking out joints, curing, scaffolding etc complete using bricks of class designation 7.5 of nominal dimensions excluding plastering and painting as per specification.	SQM	945		
88	1004	Providing <b>brick work in cement mortar 1:6</b> (1 cement 6 course sand) with half brick thickness <b>in water proofing</b> protection walls above or below plinth/graded level including raking of joints, pointing, curing, scaffolding etc using bricks of class designation 7.5 of nominal dimensions as per specification.	SQM	53		
89	1005	Providing <b>brick soling</b> spreading of earth, ramming, watering including 12mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item). <b>Using brick on edge.</b>	CUM	53		

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90	1006	Providing <b>brick soling</b> including spreading of earth, ramming, watering including 12mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item.). <b>Using flat bricks.</b>	CUM	53		
91	1007	<b>Breaking</b> of existing brick <b>work</b> at all levels including plastering, removing the rubbish up to a distance of 1 km including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	55		
92	1008	Exposed Brickwork masonry with machine finished Bricks at all levels all complete	CUM	50		
93	1009	Providing and <b>encasing of masonry work for structural steel members</b> around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification.	CUM	208		
94	1010	<b>Making /Filling openings</b> in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	SQM	26		
95	1011	Providing and filling <b>brick bats in soak pits.</b>	CUM	331		
96	1012	Commercial implication for using flyash brick in place of brick from item 1001 to item 1013 as required	CUM	10015		
97	1013	Commercial implication for using flyash brick in place of brick from item 1001 to item 1013 as required	SQM	1024		
98	1100	<b>DAMP PROOF COURSE INCLUDING ALL MATERIALS LABOUR, SHUTTERING, CENTERING, CURING ETC., COMPLETE WITH THICKNESS AS SPECIFIED/SHOWN ON DRAWINGS. ( ALL PORTLAND CEMENT WILL BE SUPPLIED BY BHEL )</b>				
99	1101	<b>Damp Proof Course</b> 50mm thk. 1:1.5:3 concrete (10mm down aggregate) with 2% of approved admixture of water proofing compound. Hot bitumen @ 1.7Kg./sqm shall be applied before & after the DPC as per specification.	SQM	315		
100	1200	<b>CEMENT MORTAR PLASTER INCLUDING ALL MATERIALS SCAFFOLDING, CURING ETC. COMPLETE AS PER SPECIFICATION ( ALL PORTLAND CEMENT WILL BE SUPPLIED BY BHEL )</b>				
101	1201	Providing <b>12 mm thick</b> plaster in cement mortar <b>1:4</b> on walls, finished to a <b>smooth finish</b> as per specification.	SQM	35000		
102	1202	Providing <b>12 mm thick</b> plaster in cement mortar <b>1:4</b> on walls, with a <b>rough finish</b> as per specification.	SQM	100		
103	1203	Providing <b>12 mm thick</b> plaster in cement mortar <b>1:4</b> on walls with a paste of <b>neat cement</b> @1kg/sqm and rubbed smooth with trowel as per specification.	SQM	400		
104	1204	Providing <b>18mm</b> thick plaster in cement mortar <b>1:4</b> on walls finished to a <b>wooden float/smooth/rough finish</b> as per specification.	SQM	10000		

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**2 X 250 MW PARICHA TPS UNIT 5+6**  
**BILL OF QUANTITIES AND RATE SCHEDULE FOR GENERAL CIVIL WORKS**

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ( ( RS . )	AMOUNT ( RS . )
105	1205	Providing <b>6mm</b> thick plaster in cement mortar <b>1:3 on ceilings</b> finished to a smooth finish as per specification.	SQM	5000		
106	1206	Providing and making <b>decorative plaster</b> of all types and design on walls, ceilings, arcs, columns with various thickness upto 18 mm including finishing all complete.	SQM	200		
107	1207	Providing <b>Plaster of Paris</b> 2 mm thick punning over finished plaster surface and finished with smooth surface as per specification.	SQM	400		
108	1208	Providing <b>screed/grading plaster</b> of average 20 mm 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		
109	1300	<b>FINISHES, PAINTING TO CONCRETE, PLASTERED SURFACES, SURFACE PREPARATION INCLUDING ALL MATERIALS, LABOUR, SCAFFOLDING ETC. ALL COMPLETE</b>				
110	1301	Two or more coats of <b>white washing</b> with lime to give an even shade on walls and ceiling as per specifications.	SQM	20000		
111	1302	Three or more coats of <b>water proof cement paint</b> of approved brand and manufacture & of required shade to give an even shade on walls as per specifications.	SQM	10000		
112	1303	Two or more coats of <b>distempering with oil bound</b> washable distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer as per specifications.	SQM	35000		
113	1304	Providing two coats of <b>Acrylic emulsion</b> paint of approved brand and manufacture to give an even shade including one coat of solvent thinnable cement primer of approved shade & quality of Berger make complete as per specifications.	SQM	400		
114	1305	Providing and applying 2 or more coats of <b>acid/alkali paint</b> of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying primer etc complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	200		
115	1306	Two or more coats of <b>fire resistant paint</b> to withstand 2 hrs of fire as per approved grade and manufacture to give an even shade as per specifications.	SQM	50		
116	1307	Two or more coats of black <b>anti-corrosive bitumastic painting</b> of approved brand and manufacture to give an even shade as per specifications.	SQM	100		
117	1400	<b>FLOORING AND SKIRTING INCLUDING BASE LAYER AND ALL MATERIALS, LABOUR, CURING, POLISHING ETC. COMPLETE IN ALL RESPECTS AS SHOWN ON DRAWINGS AND DESCRIBED IN SPECIFICATIONS. ( ALL PORTLAND CEMENT WILL BE SUPPLIED BY BHEL )</b>				

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**BILL OF QUANTITIES AND RATE SCHEDULE FOR GENERAL CIVIL WORKS**

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ( RS .)	AMOUNT ( RS .)
118	1401	<b>40 mm thick</b> heavy duty patent stone flooring with <b>Ironite hardner</b> topping. Under layer of 28mm thick cement concrete mix 1:1.5:3 and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix:2 stone aggregate 6mm nominal size) by volume with which metallic hardening compound of approved quality is mixed in the ratio 4:1 (4 parts of cement and 1 part of metallic floor hardening compound of approved quality by weight including cement slurry, rounding off edges and aluminium strips etc. complete.	SQM	30000		
119	1402	<b>25 mm thick</b> heavy duty <b>patent stone skirting</b> with Ironite hardner topping. Under layer of 15mm thick cement concrete mix 1:1.5:3 and top layer of 10mm thick metallic concrete of mix 1:2 (1 cement hardner mix:2 stone aggregate 6mm nominal size) by volume with which metallic hardening compound of approved quality is mixed in the ratio 4:1 (4 parts of cement and 1 part of metallic floor hardening compound of approved quality by weight including cement slurry, flat edges and face of the skirting to project 6mm from adjacent plaster or finish all complete. as per specification.	SQM	1000		
120	1403	<b>Precast heavy duty Terrazo tiles min 22mm thick</b> of approved shade with marble chips of sizes upto 6mm laid in floors and landings, jointed with neat cement slurry with pigment to match the shade of the tiles including rubbing and polishing complete with under layer of 18 mm thick consisting of 1 part of lime putty:1 part surkhi:2 parts coarse sand by weight, as per specification.	SQM	250		
121	1404	<b>Precast Terrazo tiles 12mm thick</b> of approved shade with marble chips of sizes upto 6mm laid in <b>skirting</b> and dado, jointed with neat cement slurry with pigment to match the shade of the tiles including rubbing and polishing complete with under layer of 10mm thick cement plaster 1:3 and face of skirting to project 6mm from adjacent plaster or finish, all complete as per specification.	SQM	15		
122	1405	Providing & fixing <b>chemical resistant (Acid &amp; Alkali) Tiles in flooring/Dado</b> . The tiles shall have compressive strength of 700Kg/Sqcm and surface shall be abrasion resistant and durable. The Mortor used for setting or for under bed shall be durable strong and chemical resistant epoxy mortor including pointing etc. complete as per specification.	SQM	200		
123	1408	Providing and laying <b>polished Kota stone 20 mm thk in flooring</b> . Under bed shall average 30mm thk of 1 part cement,2 part sand : 4 parts stonechip by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, 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, granite polishing etc. complete.	SQM	2700		
124	1409	Providing <b>polished Kota stone 20 mm thk in skirting</b> projecting 6mm from adjacent plaster all complete .	SQM	70		
125	1410	Providing <b>matt finish ceramic glazed tiles</b> of min. thickness 5.5mm on floors. The mix for leveling course shall consist of 1 part cement and 3 parts coarse sand by weight. Before under bed fairly moist but firm tiles shall be pressed by applying cement slurry with the fine joint including pigments. curing etc. complete as per specification.(preparation of underbed shall be measured else where)	SQM	200		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ) ( RS . )	AMOUNT ( RS . )
126	1411	Providing <b>glazed ceramic tiles</b> of size 150x150x5.5mm to 6mm in <b>dado</b> , projecting 6mm uniformly from adjacent plaster or wall finish. The mix for underbed plaster shall consist of 1 part cement and 3 parts coarse sand by weight. Before under bed fairly moist but firm tiles shall be pressed by applying cement slurry with the fine joint including pigments. Curing etc. complete as per specification.	SQM	200		
127	1412	Providing wearing course on the top of membrane shall consist of 40mm thick PCC(1:2:4) cast in panels of maximum size 1.2X1.2 m and reinforced with 0.56mm dia. galvanised chicken wire mesh and sealing of joints using sealing compound/ elastomeric water proofing membrane.	SQM	11800		
128	1415	Providing and laying antistatic <b>PVC floor/skirting in 2mm thick</b> tiles including all costs complete as per specification	SQM	100		
129	1416	Providing and laying <b>cinder filling</b> in the toilets complete as directed by engineer in charge.	CUM	50		
130	1417	Providing and laying 7 mm thk <b>vitrified ceramic tiles of polished variety</b> from reputed manufacturer, complete as per specification.	SQM	1800		
131	1418	Providing and laying <b>7 mm thk vitrified ceramic tiles of unpolished variety</b> from reputed manufacturer, <b>for skirting and dado</b> up to specified height complete as per specification.	SQM	50		
132	1500	<b>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. COMPLETE FOR THE FOLLOWING:</b>				
133	1501	Providing and fixing <b>M.S. trough metal decking</b> plate over roof purlins for In-situ roof slab. Thickness of deck plate shall be minimum 1.2mm and shall serve as permanent shuttering to the roof slab 100mm thick measured over crest of metal decking & shall have adequate strength of support weight of green concrete and imposed loads during concreting over a span of 2500mm between purlins as per manufacturer's recommendations/calculations/test certificates for approval including fixing of plates to purlins, side lapping; end lapping, primer and final painting underneath etc. complete as per engineers approval and specification. (height of trough as per design should be included in the cost). Measurement shall be of the plan area of roof covered by M.S. trough metal decking.	SQM	9000		
134	1502	Providing and fixing 1 mm thick corrugated/semicorrugated <b>G.I. sheet in roofs, cladding</b> at all elevation with minimum 150mm overlapping, 8 dia G.I. hook bolts or 'J' Bolts and nuts @305 mm c/c along with G.I. and bitumen washers including cutting of sheets for opening etc. all complete.	SQM	200		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ) ( RS . )	AMOUNT ( RS . )
135	1504	REMOVAL OF EXISTING GABLE END SHEETING AND ERECTION OF SAME IF REQUIRED AS PER SPECS ALL COMPLETE	SQM	750		
136	1600	PROVIDING AND FIXING FALSE CEILING INCLUDING SUPPLY OF CEILING MATERIAL, WORKING LAYOUT DRAWINGS AND DETAILS, SUSPENSION SYSTEM AND ALL OTHER MATERIALS REQUIRED FOR THE WORK INCLUDING MAKING RECESS FOR LIGHT FIXTURES, ALUMINIUM DIFUSERS, FIRE ALARMS ETC., POLISHING/PAINTINGS, LABOUR ETC., ALL COMPLETE AS PER SPECIFICATION.		.		
137	1601	Providing and Fixing 12mm thk glass reinforced gypsum (GRG) ceiling system consisting of supporting grid system forming panels of specified size suspended from RCC slab, structural steel or cat walkway grid above with 4 mm minimum galvanised wires (rods) with special height adgment clips, providing openings for AC ducts, return air grills, light fixtures etc. as per drawings, specification and instruction of engineer		1400		
138	1603	Providing, fixing and laying <b>permanently colour coated aluminium false ceiling</b> of approved colour and Luxalon or equivalent make with corrosion resistance aluminium alloys panels of minimum thickness 0.5mm including 50mm 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) grid 1200 c/c maximum shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc.	SQM	400		
139	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.		.		
140	1701	MS (ERW) down take pipes of <b>100 mm dia</b> as per specification.	RM	903		
141	1702	MS (ERW) down take pipes of <b>150 mm dia</b> as per specification.	RM	2310		
142	1800	MISCELLANEOUS		.		
143	1801	Providing and fixing <b>PVC water stops</b> 225mm wide,min 6 mm thick as per specs.	RM	918		
144	1802	Supplying and installation of <b>25mm thick vibration damping, resilient pads</b> around foundation of vibrating equipment and other locations as directed by the Engineer-in-charge including cost of all materials labour equipment etc. complete as per drawing and specifications.	SQM	100		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ( RS .)	AMOUNT ( RS .)
145	1803	Providing and laying 100 mm thk. <b>anticorrosive insulating bituminastic layer</b> laid to slope using special grade Bitumen and filter materials like compacted crushed stone chips, screenings, fine gravel, clean sand or similar material and rolled or compacted complete as per drawings below fuel oil tanks and at such other places as directed by the Engineer and as per specifications.	SQM	100		
146	1804	Providing and fixing <b>G.I strips</b> minimum 1.5mm thk and 150mm wide unless specified otherwise in water retaining structure. Galvanising as per relevant I.S. codes and as per specifications.	RM	50		
147	1805	Providing and fixing <b>aluminium strips</b> minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including aluminium screws, rawl plugs all complete as per specification.	RM	147		
148	1806	Preparation of detail fabrication drawing(also review by approved Consultant)and , supply, fabrication of <b>structural steel</b> (rolled section, built up section or combination), delivery at site, transportation, work in columns, girders, beams ,gantry girders, trusses, purlins, bracings, cleats,earthing mats shear connectors, chequered plates, gratings, hand rails and other fittings including cutting, grinding, machining (where ever applicable), drilling, bolting (including MS or HSFG bolts and nuts), welding, reheating of welded joints, use of hydrogen/radiographic electrodes, shop coat of paint and touch of paints and final painting including all <b>Non Destructive Tests</b> complete.	MT	250		
149	1809	Providing and fixing <b>weep holes</b> in Drains consisting of 100 mm dia LDPE pipe sleeves along with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening along with 300 X 300 mm sq., 300 mm deep, 40 mm aggregates to cover fabric mesh mouth complete as directed by engineer in charge.	Nos.	100		
150	1810	Providing and fixing <b>GI rungs</b> in concrete/brick walls at all elevations including @ zinc coating shall not be less than 900 g/sqm all complete.	KG	1622		
151	1811	Providing and fixing <b>Pressure release Valve &amp; Filter</b> Below Openings in Sump , as per specifications and Drawings complete.	Nos.	40		
152	1812	Supply and placing in position <b>mild steel wire fabric</b> of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	100		
153	2000	<b>FENCING AND GATES.</b>				
154	2001	Supplying and erecting in position 2.4 m high <b>PVC coated gavanised chain linked fencing</b> of minimum 8 gauge (including PVC coating ) of mesh size 75 mm. The diameter of the steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing confirming to IS 298 at top of chain link fencing shall be provided with 4 stands of height of 600 mm including all accesories as per specification all complete.	SQM	50		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ( RS .)	AMOUNT ( RS .)
155	2003	Supply, fabrication and installing in position and testing galvanised <b>MS Gates</b> out of channels, joists, angles, flats, plates, pipes & sheets including stiffners, 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 600mm high GI barbed wire fencing at top all complete.	MT	3		
156	2100	<b>WATER SUPPLY</b>				
157	2101	Providing and fixing in position tested heavy duty type <b>chromium plated brass long neck bib cocks</b> including sockets, union, nut etc. complete <b>15mm nominal bore</b> .	NO.	39		
158	2102	Providing and fixing in <b>position heavy duty brass stop cock</b> of approved quality including all specials etc. complete as directed by Engineer <b>15mm nominal bore</b> .	NO.	62		
159	2103	Providing and fixing in position heavy duty <b>brass full way valve</b> with wheel of approved quality <b>25mm nominal bore</b> .	NO.	13		
160	2104	Providing and fixing in position heavy duty <b>brass full way valve</b> with wheel of approved quality <b>50mm nominal bore</b> .	NO.	4		
161	2105	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. and clamps including cutting and making good the walls etc. complete (internal work) <b>15 mm nominal bore</b> .	RM	105		
162	2106	Providing and fixing <b>GI pipes</b> complete with GI fittings a clamps including cutting and making good the walls etc. complete (internal work) <b>20 mm nominal bore</b> .	RM	137		
163	2107	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. and clamps including cutting and making good the walls etc.complete ( <b>internal work</b> ) <b>25 mm nominal bore (N.B)</b> .	RM	36		
164	2108	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc. complete ( <b>external work</b> ) <b>15mm nominal bore (N.B)</b> .	RM	46		
165	2109	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc.complete ( <b>external work</b> ) <b>20mm nominal bore (N.B)</b> .	RM	231		
166	2110	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc.complete ( <b>external work</b> ) <b>25mm nominal bore (N.B)</b> .	RM	32		
167	2111	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc.complete ( <b>external work</b> ) <b>50mm nominal bore (N.B)</b> .	RM	57		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIGURE AND WORDS (RS.)	AMOUNT (RS.)
168	2112	Providing and fixing <b>610mmx453mmx6mm thk mirror</b> from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets etc. complete with CP screws as per specification.	NO.	15		
169	2113	Providing and fixing <b>610mmx127mmx6mm thk clear glass</b> with <b>C.P Guard rails</b> and mounted on C.P. brackets etc. complete as per specification.	NO.	15		
170	2114	Providing and fixing <b>20mm dia</b> chromium plated M.S. pipes wall mounted <b>towel rod</b> with C.P. brackets etc. all complete as per specification.	NO.	25		
171	2115	Providing and fixing <b>C.P. soap holder</b> mounted with C.P. screws etc. complete as per specification.	NO.	15		
172	2116	Providing and fixing <b>C.P. liquid soap dispenser</b> . Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc. complete as per specification.	NO.	15		
173	2117	Providing and fixing glazed vitreous wall mounted <b>paper holder</b> with suitable cover cum cutter fitted with CP screws etc. complete as per specification	NO.	11		
174	2118	Providing and fixing <b>chromium plated brass shower</b> rose with 15 or 20 mm inlet all complete.	No.	13		
175	2119 a	Providing & fixing <b>P.V.C. water tank</b> (Syntex or equivalent) in position of <b>1000 litres</b> capacity. The work to including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification at all heights and levels	NO.	7		
176	2119 b	Providing & fixing <b>P.V.C. water tank</b> (Syntex or equivalent) in position of <b>2000 litres</b> capacity. The work to including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification at all heights and levels	NO.	2		
177	2120	Providing and fixing in position in the base slab of water retaining structures <b>non return valves</b> of 90mm diameter non metallic PRV pipe and 160mm diameter OD perforated PVC housing pipe 430mm long including graded gravel filters as per IS:4558-1995 and as shown in the drawings all complete.	Nos.	10		
178	2200	<b>SANITARY WORKS</b>				
179	2201	Supply and fixing <b>vitreous china wash basin</b> size 600x450 with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, cutting and making good the walls where required etc. complete as per specifications	NO.	17		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ( RS .)	AMOUNT ( RS .)
180	2202	Providing and fixing approved <b>vitreous china acid/alkali resistant laboratory sink</b> of size 600x450x200mm with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, CP brass waste and 40mm CP brass bottle trap with necessary union complete including painting the fittings, cutting and making good the wall where required as per specification.	NO.	2		
181	2203	Providing and fixing colour <b>European type water closet</b> with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre glazed stone water flushing cistern with valveless fittings, necessary C.P connections etc. complete as per specification.	NO.	13		
182	2204	Providing and fixing <b>glazed vitreous china pan</b> with foot rests and high level 12.5 litre C.I flushing cistern with valveless fittings, necessary C.P connections, foot rests shall be made of white glazed vitreous china with chequered surface allcomplete with cistern painting, C.I brackets etc. as per specification.	NO.	8		
183	2205	Providing and fixing wall type <b>glazed vitreous china urinals</b> with C.I automatic flushing cistern approximately once every five minutes for every four urinals (max.) with flush pipes, lead pipes, gratings, CP bottle traps and necessary C.P fittings all complete as per specifications.	NO.	25		
184	2206	Supply, laying and jointing <b>75mm dia heavy duty cast iron pipes</b> including bends, branches and all other necessary fittings, lead cocking, a coat of bitumenous paint, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc. all complete and as per specifications.	RM	163		
185	2207	Supply, laying and jointing <b>100mm dia heavy duty cast iron pipes</b> including bends, branches and all other necessary fittings, lead caulking, a coat of bitumenous paint, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc. all complete and as per specifications.	RM	194		
186	2208	Supply, laying and jointing <b>150mm dia heavy duty cast iron pipes</b> including bends, branches and all other necessary fittings, a coat of bitumenous paint, M.S holder bats/clam lead caulking, a coat of bitumenous paint, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc. all complete and as per specifications.	RM	263		
187	2209	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>150mm</b> dia, as per specifications.	RM	189		
188	2210	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>200mm</b> dia, as per specifications.	RM	147		
189	2211	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>250mm</b> dia, as per specifications.	RM	21		

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ) ( RS . )	AMOUNT ( RS . )
190	2212	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>300mm dia</b> , as per specifications.	RM	110		
191	2213	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>500mm dia</b> , as per specifications.	RM	11		
192	2214	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>600mm dia</b> , as per specifications.	RM	11		
193	2215	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>900mm dia</b> , as per specifications.	RM	11		
194	2216	Providing, laying light duty non pressure <b>NP2 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. as per specifications for dia:		.		
195		150mm	RM	20		
196		250mm	RM	110		
197		300mm	RM	263		
198		500mm	RM	263		
199	2217	Providing, laying light duty non pressure <b>NP4 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. as per specifications for dia:		.		
200		300mm	RM	10		
201		500mm	RM	10		
202		600mm	RM	10		
203		900mm	RM	10		

**TENDER NO. BHCL:NR(SCT):PARICHA – 5 6 : CIVIL:459**  
**2 X 250 MW PARICHA TPS UNIT 5+6**  
**BILL OF QUANTITIES AND RATE SCHEDULE FOR GENERAL CIVIL WORKS**

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIG URE AND WORDS ) ( RS . )	AMOUNT ( RS . )
204	2218	Providing and fixing <b>C.I Manhole cover</b> of size <b>600mmx450mm</b> including frame from reputed manufacture all complete as per specifications.	NO.	6		
205	2218(a)	Providing and fixing <b>C.I Manhole cover</b> of size <b>1000mmx1000mm</b> including frame from reputed manufacture all complete as per specifications.	NO.	20		
206	2219	Providing and fixing circular heavy duty <b>man hole cover of 600mm</b> dia with frame all complete as per specification.	NO.	56		
207	2220	Providing and fixing <b>square mouth S.W Gully trap</b> grade 'A' complete with CI grating, brick masonry chamber and watertight 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 <b>100x100mm</b> P or S Type.	NO.	11		
208	2221	Providing and fixing square mouth <b>S.W Gully trap</b> grade 'A' complete with CI grating, brick masonry chamber and watertight 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 <b>150x100mm</b> P or S Type.	NO.	13		
209	2222	Providing and fixing square mouth <b>S.W Gully trap</b> grade 'A' complete with CI grating, brick masonry chamber and watertight 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 <b>150x150mm</b> P or S Type.	NO.	8		
210	2223	Providing and fixing <b>C.I. floor traps with C.P jalli</b> complete as per specification.	NO	57		
211	2224	Providing and installing approved brand single tap <b>water cooler of 80 L</b> cooling capacity complete in all respect.	NO.	4		
212	2225	Providing and installing approved brand single tap <b>water cooler of 150 L</b> cooling capacity complete in all respect.	NO.	2		
213	2226	Providing and fixing white vitreous <b>urinal partitions</b> all complete as per specification.	NO.	25		
214	2300	<b>Structural steel works. All items for fabrication should include supply (AS APPLICABLE ), fabrication drawings as per specifications including painting with a coat of primer and also inclusive of all necessary quality tests to the satisfaction of engineer/customer for the following. ( ALL STRUCTURAL STEEL , WHEREVER MENTIONED , WILL BE SUPPLIED BY BHCL )</b>				

**TENDER NO. BHEL:NR(SCT):PARICHA – 5 6 : CIVIL:459**  
**2 X 250 MW PARICHA TPS UNIT 5+6**  
**BILL OF QUANTITIES AND RATE SCHEDULE FOR GENERAL CIVIL WORKS**

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- GCW	RATE IN FIGURE AND WORDS (RS.)	AMOUNT (RS.)
215	2313	<b>Grouting of pocket holes</b> , pipe sleeves of any shape and size under base plate after erection and alignment if necessary, structural steel work, machinery at any elevations including roughening surface, cleaning, ramming, curing, etc., complete as per specifications. (Cost of cement shall be in the scope of the contractor and clearing the pocket by compressed air before placement of concrete).	CUM	25		
216	1815	HT & HSFG Bolts	MT	5		
		<b>TOTAL</b>				

**NOTE:**

- 1 The contractor while quoting the price / rates as above, categorically confirm having understood the fullest implications of the price variation provisions contained in clause 51.0 of this tender. Accordingly, taking into considerations all aspects thereof, quoted the above rates. Further the contractor confirms that he will not come up with any other claim/compensation on account of any increase whatsoever during entire period of execution including extended period, if any.
- 2 As per Government of India notification, applicable w.e.f 01.08.04, fly ash bricks only have to be used. The contractor while quoting the price / rates as above, categorically confirm having understood the fullest implications of this.
- 3 In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item
- 4 The rate shall be entered in figures as well as in words. In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.
- 5 The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the lower of the two shall be considered for evaluation and award.
- 6 The quantities indicated against each item above are tentative and same are liable to vary depending upon the site requirement. The contractor has to handle all items indicated by BHEL Engineer for completion of work