

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 1.0 | Excavation including providing cofferdams, shoring, strutting, sheeting, bracing, draining and pumping out water other than water below ground water table , clearing all grass, vegetation etc. including trimming of excavation bottom, staking, levelling, grading etc. of excavated materials all complete as per specifications, drawings and instructions of the engineer, including a lead up to 100 meters | | | | | |
| 1.1 | In all types of soils including hard soil, silty clay, clayey sand, ash, hard murrum, laterite, coal sim, slushy soil etc. | | | | | |
| a) | From 0 m to 2 m | CUM | 50,000 | | | |
| b) | From 2 m to 4 m | CUM | 14,000 | | | |
| c) | From 4 m to 7 m | CUM | 1,400 | | | |
| 1.2 | Excavation in Soft rock , Ordinary whetthered rock, Sandy soft rock which can be excavated with pneumatic rock breaker attachment of poclain, crow bars, pick axe etc. | | | | | |
| a) | From 0 m to 2 m | CUM | 130 | | | |
| b) | From 2 m to 4 m | CUM | 260 | | | |
| c) | From 4 m to 7 m | CUM | 600 | | | |
| 1.3 | Excavation in Hard rock (blasting Prohibited) at any depth by means of chiselling, pneumatic rock breaker attachment of poclain , wedging, chemical grouting or any other suitable means accepted by Engineer . Measurement shall be taken as per the stock measurement by reducing 30% for voids. Rocks without recovery in the form of hard stone, boulders shall not be treated as hard rock. | CUM | 1,000 | | | |
| 1.4 | Extra over item no. 1.1, 1.2 & 1.3 above for excavation below ground water table (to be established at site as per actual site condition) including lowering of ground water table to maintain dry working condition for all activities up to filling, testing, water proofing of under ground RCC structures all complete as per specification & drawings. | CUM | 30,000 | | | |
| 1.5 | DISPOSAL | | | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|--------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
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| | Extra over item 1 above for carriage/disposal of all types of excavated materails beyond the initial lead of 100 m (included in item 1 above) all complete as per specifications, drawings and instructions of the engineer for the following leads in/outside of the plant (area earmaked by BHEL/Customer) including levelling & grading the disposed earth | | | | | |
| a) | Carriage beyond initial lead of 100m but not exceeding 1 Km. | CUM | 500 | | | |
| b) | Carriage beyond initial lead of 100m but not exceeding 2 Km. | CUM | 500 | | | |
| c) | Carriage beyond initial lead of 100m but not exceeding 5 Km. | CUM | 40,000 | | | |
| d) | Carriage beyond initial lead of 100m but not exceeding 10 Km. | CUM | 1,000 | | | |
| 2.0 | BACK FILLING | | | | | |
| 2.1 | Earthwork in backfilling including watering and compacting in layers not exceeding 250 mm around foundations, trenches , below grade slabs and all other locations , as per specs, drawings and as directed by the Engineer to achieve 95% Standard Proctor Density. Frequency of test to be decided by BHEL Engineer. | | | | | |
| a) | With earth obtained from stacks within a lead of 100m | CU. M. | 25,000 | | | |
| b) | With earth obtained from stacks within a lead of 1 Km. | CU. M. | 500 | | | |
| c) | With earth obtained from stacks within a lead of 2 Km. | CU. M. | 300 | | | |
| d) | With earth obtained from stacks within a lead of 5 Km. | CU. M. | 200 | | | |
| e) | With selected CNS soil (cohesive non-swelling / murrum) obtained from borrow pits within a lead of 5 Km inclusive of necessary royalty charges. | CU. M. | 5,000 | | | |
| f) | With selected earth (cohesive non-swelling / murrum) obtained from borrow pits within a lead of 10 Km inclusive of necessary royalty charges. | CU. M. | 1,500 | | | |
| 2.2 | Supplying and filling river sand in layers not exceeding 150mm including compacting by mechanical means, flooding with water etc all complete as per specification and as directed by the Engineer. | CU. M. | 5,100 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|--------|----------|-----------------|----------|--------------|
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| 2.3 a) | Site grading and levelling with filling excavated earth obtained from foundations in layers not exceeding 250 mm within the project area using mechanical / manual means breaking clods, cutting heaps, compacting using compaction equipment in non-accessible areas and rolling with road roller in open areas to obtain 95% of proctor density for cohesive soils and 85 % for non-cohesive soils & disposal of the debris, all complete as drgs and spcns. | CU. M. | 5,000 | | | |
| 2.40 | Filling in trenches, plinths, area paving and other underground structures with stone (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 complete as per instructions of engineer-in-charge | CU. M. | 200 | | | |
| 2.50 | Filling in trenches, plinths, area paving and other underground structures with stone (40 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 complete as per instructions of engineer-in-charge | CU. M. | 100 | | | |
| 3.0 | CONCRETE | | | | | |
| 3.1 | Supplying, laying in position, compacting and curing as per specification Plain cement concrete using ordinary portland cement of the following mix with 20mm down size aggregates below GL and upto 1.0M above GL , including consolidation of subgrade wherever required. | | | | | |
| a) | 1:5:10 | CU. M. | 2,000 | | | |
| b) | 1:4:8 | CU. M. | 350 | | | |
| c) | M-10 (1:3:6, with cement content of 225 kg / m3 of concrete) | CU. M. | 200 | | | |
| d) | M-15 (1:2:4 ,with 20 mm and down sized aggregate) | CU. M. | 100 | | | |
| 3.2 | Supplying, laying in position, curing as per specifications Controlled concrete using ordinary portland cement of the following grades (graded coarse aggregates of 40mm down, 20mm down 12mm down shall be used wherever applicable) | | | | | |
| a) | for all depths below GL and 1.0 m above GL | | | | | |
| | i) Grade M-20 in foundations, floors etc. with 350 kg/m3 cement | CU. M. | 1,000 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

PART-II, RATE SCHEDULE

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|--------|---|--------|----------|-----------------|----------|--------------|
| | | | | IN FIGURES | IN WORDS | |
| | ii) Grade M-25 in foundations, slabs, columns, floors, beams.etc.with minimum cement content of 375 kg/m ³ | CU. M. | 7,200 | | | |
| | iii) Grade M-30 in foundations, slabs, columns, floors, beams.etc.with minimum cement content of 400 kg/m ³ of concrete | CU. M. | 1,000 | | | |
| b) | for all elevations 1m above G.L. | | | | | |
| | i) Grade M-20 with 350 kg/m ³ cement | CU. M. | 1,000 | | | |
| | ii) Grade M-25 with minimum cement content of 375 kg/m ³ | CU. M. | 4,000 | | | |
| | iii) Grade M-30 with minimum cement content of 400kg/m ³ | CU. M. | 500 | | | |
| c) | Extra over 3.2 for controlling temperature of freshly laid concrete to less than 23 degree centigrade using ice , including all related arrangements for providing , storing and mixing of ice with water , colling of aggregates etc all complete as per specification , drawing and instruction of engineer in charge. | CU. M. | 400 | | | |
| 3.3 | Providing and placing in position RCC of grade M25 using ordinary portland cement of 12mm & down graded chips with min. cement content of 350 kg/m ³ for encasing of steel structures at all elevations as per drawings, specifications , all complete. | CU.M | 500 | | | |
| 3.4 a) | Providing and placing in position, compating , curing Reinforced concrete for paving of M20 grade with min. cement content of 350 kg/m ³ using OPC/PPC/PSC including laying in approved size panels, leaving grooves for sealing joints, cost of form work, finishing of top surface as required but excluding cost of reinforcement which will be paid under relevant items, etc.all complete for floors and pavement as per drawings and specifications. | CU.M | 640 | | | |
| 3.4 b) | Providing and placing in position, compating , curing Reinforced concrete for paving of M30 grade with min. cement content of 375 kg/m ³ using OPC/PPC/PSC/SRC including laying in approved size panels, leaving grooves for sealing joints, cost of form work, finishing of top surface as required but excluding cost of reinforcement which will be paid under relevant items, etc.all complete for floors and pavement as per drawing and specifications. | CU.M | 2,000 | | | |
| 3.5a) | Supplying and mixing 'SIKA' or approved equivalent brand of integral water proofing compound in cement concrete / cement mortar etc. all complete as per drawings and specifications. | Kgs | 700 | | | |
| b) | Providing and Fixing in position 12mm thick 'shalitex' or approved equivalent fibre board in expansion joints etc all complete as per specifications and drawings. | SQ. M. | 200 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|--------|----------|-----------------|----------|--------------|
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| 3.6 | Providing and Fixing in position 25mm thick 'shalitex' or approved equivalent fibre board in expansion joints etc all complete as per specifications and drawings. | SQ. M. | 470 | | | |
| 3.7 | Supplying and laying sealing compound with premium grade Silicon sealant (SILPRUF of GE Silicon or approved equivalent) conforming to IS:1834 as per specification. | | | | | |
| | a) 20mm wide,25mm deep | R.M. | 6,170 | | | |
| | b) 10mm wide,40mm deep | R.M. | 7,500 | | | |
| 3.8 | Fabricating and placing in position precast reinforced concrete trench covers of grade M25 (using OPC/PPC/PSC) of varying thickness including reinforcement, shuttering, lifting lugs etc., all complete including edge angles as per drawing and specifications. Reinforcement will be paid under item 5.1 (b) and edge angles will be paid for under item 6.13 | CU. M | 1,220 | | | |
| 3.9 (a) | Supplying and installing ribbed PVC water stops 6mm thick and 150mm wide in cement concrete including laps by fixing / valcanizing joints and folds as applicable and approved by the Engineer. | RM | 3,500 | | | |
| 3.9 (b) | Supplying and installing ribbed PVC water stops 6mm thick and 225mm wide in cement concrete including laps by fixing / valcanizing joints and folds as applicable and approved by the Engineer. | RM | 1,500 | | | |
| 3.10 | Grouting under equipment bases as required,curing and finishing the exposed surfaces including all materials, form work etc. as per drawings and directions of the Engineer. | | | | | |
| a) | With 1:1:2 cement sand and 6mm down stone chips nominal mix by volume | CU. M. | 7 | | | |
| b) | With non shring grout like conbextra GP1 or approved equivalent, including cost of grout mix, form work, finishing , curing etc. , all complete as per drawings and manufacturers' specifications. | CU. M. | 50 | | | |
| c) | With non shring grout like conbextra GP2 or approved equivalent, including cost of grout mix form work, finishing , curing etc. , all complete as per drawings and manufacturers' specifications. | CU. M. | 10 | | | |
| 4.0 | FORM WORK | | | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

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|--------------------------------------|---|-------|----------|-----------------|----------|--------------|
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| 4.1 | Supplying, installing, dismantling and removing the following classes 'of formwork as per drawings and specifications at all levels using steel / plywood wood shuttering at all heights including all staging and scaffolding arrangements with mateterial, labour etc. | | | | | |
| a) | Straight in plan | | | | | |
| | i) Ordinary Formwork (reasonably good surface of steel plate/ply board) | SQ.M. | 19,000 | | | |
| | ii) Fareface Formwork (New ply boards/free from holes, rashes to give smooth concrete surface) | SQ.M. | 40,400 | | | |
| b) | Curved in plan | | | | | |
| | i) Ordinary Formwork (reasonably good surface of steel plate/ply board) | SQ.M. | 250 | | | |
| | ii) Fareface Formwork (New ply boards/free from holes, rashes to give smooth concrete surface) | SQ.M. | 450 | | | |
| 4.2 | Providing Pockets in concrete of sectional area less than 0.1 sq.m in plan by fixing and removing formwork for anchor bolts , pipe sleeves etc. as per drgs including. all materials ,labour etc. complete as per drawings and specifications. | | | | | |
| | a) Up to 300 mm deep | Nos. | 800 | | | |
| | b) 301mm to 600mm deep | Nos. | 350 | | | |
| | c) 601mm to 1000mm deep | Nos. | 200 | | | |
| | d) 1001 mm to 1500 mm deep | Nos. | 100 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

PART-II, RATE SCHEDULE

| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
|------------|--|--------|----------|-----------------|----------|--------------|
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| 5.0 | REINFORCEMENT, | | | | | |
| 5.1 | Taking delivery from BHEL stores/ yard, loading, transportation to work site unloading, straightening, cutting, bending, placing at any level, binding in position high yield strength steel reinforcements/TMT bars in concrete including cost of binding wire, labour etc. complete all as per specifications & drawings (Reinforcement Steel & MS reinforcement shall be supplied by BHEL Free of cost) | | | | | |
| | a) MS reinforcement conforming to IS:432 | M.T. | 10 | | | |
| | b) HSD reinforcement conforming to IS:1786 of minimum grade Fe 415 | M.T. | 2,030 | | | |
| 5.2 | Supplying and fixing steel wire mesh 10 SWG,100X100mm mesh,as reinforcement for encasing steel columns at all elevations as per drawings and specifications. | Sq. m. | 3,200 | | | |
| 6.0 | STRUCTURAL STEEL , | | | | | |
| 6.1 | Taking delivery from BHEL stores/ yard, loading, transportation to work site, unloading, fabricating using approved quality electrodes of 6013 or low hydrogen 7018 for plate thickness above 20 mm, pre-heating, Post heating , NDE test etc packing and delivering at site of the following categories of Structural Steelwork including providing & fixing necessary bolts, nuts, washers with a shop coat of approved Inorganic Zinc Silicate of 65-75 micron DFT after cleaning with grit blasting to SA 2 1/2 Swedish standards complete as per drawings and specifications excluding the cost of steel and supply & fixing of bolts, nuts & washer etc. (Structural Steel shall be supplied by BHEL Free of cost and Supply & fixing of bolts, nuts & washer will be paid for applicable item 6.14) | | | | | |
| a) | Steel work consisting of portal frames , laced & plated columns, beams, fabricated with standard rolled sections, plates , flats, angles pipes etc. | M.T. | 1,200 | | | |
| b) | Steel work consisting of roof trusses with standard rolled sections, plates, flats, angles, pipes etc. | M.T. | 60 | | | |
| c) | Steel work consisting of purlins, non plated beams , bracings, sag rods with anchor cleats / end plates | M.T. | 60 | | | |
| | | | | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|-------|----------|-----------------|----------|--------------|
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| | | | | IN FIGURES | IN WORDS | |
| 6.2 | Erection of structural steel as described in 6.1 including grouting under bases using Convextra GP1 with necessary erection bolts, nuts & washers, welding electrodes of 6013 or low Hydrogen electrodes of 7018 grade, wherever required, etc all complete as drawing and specifications. | M.T | 1,320 | | | |
| 6.3 | Supplying, fabricating and fixing in positions MS Bolts, nuts MS inserts like channels, angles, flats, rounds, plates, pipe sleeves and any other structural shape etc. including cost of steel , necessary templates / stagings, cutting to required lengths, bolting, revetting, welding etc. as required all complete as per drawings and specifications. | M.T. | 40 | | | |
| 6.4 | Supplying, fabricating and fixing in positions Rails section Inserts in concrete including cost of rail sections, necessary templates / stagings, cutting to required lengths, bolting, revetting, welding etc. as required all complete as per drawings and specifications. | M.T. | 40 | | | |
| 6.5 | Taking delivery of foundation hardware supplied by BHEL and transporting to site, fixing in position foundation hardware such as anchor bolts, nuts, washers, anchor assembly etc. as per drawing including fixing to proper level and alignment using contractor's own templates, protecting till handover of the foundation, all complete as per drawings and specifications. | M.T. | 10 | | | |
| 6.6 | Supplying and erecting hot dip galvanised GI floor gratings with minimum coating of 710 gms per sq.m. , staircase steps as per dwg including all fasteners, painting with two coats of aluminium paint at the places of site welding etc all complete as per drawings and specification | M.T | 45 | | | |
| 6.7 | Supplying, fabricating, fixing in position 40 mm dia MS pipe handrails at various elevation as per drawing no:- 1-38142-03195 / R02 including cost of materials, consummables, labour etc. all complete as per drawing and specifications. | R.M. | 700 | | | |
| 6.8 | Supplying, fabricating, fixing in position by welding 18 gauge MS sheets to steel columns for encasing at various elevations , all complete as per drawings and specifications. | M.T | 20 | | | |
| 6.9 | Supplying, fabricating, fixing in position welded wire mesh to steel columns for encasing at various elevations , all complete as per drawings and specifications. | SQ.M. | 2,000 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| PART-II, RATE SCHEDULE | | | | | | |
|-------------------------------|--|-------|----------|-----------------|----------|--------------|
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| | | | | IN FIGURES | IN WORDS | |
| 6.10 | Supplying, installing and fixing in position pre-coated galvalume sheeting of minimum 0.55 mm thick having base metal thickness of 0.5 mm for roof of buildings with all necessary nuts, bolts and washers and any other fixing material and means as required as per manufacturer specifications and TEIL/IOCL specification at all elevations as per drawings and specifications . | SQ.M. | 7,500 | | | |
| 6.12 | Supplying, fabricating, fixing in position 32 mm dia GI / MS pipe handrails at various elevation to concrete structures as per TEIL / IOCL drawings including cost of materials, cutting concrete, consummables, labour etc. all complete as per drawing and specifications. | R.M. | 400 | | | |
| 6.13 | Supplying, fabricating and fixing in positions for miscellaneous steel work such as cable trench cover frames, fencing poles etc. | M.T | 50 | | | |
| 6.14 | (i) Supplying and fixing in position of permanent milesteel bolts (Clause 4.6 as per IS 1367 and grade 'C' as per IS 1363) and nuts, wasers etc upto and inclusive of 39mm dia and upto 300mm long for structural steel works complete as per specification, drawings and instruction of engineer. | M.T | 1 | | | |
| | (ii) Supplying and fixing in position of high strength structural bolts (HSFG bolt of property clause 8.8 and product grade 'C' as per IS 1367) and confirming to IS 3757 and high strength structural hardened and tempered waser as per IS 6649 upto and inclusive of 39mm dia and upto 300mm long for structural work complete as per specification, drawing and instruction of engineer. | M.T | 8 | | | |
| 7.0 | MASONRY & ALLIED WORKS, | | | | | |
| 7.1 | Supplying and laying of coarsed rubble stone massonary in cement mortar 1:6 in foundations and basement as per specifications (Using OPC/PPC/PSC/SRC cement) | CU.M. | 20 | | | |
| 7.2 | Supplying and laying in position minimum 75 kg/cm ² brick work in foundation and upto plinth in cement sand mortar (1:6) including mixing mortar, laying bricks,raking of joints, curing etc., all complete as per drawings as spefications. (Using OPC) | CU.M. | 120 | | | |
| 7.3 | Similar to 7.3 in super-structure at all elevations | CU.M. | 1,800 | | | |
| 7.4 | Supplying and laying position minimum 75 kg/cm ² brickwork in half brick walls at various elevations in 1:4 cement sand mortar with HB netting at every fourth layer including mixing mortars, raking joints, curing etc all complete as per drawings and specifications. (Using OPC) | SQ.M. | 150 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|-------|----------|-----------------|----------|--------------|
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| 7.5 | Supplying and laying damp proof course 40mm thick with plain concrete (1:1 ^{1/2} : 3) nominal mix by volume with 12mm down size aggregates and minimum 3% admixture of water proofing compound with all materials complete as per specifications. | CU.M. | 10 | | | |
| 7.6 | Providing 12mm thick cement-sand (1:6) plastering with smooth cement Neeru finish to the interior faces of the walls & RCC columns coming in line with side of the wall at various elevations including mixing, laying , finishing,curing, rounding corners, cutting grooves, wherever required, etc. with all materials complete as per drawings and specifications. (Using OPC) | SQ. M | 7,200 | | | |
| 7.7 | Providing 18/20 mm thk cement sand plaster finish in two layes first layer of 14mm in cement mortar 1:6 & second layer of 6mm thickness in cement mortar 1:4 using approved quality sand for second layer, on RCC and brickwork including mixing , laying , finishing curing, rounding corners, cutting groves, wherever required, with all materials complete as per drags. and specifications. (Using OPC) | SQ.M | 7,000 | | | |
| 7.8 | Providing 18/20 mm thk cement sand plaster with heritage finish in two layes first layer of 14mm in cement mortar 1:4 & second layer of 6mm thickness in cement mortar 1:2 using approved quality sand for second layer, on RCC and brickwork including mixing , laying , finishing curing, rounding corners, cutting groves, wherever required, with all materials complete as per drags. and specifications. (Using OPC) | SQ.M | 2,400 | | | |
| 7.9 | Providing minimum 6 mm thick (1:4) cement sand plaster over concrete surfaces of columns, beams, slabs etc. similar to item 7.7 above (Using OPC/PPC/PSC/SRC cement) | SQ.M | 2,400 | | | |
| 7.10 | Drip course at various elevations to parapet, chajja, windows, door heads etc. with all material complete as per drawings, spcns. And directions of the engineer. | R.M. | 1,500 | | | |
| 7.11 | Providing 12mm wide x 12 mm deep rectangular grooves in plaster for architectural purposes, including all materials, etc. all complete. as per drawings . | R.M. | 1,000 | | | |
| 7.12 | Extra over plaster for providing neat cement finish | SQ.M. | 800 | | | |
| 7.13 | Providing 3mm thick plaster of paris punning to newly plastered surfaces at various elevations with all materials etc., complete as per specifications and directions of engineer. | SQ.M. | 8,000 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

PART-II, RATE SCHEDULE

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|------------|---|-------|----------|-----------------|----------|--------------|
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| 7.14 | Supplying and fixing 24 G meta lath (wire mesh) at junctions of brick work and concrete work before plastering at various elevations locations as shown in drawings and as directed by the Engineer | SQ.M. | 600 | | | |
| 7.15 | Providing average 50mm thick 1:2:4 cement screed with 6mm down stone chips, to required slope with all materials, hacking the old concrete, finishing, curing etc., as per drgs & specifications. | CU.M | 120 | | | |
| 8.0 | FLOORING | | | | | |
| 8.1 | Supplying, laying,fixing marble stone flooring min. 40mm thick over all comprising min. 20 mm thick of selected quality (grade-1) i approved design, pattern and shade of indo italian marble and white makrana marble including preparation of base course laying underbed , finishing, curing, grinding by machine polishing, etc. all complete as per specifications. | SQ.M. | 600 | | | |
| 8.2 | Supplying and laying Granite Stone flooring / cladding of approved shade and texture comprising min. 19 mm thick granite stone slabs of premium quality (grade -I), including preparation of base course laying underbed / plastering , finishing, curing etc. all complete as per specifications and drawings . | SQ.M. | 800 | | | |
| 8.3 | Supplying, laying acid resistant tiled floor / DADO as per IS:4457 with 25mm thick tiles from approved mnufacturers' at various elevations including preparation of base laying underbed of 6mm thick acid proof mortar over 3layers of bitumen grade 85/25(total 3mm thick) as per IS:702 over 12mm thick CM(1:3), pointing of size 6mm x 18 mm deep with CSNL mortar or equivalent including curing of the joints with dilute hydrochloric acid(25 %) as per manufacture's specifications , with all materials complete as per drawing and specifications. | SQ.M. | 600 | | | |
| 8.4 | Supplying and fixing Vitrified ceramic tiles of approved make of sizes 600X600X8mm for flooring and 600X600X6 for dado up to 2.5 m elevations including pereparation of base laying underbed, finishing and rounding corners and junctions, curing etc. complete as per drawings and specifications. | SQ.M. | 1,000 | | | |
| 8.5 | Supplying and fixing antiskid ceramic tiles of approved make of sizes 300X300X8mm for flooring and 300X300X6 for dado up to 2.5 m elevations including pereparation of base laying underbed, finishing and rounding corners and junctions, curing etc. complete as per drawings and specifications. | SQ.M. | 800 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| PART-II, RATE SCHEDULE | | | | | | |
|-------------------------------|--|-------|----------|-----------------|----------|--------------|
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| | | | | IN FIGURES | IN WORDS | |
| 8.6 | Supplying laying and fixing white cement based terrazzo tiles of approved colour and make at staircase steps and landing at various elevations comprising min. 25mm thick tiles for tread of the steps and landing & 18mm thick tiles for riser, including preparation of base laying under bed, finishing polishing etc., as per drawings and specifications. | SQ.M. | 400 | | | |
| 8.7 | Supplying laying & fixing 40mm thick Kota stone flooring, skirting and dado in various elevation comprising min. 400X275mm 25mm thick stone slabs for flooring,min 400X275mm 18 mm thick stone slabs for dado and 125mm high 18mm thick stone slabs for skirting including preparation of base, laying underbed finishing, curing, polishing etc. complete as per drawings and TEIL/IOCL specifications. | SQ.M. | 400 | | | |
| 8.8 | Supplying and fixing Dholpur stone cladding(combination of red and beige) of 25 mm thick and approximate size of 600 mm X 450 mm of approved colour and shade to external faces of walls of building to give an even shade and colour with all matls. complete as per drawings and TEIL/IOCL specifications. | SQ.M. | 800 | | | |
| 8.9 | Supply and laying of 3mm thick PVC skirting 150 mm high including preparation of base, fixing tile finishing etc., all complete as per approved manufacturer's specifications. | SQ.M. | 50 | | | |
| 8.10 | Providing and laying PVC roll approved shade, texture of 2mm thickness in floor, skirting fixed over Heavy duty flooring wherever specified by means of neoprene based rubber adhesive (as per manufacture specification) including cleaning surfaces with approved detergent to remove stains etc. all complete as per specifications. | SQ.M. | 450 | | | |
| 8.11 | Providing 50mm thick Heavy duty artificial patent stone flooring (IPS) comprising 35mm cement concrete base laying underbed in panels bound by 3X40mm PVC 4X40mm glass strips followed by 15mm thick wearing top layer of cement, ironite hardner and stone aggregate, finishing, curing etc. all complete with dust protective coating as per specifications. (Using OPC cement) | SQ.M. | 4,000 | | | |
| 8.12 | Supplying and laying pigmented epoxy coating including min 3mm thick screed and finishing coat in two coats @ 125gm./ sq.m per coat all as per specifications. | SQ.M. | 400 | | | |
| 8.13 | Laying 20 mm thick grey cement skirting(1:3) including preparation of base , laying underbed, finishing with neat cement, rounding corners and junctions, cutting grooves, if required curing etc., complete as per drawings and specifications. | SQ.M. | 120 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| PART-II, RATE SCHEDULE | | | | | | |
|-------------------------------|--|--------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 8.14 | Providing 3 mm thick neat cement finish over concrete base for flooring paving etc. | SQ.M. | 2,000 | | | |
| 9.0 | FALSE FLOORING | | | | | |
| | Supplying, erecting, fitting & laying false flooring with cold formed steel channel sections and cast grooved head supports by adjusting threaded studs of 30 mm dia 600 mm long and tiles of 35 mm thick approved quality phenol bonded particle board with bottom side 0.05 mm thick Aluminium foil & top side 3mm thick best quality approved pressure laminate / antistatic PVC tile, conforming to IS:3462 for topping and PVC lipping for the edges including all necessary nuts, bolts, washers etc, all complete as per drawings and specifications. | SQ. M. | 1,500 | | | |
| 10.0 | FALSE CTTEILING | | | | | |
| 10.1 | Providing and fixing aluminum linear false ceiling system "LUXALON" by Hunter Douglas comprising of 84mm wide 16mm deep roll formed panels consisting of length upto 6 m, coil coated on both sides, rolled formed from stove enamelled corrosion resistant 0.5mm thick aluminium alloy AA-5050 or 3005 and perforated panels for return air as per air conditioning requirements including 32mm wide & 39mm deep panel carriers made of roll formed coated steel with 0.95mm thick aluminium alloy with cutouts to hold the panels in the module of 90/100mm , including suspending carries from roof by 4mm dia galvanised steel hanger with steel by "j" hooks & nylon inserts, height adjustment clips made of spring steel at .max 1.2 m c/c including providing profiles gap closure strips etc., slit openings for fixing supply/ return air grill, lighting fixtres, AC diffusers etc. all complete as per drawings and specifications. | SQ. M. | 1,900 | | | |
| 10.2 | Supplying and fixing gypsum board false ceiling system comprising of 12mm thick gypsum board tiles of approved qualities and fixing to under side of grid system with 12.5mm dia dry wall screw @ 230mm c/c , and grid system made of 0.9mm thk. 45mm size and two flanges of 15mm each GI main runner suspended from ceiling @ 1.2m by means of bolting to GI cleat fixed the ceiling with dash fastners, 0.5 thk. knurled web of 51.1mm and two flanges of 26mm GI channel shaped cross runners and 0.5mm thick web size of 27mm one flange 20mm other 30mm wall runnersfixed to peripheral walls by rawl plugs/ dash fasteners @ 450mm c/c including finishing, levelling and aligning etc. all complete as per specifications. | SQ. M. | 600 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 10.3 | Providing Phenolic Foam under deck insulation on the ceiling system (at soffit of the slab) consisting of 25 mm and approx. 1000 mm X 500 mm size conforming to IS:13204 (having a density of 32 kg/m ³ and K value of 0.016 KCal/hr M C as per BS 4370, Part-2) faced with alluminium foil , as non-combustible as per BS:476, part - 5 including fixing the insulation to soffit / sides of beams by means of approved quality adhesive and providing & fixing 3 mm thick 190 x 25 mm L-shaped M.S. slotted cleats to the soffit of the slab with dash fasteners @ 600 mm c / c, both ways securing the insulation with chicken wire netting stretched tightly over the insulation and held by 14 SWG G.I. wire tied diagonally through the slots of cleats etc., all complete as per drawings and specifications. | SQ.M. | 2,000 | | | |
| 11.0 | PAINTING | | | | | |
| 11.1 | Providing minimum two coats of acid resistant paint over a coat of primer, if required, as per manufactures instructions to plastered surfaces. including preparation of sufaces, scaffolding etc., all complete as per drawings and specifications | SQ.M. | 600 | | | |
| 11.2 | Providing complete Protective coating system to Stuctural Steel with epoxy paint , to a total thickness of minimum 245 microns with all materials, consumables and scaffoldings complete as per TEIL/IOCL specifications and drawings. | M.T. | 1,370 | | | |
| 11.3 | Supplying and painting with CPCI and ERBP over concrete surfaces to foundations below ground to a total thickness of 300 - 325 microns for providing protection against marine environments as per specifications. | SQ.M. | 6,612 | | | |
| 11.4 | Providing & applying to interior surfaces two or three coats of Oil Bound distemper/Acrylic Oil Bound distemper of approved shade & make confirming to IS : 428 to obtain a even finish and uniform color over a coat of primer as per manufacture recommendation including cost of paint, surface preparation, scaffolding etc, all complete as per spec. and drawing. | SQ.M. | 1,000 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 11.5 | Providing and applying two coats of Plastic emulsion paint confirming to IS : 5411 , of approve shade, over a of coat of suitable primer as per manufacturer's recommendation , including cost of paint on prepared plastered surface with POP (POP shall be paid separately under relevant items 7.13), scaffolding etc. all complete including scraping / removing of old paints, making the surface good with plaster of paris wherever required, all complete as per specification and to the satification of engineer / architect incharge. | SQ.M. | 8,000 | | | |
| 11.6 | Providing three or more coats of white wash to give a smooth and even shade including cleaning & preperation of surfaces scaffolding etc., complete | SQ.M. | 800 | | | |
| 11.7 | Providing 2 or 3 coats of Cement Paint of "Snowcem" or approved equivalent of approved shade, over a coat of exterior sealer, to give an even shade as per manufacturers' instructions over concrete surfaces or newly plastered surfaces including cost of paint, preparation of surfaces, scaffolding, curing etc., all complete as per drawings and specification. | SQ.M. | 7,000 | | | |
| 11.8 | Providing 2 or 3 coats of Elastomeric high stretch exterior paint of Asian paints or approved equivalent of approved shade, over a coat of exterior sealer, to give an even shade as per manufacturers' instructions over concrete surfaces or newly plastered surfaces including cost of paint, preparation of surfaces, scaffolding, curing etc., all complete as per drawings and TEIL specification. | SQ.M. | 3,000 | | | |
| 11.9 | Providing two coats of polishing over wood work at various elevations , including all materials, surface preparation, finishing, polishing etc. all complete, as per drawings and specifications. | SQ.M. | 400 | | | |
| 12.0 | ROOF WATER PROOFING | | | | | |
| 12.1 | Preparation of grading underbed with 1:2:4 mix using 12mm down graded coarse aggregate at various elevations including mixing, laying, curing etc. in varying thickness with all materials complete as per drawings and specifications. | CU.M. | 250 | | | |
| 12.2 | Preparation of average 25 mm thick grading underbed with 1:4 cement coarse sand mortar and mixing 2% water proofing chemical admixtures of approved brand at various elevations including mixing laying, curing etc. with all materials complete as pe drawings & specifications. | SQ.M. | 1,200 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 12.3 | Supplying and laying Polyurethane Water Proofing as per specification , all complete with mateterial, consumables, scaffoldings, labour etc. | SQ.M. | 2,000 | | | |
| 12.4 | Same as Item No-12.3 above but for flashing at junction of slab and parapet wall including preparation of surfaces, cutting grooves, caulking the end of flashing etc. complete as per TEIL Drawings <i>and spec</i> . | SQ.M. | 140 | | | |
| 12.5 | Providing and making 150x150mm size fillets in cement concrete 1:2:4 at junctions of roof slab and parapet wall including cutting groves, rounding corners, finishing etc. all complete as per drawings and specifications. | CU.M. | 40 | | | |
| 13.0 | DOORS, WINDOWS & VENTILATORS | | | | | |
| 13.1 | Providing and fixing Steel windows conforming to IS: 1038 and IS:7452 including handles, peg stays, stoppers, hinges , and painting with two coats of approved make epoxy paint over a coat of suitable primer etc.all complete as per specifications and drawings . | | | | | |
| | a) fixed type | SQ.M. | 180 | | | |
| | b) openable type | SQ.M. | 260 | | | |
| 13.2 | Supplying and erecting including assembling fitting and fixing best quality electrostatic Powder coated Pressed steel doors of 18 gauge MS sheets, with 16 gauge pressed steel frames at various elevations including frames, shutters, fittings and fixtures, CP mortice lock cum handle mastic caulking, grouting the frames, painting with 2 coats of approved quality epoxy paint over approved primer/ min. 30 micron DFT per coat etc. complete as per drawing and specifications. | | | | | |
| | a) Single shutter | SQ.M. | 240 | | | |
| | b) Double shutter | SQ.M. | 400 | | | |
| 13.3 | Same as item 13.2 but with 150mm X 500mm vision panels with 6 mm thk. Plate glass etc. complete as per TEIL specifications and drawing | | | | | |
| | a) Single shutter | SQ.M. | 120 | | | |
| | b) Double shutter | SQ.M. | 180 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| PART-II, RATE SCHEDULE | | | | | | |
|-------------------------------|--|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 13.4 | Supplying and erecting including assembling fitting and fixing best quality electrostatic Powder coated Pressed steel Air tight doors of 18 gauge MS sheets (for shutters), with 16 gauge pressed steel frames at various elevations. Shutters shall be 38mm thick flushed design comprising of two outer sheets of 18 gauge steel sheets rigidly connectd & reinforced inside with continuous vertical 20 guage stiffeners, spot welded in position at not more than 150mm on centers, side, top, bottom edge of shutters shall be of pressed steel channel of 1.2mm thick, voids to be filled with mineral wool (48kg./m3 density). Frame shall be of 16 gauge pressed steel including all fittings like hold fast, adjustable floor anchors, tower bolts, handle, stoppers, eldrops, CP mortice lock cum handle, mastic caulking, grouting the frames and painting with two coats of approved quality epoxy paint over approved primer / min. 30 micron DFT / coat etc. complete as per TEIL/IOCL and specifications | | | | | |
| | a) Single shutter | SQ.M. | 40 | | | |
| | b) Double shutter | SQ.M. | 60 | | | |
| 13.5 | Supplying,erecting, assembling best quality PVC panelled doors of Sintex make or approved equivalent with powder coated aluminium frames for toilets including all powder coated fittings towerbolts, aldrops and fixtures etc. all complete as per drawings and specifications. | SQ.M. | 80 | | | |
| 13.6 | Providing and fixing in position composite, insulated type fire proof doors of approved make having 2Hrs fire rating conforming to IS :3614 Part I with all necessary fittings and fixtures incuding self closing hinges, locking arrangement and painting with two coats of fire proof paint over approved primer etc. complete(contractor to obtain and furnish T.A.C. approval for supplies made) | | | | | |
| | a) Single leaf | SQ.M. | 40 | | | |
| | b) Double leaf | SQ.M. | 50 | | | |
| 13.7 | Providing and fixing 38mm thick wooden flush doors with pressed steel frame (as per item no. 13.4) as per drawings all fittings and fixtures,approved quality heavy duty hinges, anodised aluminium tower bolts , aldrops, door stops, CP mortice lock cum handle, mastic caulking, grouting the frames and painting with two coats of approved quality epoxy paint over approved primer / min. 30 micron DFT / coat etc. complete as per TEIL/IOCL and specifications | SQ.M. | 30 | | | |
| 13.8 | Providing and fixing approved quality hydraulic door closer corforming to IS :3564 as directed by the Engineer. | Nos | 20 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 13.9 | Providing and fixing 2mm thk. approved quality rubber sealing strip around doors and windows for making them air tight including cost of rubber strip adhesive, clips etc. all complete as per specifications and drawings. | R.M. | 500 | | | |
| 13.10 | Supplying fitting and fixing the following glazing specials at various elevations as per drg. No 7-75-0014 including supplying rubber beading, (cost of putty and glazing clips for fixing to steel windows), all materials etc. complete as per specifications to alluminium windows, doors & partitions / steel windows . | | | | | |
| a) | 4mm thick toughened clear glass | SQ.M. | 450 | | | |
| b) | 5.5 mm thick toughened clear glass | SQ.M. | 600 | | | |
| c) | 6.3 mm thick toughened tinted glass | SQ.M. | 400 | | | |
| d) | 12 mm thick toughened tinted glass | SQ.M. | 150 | | | |
| 13.11 | Supplying, fitting and fixing 12 mm thick twin laminated Gypsum board of "India Gypsum" make conforming to IS:2905, categorised as Class-I for surfaces of very low flame spread as per BS:476, at various elevations to aluminium windows, doors & partitions, including supplying rubber gaskets, cost of all materials etc. complete as per drawings and EIL specifications. | SQ.M. | 480 | | | |
| 13.12 | Supplying and erecting including assembling fitting and fixing electrostatically powder coated aluminum windows of INDAL , Jindal or approved equivalent at various elevations including frames and shutters , transomes, mullions, fittings and fixtures, aluminium beading, but excluding glazing, complete as per specifications and drgs. (alluminium hollow sections should be infilled with timber of silver oak) as per drg and specifications. | | | | | |
| a) | Openable type | SQ.M. | 240 | | | |
| b) | Fixed type | SQ.M. | 420 | | | |
| 13.13 | Supplying and erecting including assembling fitting and fixing electrostatically powder coated Aluminium partition frames with matching doors etc., with frames, shutters, double acting heavy duty floor springs, fittings, and fixtures, mortice lock, alluminium beading but excluding glazing etc. complete (aluminium hollow sections should be infilled with timber of silver oak) | SQ.M. | 420 | | | |

PART-II, RATE SCHEDULE

| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
|-------------|---|-------|----------|-----------------|----------|--------------|
| | | | | IN FIGURES | IN WORDS | |
| 13.14 | Supplying,fitting and fixing electrostatically powder coated Aluminium framed doors as per drawing.no. 4-38144-0033 and specs. Same as item 13.12 but to be fixed masonry openings. (aluminium hollow sections should be infilled with timber of silver oak) | SQ.M. | 380 | | | |
| 13.15 | Providing and fixing electrostatically powder coated aluminium ventilators all as per drawings | SQ.M. | 100 | | | |
| 13.16 | Supplying, fitting and fixing 12 mm thick twin laminated Medium Density Fibre(MDF) boards (mannufactured from agrobased lignocellulosic fibres conforming to IS:12406, exterior grade with synthetic resin conforming to IS:848, BWP type) , categorised as Class-I for Surfaces of very low flame spread as per BS:476 and twin laminated with 1.0 mm thick melamine of approved make and shade at various elevations to aluminium windows, doors & partitions, including supplying rubber gaskets, cost of all materials etc. complete as per drawings and specifications. | SQ.M. | 240 | | | |
| 14.0 | ROLLING SHUTTERS : | | | | | |
| 14.1 | Supplying, erecting, assembling, fitting and fixing rolling steel shutters of 18 gauge steel sheets with 16 gauge MS rolled channel frame as per IS:6248 from approved manufacturers specifications including all fixtures, accessories locking arrangements, , shop coat of approved epoxy primer and two coats of epoxy paint of approved brand and shade after erection with all fittings and fixtures etc all complete as per specifications and drawings. (All the rolling shutters irrespective of their size should have mechanical opening arrangements.) | SQ.M. | 240 | | | |
| 15.0 | SANITATION / PLUMBING | | | | | |
| 15.1 | Supplying and erecting HDPE cylindrical and vertical water tank with closed top of SINTEX make or approved equivalent of following capacity. | | | | | |
| | a) 1500 LTR | Nos | 4 | | | |
| | b) 2500 LTR | Nos | 4 | | | |
| | C) 5000 LTR | Nos | 2 | | | |
| 15.2 | Supplying, fitting and fixing heavy cast iron " Roof Drain" pipes at various elevations including shoe bends junctions, sockets, adapters, brackets, hangers, supports etc jointing, caulking prime coat of painting with anticorrosive paint including all materials etc complete as per drawings and specifications. | | | | | |
| | a) 100 mm dia. | R.M. | 40 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| | b) 150 mm dia. | R.M. | 240 | | | |
| 15.3 | Similar to item no:-15.2 above supplying fitting and fixing of PVC (Class-1) drain pipes of approved make at various elevations including shoe bends junctions sockets, adapters, brackets, hanger supports etc., jointing with appropriate adhesives, including all materials complete as per drawings and specifications. | | | | | |
| | a) 100 mm dia pipes | R.M. | 50 | | | |
| | b) 150 mm dia pipes | R.M. | 280 | | | |
| 15.4 | Supplying, fitting and fixing Roof drain heads with high domed gratings as per drawings at various elevations, including connecting to roof drain pipes, caulking with lead supports / fixing with adhesive for PVC pipes, hangers etc, prime coat of painting with anti - corrosive paint with all materials as per drawings and specifications. | | | | | |
| a) | Heavy duty C.I. Heads | | | | | |
| | i) 100 mm pipe | Nos. | 5 | | | |
| | ii) 150 mm pipe | Nos. | 30 | | | |
| b) | PVC roof drain heads | | | | | |
| | i) 100 mm pipe | Nos. | 5 | | | |
| | ii) 150 mm pipe | Nos. | 40 | | | |
| 15.5 | Supplying, fitting fixing the following best quality sanitary fixtures of " Hindustan Sanitaryware" or approved equivalent make at various elevations including all necessary accessories, cutting and making good of concrete / brickwork for concealing all connecting pipes and bends with all materials etc all complete as per specifications and drawings. | | | | | |
| a) | European type type water closet conforming to IS:2556 with white glazed stone ware basin with plastic seats & cover and low level PVC cistern of 15 litre discharge capacity including valveless fittings, flush bends, supply connections, syphon , integral 'S' or 'P' trap etc. all complete as per drawing and specifications. | NOS | 6 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

PART-II, RATE SCHEDULE

| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
|-------|--|------|----------|-----------------|----------|--------------|
| | | | | IN FIGURES | IN WORDS | |
| b) | Indian pattern water closet (Orissa pan size 580 mm conforming to IS:2556) with white glazed stone ware and integral 'footrest; 15 litre capacity highlevel PVC flushing cistern including valveless fittings, with all necessary fixtures, integral with 'S' or 'P' trap etc. all complete as per drgs. and specifications . | Nos. | 8 | | | |
| c) | 610 x 410 x 380 mm large flat back urinals with a pair of 250 X 125 mm white ceramic foot rest with concealed hangers and brackets, CP brass spreader for concealed piping work, CP brass waste fittings, 30 mm dia heavy duty bottle trap etc all complete as per drgs and specifications. | Nos. | 10 | | | |
| d) | Automatic high level PVC cistern with mosquito proof lid, interior painted with 2 coats of anti corrosive paint complete with loose key CP brass bibcock | | | | | |
| i) | Cistern capacity 5 ltrs. | Nos. | 4 | | | |
| ii) | Cistern capacity 10 ltrs | Nos. | 8 | | | |
| iii) | Cistern capacity 15 ltrs | Nos. | 12 | | | |
| e) | White poreclain division plate of size 840 X 300 mm with CP brass screws | Nos. | 10 | | | |
| f) | 550 x 400 mm wall hung white glazed stone ware flat back wash basin with provision for tap holes in three locations with supporting brackets,C.P brass 30mm dia waste fittings,heavy duty CP bottle trap,one no. 15mm dia long nose C.P brass pillar cock,one number supply connection with 300.mm long,15 mm dia P.V.C pipe with brass nuts at both ends and C.P brass stop cock etc,complete as per drgs and specifications . | Nos. | 16 | | | |
| g) | 150 x 150 mm recessed PVC soap tray . | Nos. | 10 | | | |
| h) | Chromium plated shower set with 100/150 mm dia brass shower rose with rim arm,wall flange,hot/ cold water mixing valves including handle and concealed supply pipe including 600mm long C.P grab bar,bibcock etc, as per specifications all complete. | Nos. | 10 | | | |
| i) | 600 x 450 x 6 mm thk bevelled edge mirror of superier glass with necessary fixtures as per specifications. | Nos. | 16 | | | |
| j) | 35 litre capacity hot water geyser of approved make. | Nos. | 4 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| k) | 600mmX120mmX4mm thick clear glass shelves with chromium plated brackets, guard rails etc, all complete | Nos. | 10 | | | |
| l) | 600 mm long, 20 mm dia and 1.25 mm thick chromium plated brass towel rail with brackets fittings, etc, complete. | Nos. | 16 | | | |
| m) | All Chromium plated standard liquid soap dispenser of approved make with all fittings etc, complete. | Nos. | 16 | | | |
| n) | 12 mm dia Cromium Plated brass ablution tap with all fittings complete. | Nos. | 35 | | | |
| 15.6 | Supplying, fitting fixing the following best quality Automatic Urinal flush Control System of approved make at various elevations including all necessary accessories, cutting and making good of concrete / brickwork for concealing all connecting pipes and bends with all materials etc all complete as per specifications and drawings. | Nos. | 20 | | | |
| 15.7 | Supplying, fitting and fixing 100 mm dia inlet and 80/100 mm dia outlet SS floor drain with P-trap and with screwed or hinged CP brass gratings. | Nos. | 20 | | | |
| 15.8 | Providing 300 x 300 x 675 mm chamber in 1:4 brickwork 115 mm thick with plain concrete 1:2:4 foundation cement mortar including supplying and fixing 100 mm. dia square mouth gully trap, gratings, CI frame and cover, all complete as per specifications. | Nos. | 10 | | | |
| 15.9 | Supplying, laying, fitting, fixing and jointing concealed PVC pipes(class-1) conforming to relevant IS codes for water lines at various elevations pipes underground with all fittings bends, teas, reducers etc. including excavation, backfilling, supports, caulking, chases, grooves, hangers, supports, straps etc. painting as specified all complete as per specification and drawings. | | | | | |
| a) | 12 mm dia | R.M. | 80 | | | |
| b) | 19mm dia | R.M. | 50 | | | |
| c) | 25 mm dia | R.M. | 50 | | | |
| d) | 32 mm dia | R.M. | 40 | | | |
| e) | 50 mm dia | R.M. | 40 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 15.10 | Supplying, laying, fitting, fixing and jointing extra heavy cast iron soil and drain pipes underground with all fittings bends, tees, reducers etc. including excavation, backfilling, supports, caulking, chases, grooves, hangers, supports, straps etc. pain- ting as specified all complete as per specification and drawings. | | | | | |
| a) | 100 mm | R.M. | 60 | | | |
| b) | 150 mm | R.M. | 120 | | | |
| 15.11 | Same as 15.11 but over ground, including vent pipes and cowls. | | | | | |
| | a) 100 mm | R.M. | 40 | | | |
| | b) 150 mm | R.M. | 60 | | | |
| 15.12 | Supplying fitting and fixing CI heavy duty man hole cover of 500 mm dia of approved brand as per specification | Nos. | 20 | | | |
| 16.0 | SURFACE AND UNDERGROUND DRAINS | | | | | |
| 16.1 | Supplying and installing of heavy duty PVC pipes of following diameter as per specifications and drawing. | | | | | |
| a) | 100 mm dia | R.M. | 100 | | | |
| b) | 150 mm dia | R.M. | 140 | | | |
| c) | 200 mm dia | R.M. | 120 | | | |
| d) | 250 mm dia | R.M. | 140 | | | |
| 16.2 | Providing and installing RCC Hume pipes of class NP-2 of following diameters with collars,at all depths including bedding, jointing etc. all complete as per drawing and TEIL/IOCL specifications . (excavation and backfilling to be measured seperatly under relevant items) | | | | | |
| a) | 150 mm | R.M. | 160 | | | |
| b) | 200 mm | R.M. | 200 | | | |
| c) | 250 mm | R.M. | 100 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| d) | 300 mm | R.M. | 50 | | | |
| e) | 450 mm | R.M. | 50 | | | |
| 16.3 | Providing and installing RCC Hume pipes of class NP-3 of following diameters with collars,at all depths including bedding, following diameters. (excavation and backfilling to be measured seperatly under relevant items) | | | | | |
| a) | 300mm | R.M. | 30 | | | |
| b) | 450 mm | R.M. | 30 | | | |
| c) | 500 mm | R.M. | 30 | | | |
| d) | 600 mm | R.M. | 30 | | | |
| 16.4 | Providing and installing SWG pipes at all depths including jointing and excavation up to 1 m depth and backfilling all complete as per specs and directions of the Engr. | | | | | |
| | a) 150 mm dia. | R.M. | 100 | | | |
| | b) 200 mm dia. | R.M. | 150 | | | |
| | c) 250 mm dia. | R.M. | 150 | | | |
| 16.5 | Supplying, laying, jointing, testing and commissioning of double coated and double wrapped Carbon Steel pipes of the following diameter below GL including all material complete as per drawing and specifications. | | | | | |
| a) | 100mm dia as per IS: 1239 | R.M. | 250 | | | |
| b) | 150mm dia as per IS: 1239 | R.M. | 250 | | | |
| c) | 200mm dia as per IS: 3589 | R.M. | 300 | | | |
| 16.6 | Supplying, fitting, fixing, drain funnels of following diameters below GL | | | | | |
| a) | 150mmdia as per drg. No. 4-38142-00055 | Each | 20 | | | |
| b) | 250mm dia as per drg. No. 4-38144-00053 | Each | 25 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 16.7 | Providing and fixing weep holes in drains consisting of 100mm dia LDPE pipe sleeves along with single side covering for the pipe mouth with galvanised welded fabric of 20mm SQ. opening along with 300x300mm SQ., 300mm deep, 40mm aggregate to cover fabric mesh mouth complete as directed by BHEL engineer | Nos. | 200 | | | |
| 17.0 | ROADS/PAVING | | | | | |
| 17.1 | Consolidating sub-base before providing stone soling/WBM with road roller including watering, if required to obtain 95% proctor density including making good undulation etc. all complete as per drawing and specifications . | SQ.M. | 17,000 | | | |
| 17.2 | Supplying,laying and rolling Stone soling of consolidated thickness 200mm in 2layers including spreading binding material(sand / morrum) watering and rolling with road roller etc. all complete as per drawings and specifications . | SQ.M. | 12,000 | | | |
| 17.3 | Supplying and laying WBM in 150 mm consolidated thickness in two layers with dry and wet rolling etc complete as per drgs and specifications. | SQ.M. | 5,200 | | | |
| 17.4 | Providing and laying 60 mm compacted thickness of bituminous macadam followed by 25mm thick premixed bituminous carpet (hot process) finish over WBM surface including provision of a tack coat and a seal coat,using bitumen conforming to IS : 73 , preparation of surfaces, rolling etc.complete as per specs. | SQ.M. | 5,200 | | | |
| 17.5 | Supplying,laying and setting precast concrete edging blocks 300 x 150 mm (at base) and a min.length of 450 mm (except at curves) in M 20 grade concrete including cutting of trench and packing exterior face of blocks with stone chips and murrum including pointing the joints with CM 1:4 etc. all complete as per drawings and specifications | R.M. | 1,600 | | | |
| 17.6 | Supplying, Spreading & filling murrum 150 mm thick and consolidation and preparation of sub base including watering and rolling & compaction with power roller 10-12 T capacity to the required density (95% of proctor density) & upto satisfaction of BHEL | CU.M. | 2,000 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

PART-II, RATE SCHEDULE

| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
|-------------|--|-------|----------|-----------------|----------|--------------|
| | | | | IN FIGURES | IN WORDS | |
| 18.0 | MISCELLANEOUS ITEMS | | | | | |
| 18.1 | Supplying and spreading 40mm size stone chips / gravels in transformer yards | CUM | 120 | | | |
| 18.2 | Supply, fabricating and fixing in position transformer gate / fencing as per drg. no:7-75-0051 including painting with aluminium paint two coats over suitable primer etc.complete., excavation,concreting and post etc to be measured separately. | SQ.M. | 150 | | | |
| 18.3 | Supplying and fixing in positions Anchor Fasteners of FISCHER make FBN bolt or approved equivalent of following diameters in concrete, including drilling in concrete, driving the anchor fastner, finishing the concrete etc., all complete as per drawings and specifications | | | | | |
| | a) 8 mm | Nos | 40 | | | |
| | b) 10 mm | Nos | 30 | | | |
| | c) 12 mm | Nos | 30 | | | |
| | d) 14 mm | Nos | 20 | | | |
| | e) 16 mm | Nos | 20 | | | |
| | f) 20 mm | Nos | 20 | | | |
| 18.4 | Supplying and fixing in positions 100 mm wide Aluminium strips of approved make in expansion joints with brass screws including drilling in concrete, all complete as per drawings and specifications | R.M. | 80 | | | |
| 18.5 | Cutting and drilling holes of the following diametes using diamond cutter drilling machine with all material, labour etc., all complete as per drawings and specifications. | | | | | |
| | a) 100mm dia x 200 mm deep | Nos | 20 | | | |
| | b) 150mmdia x 200 mm deep | Nos | 20 | | | |
| | c) 200mm dia x 200 mm deep | Nos | 20 | | | |
| | d) 250mm dia x 200 mm deep | Nos | 20 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| PART-II, RATE SCHEDULE | | | | | | |
|-------------------------------|---|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 18.6 | Providing Anti-termite treatment to building columns and floors of Chloropyrifos emulsifiable concentrates (1%) conforming to IS:8499 and IS: 6313 with cost of material, labour, consumables etc, all complete as per drawings and specifications | Sq. m | 2,400 | | | |
| 18.7 | Cutting of trees , including transportation, stacking of storage yard and disposal of unused materials as per the direction of engineer in charge. | | | | | |
| a) | 300 mm upto 600 mm girth | Nos. | 3 | | | |
| b) | 601 mm upto 900 mm girth | Nos. | 3 | | | |
| 19.0 | FENCING | | | | | |
| 19.1 | Supplying and fixing chain link mesh conforming to I S : 2721, both ends bent type, mesh size 50 mm, dia. of mesh wire 4 mm, with 2 nos line wire 4 mm dia. including tying to RCC / STEEL posts neatly with GI wires including cost of all materials etc. complete. (Structural post shall be paid under item no. 6.3) | SQ.M. | 1,200 | | | |
| 19.2 | Supplying and fixing barbed wire fencing of approved quality, including tying to RCC / STEEL posts neatly with GI wires including cost of all materials etc. complete. (Rate shall be for single strand) | R.M. | 1,000 | | | |
| 19.3 | Supplying, fabrication and fixing 40 mm dia GI pipe of approved quality, including all fittings and fixtures with cost of all materials etc. complete. | R.M. | 1,001 | | | |
| 20 | PILING | | | | | |
| 20.1 | Mobilisation of minimum two number of piling rigs and ancillary equipment including boring equipment all complete to site for installing of 500mm / 450mm diameter Bored cast in situ R.C.C. piles and demobilisation from site after completion of work as per specifications. | L.S. | 1 | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| PART-II, RATE SCHEDULE | | | | | | |
|-------------------------------|--|------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 20.2 | Boring in all types of strata including socketing in rocks for construction of 500mm nominal dia. 16 m long Bored cast in situ piles using cement concrete (cement not less than 400 kg/cum.) of grade M25 as per specifications including cost of plant and equipment, labour, pumping/bailing out bentonite solution & any other required materials (except reinforcement which will be paid under item no.- 5.1) etc. complete as per standard procedure stipulated in relevant latest IS specification. (No extra payment shall be made for socketing in rock). Effective length of pile shall be measured from cut-off level as per approved drawing supplied at site during execution. Rate shall be inclusive of empty boring and casting one meter extra length of pile above Cut-off level, dismantling of pile above COL, exposing the reinforcement & embedded in pile cap etc. complete. | RM. | 12,000 | | | |
| 20.3 | Same as 20.2 but 450mm nominal dia. 12 m long Bored cast in situ piles. | RM. | 7,000 | | | |
| 20.4 | Same as item no. 20.2 for increase or decrease in length of piles | | | | | |
| (a) | For 500mm dia. Pile | | | | | |
| | (i) Increase per meter or part there of (for unit quantity) | RM. | 1 | | | |
| | (ii) Decrease per meter or part there of (for unit quantity) | RM. | 1 | | | |
| (b) | For 450mm dia. Pile | | | | | |
| | (i) Increase per meter or part there of (for unit quantity) | RM. | 1 | | | |
| | (ii) Decrease per meter or part there of (for unit quantity) | RM. | 1 | | | |
| 20.5 | Conducting the following load test by direct loading on piles including finishing pile head, supplying and erection of kentledge, labour, excavation, backfilling, compaction etc. all complete as per specification. | | | | | |
| a) | initial vertical | Nos. | 2 | | | |
| b) | initial lateral | Nos. | 2 | | | |
| c) | initial pullout | Nos. | 2 | | | |
| d) | routine vertical | Nos. | 4 | | | |
| e) | routine lateral | Nos. | 4 | | | |
| f) | routine pullout | Nos. | 4 | | | |
| 21 | DISMANTLING OF STRUCTURE | | | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|--|-------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| 21.1 | Dismantling and removal before modification of the following items in the existing structures with all labour, tools, transport etc. all complete including delivering as directed by Engineer. | | | | | |
| | a) Concrete (plain) | CU.M. | 20 | | | |
| | b) Concrete (rein forced) | CU.M. | 50 | | | |
| | c) Brickwork | CU.M. | 50 | | | |
| | d) Doors, windows, ventilators | SQ.M. | 50 | | | |
| | e) 50 Tk.premix carpet | SQ.M. | 200 | | | |
| | f) Pipe hand rail | R.M. | 50 | | | |
| | g) GI sheetings | SQ.M. | 80 | | | |
| | h) Structural steel | M.T. | 20 | | | |
| | i) WBM/soling for roads or paving | SQ.M | 200 | | | |
| | j) Dismantling of false ceiling | SQ.M | 100 | | | |
| 22 | GROUNDING | | | | | |
| 22.1 | Drawing earthing strips from B H E L stores(earthing strips free supply) Laying, cutting , jointing , welding, painting the joints with cold galvanising paint after welding and testing ground conductors including cost of excavation up to 1m, backfilling, galvanising paint , labour, material etc. complete as per drawing and specifications. (All ground conductors will be issued by BHEL free of cost) | | | | | |
| a) | Earthing strip 75 X 10 mm | R.M. | 8,000 | | | |
| b) | Earth risers of 75X10 mm GI strip | R.M. | 1,500 | | | |
| c) | Test Pit Electrode as per drg. no.:GT57191 construction of masonry chambers with M.S. covers (for test electrodes), filling with sand, charcoal and salt etc. all complete as per drawings and specifications. | Nos. | 50 | | | |
| d) | Pipe Electrode as per drg. no.GT57191 sheet 2.(Ref. specs.) | R.M. | 100 | | | |
| 23.00 | Miscellaneous Items | | | | | |

BHEL- PS-WR
TS:BHE/PW/PUR/IOC-CVL/523
PART-II,VOL-III
PRICE BID

| <u>PART-II, RATE SCHEDULE</u> | | | | | | |
|--------------------------------------|---|------|----------|-----------------|----------|--------------|
| SL NO | DESCRIPTION | UNIT | QUANTITY | UNIT RATE IN RS | | AMOUNT IN RS |
| | | | | IN FIGURES | IN WORDS | |
| (i) | Providing 75mm thk anticorrosive layer laid to slope consisting of comacted crushed stone screening,fine gravel,clean sand or similar material as directed by the engineer, mixed in hot asphalt 8 to 10% by volume and rolled or compected complete as per drawing and specifications, below tanks and as such other places as per specifications and as directed by the engineer. | SQM | 200 | | | |
| | TOTAL VALUE IN Rs | | | | | |
| | TOTAL VALUE IN WORDS RS | | | | | |