

TENDER SPECIFICATION

NO: BHE/PW/PUR/LRPT ENB/1240

DEVELOPMENT OF OPEN STORAGE YARD (30,000 SQM) WITH INTERNAL ROADS, DRAINS, HARD SURFACING BY MURUM, FENCING ALONG WITH ITS ILLUMINATION, CONSTRUCTION OF RAISED CONCRETE PLATFORM, MESS BUILDING, CLOSED STORAGE SHED FOUNDATION UPTO FFL(15X60M)ETC. INCLUDING ITS INTERNAL/EXTERNAL ELECTRIFICATION

AT

**2 X800 MW NTPC LARA STPP (ESP PKG)
LARA , CHHATISGARH**

Price Bid Specification - volume- II



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
Power Sector - Western Region
345-Kingsway, Nagpur-440001

Tender Specification Issue Details

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EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

**LAST DATE FOR Refer Notice Inviting Tender
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THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I AND VOLUME- II ARE ISSUED TO:

M/s.

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**PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.
For Bharat Heavy Electricals Limited**

**AGM (Purchase)
Place: Nagpur
Date :**

JOB: ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC.AND ITS ILLUMUNATION, INCLUDING ADDITIONAL WORKS OF CONSTRUCTION OF SECURITY CABIN- 2 NOS., SUPPLY AND INSTALLATION OF BOREWELL,CONSTRUCTION OF CLOSED STORAGE SHED AND ITS INTERNAL ELECTRIFICATIONS MESS BUILDING AND TOILET COMPLEX WITH THEIR ELECTRIFICATION ETC. ALL COMPLETE AT 2X800 MW NTPC LARA

RATE SCHEDULE, SECTION - A

SECTION A: DEVELOPMENT OF OPEN STORAGE YARD OF AREA 30,000 SQM. WITH INTERNAL ROADS, MONSOON YARD, DRAINAGE AND FENCING, AND CONSTRUCTION OF SECURITY CABINS - 2NOS. AT 2 X 800 MW NTPC LARA ESPPROJECT

SECTION	SL.NO	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words	Amount
Sec. A	1	GRADING & LEVELLING :-LEVELLING AND GRADING OF OPEN STORAGE YARD(STORAGE BLOCKS) INCLUDES CUTTING AND DISPOSAL OF ALL GRASS, VEGETATION, BUSHES, ETC (IF ANY),SPREADING OF REQUIRED QUANTITY OF SURPLUS EXACAVATED EARTH FROM ROAD AND DRAINS UNIFORMLY OVER SPECIFIED AREA , GRADING & LEVELLING OF OPEN STORAGE BLOCKS UPTO REQUIRED LEVELS,SLOPE & GRADES AS SPECIFIED BY ENGINEER INCHARGE FOR DRAINING OUT THE RAIN WATER AND COMPACTING THE GRADED SURFACE BY MECHANICAL MEANS(10-12 MT VIBRO ROLLER), DISPOSAL OF UPROOTED GRASS,VEGETATION,BUSHES WITHIN A LEAD OF 1KM ETC AS PER SPECIFICATION, DRAWING AND AS DIRECTED BY THE ENGINEER.	M2	30000			
Sec. A	2	BACK FILLING FOR LAND DEVELOPMENT AND OTHER AREA IN LAYERS NOT EXCEEDING 15 CM THICKNESS FOR LOW LYING AREA OF OPEN STORAGE YARD WHEREVER REQUIRED TO BE DEVELOPED INCLUDING WATERING AND CONSOLIDATING, ROYALTY ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.					
	B	WITH SAND BROUGHT FROM CONTRACTOR'S OWN SOURCE (OUTSIDE OF PLANT)	M3	162			
Sec. A	3	EXCAVATION /CUTTING OF EARTH BEYOND INITIAL 250MM THICK WHICH IS COVERED UNDER ITEM NO.(1) ABOVE IF REQUIRED AND SPREADING THE SAME IN LOW LYING AREA, WATERING, COMPACTION BY MEANS OF 10-12 MT CAPACITY POWER/VIBRO ROLLER FOR DEVELOPMENT OF OPEN STORAGE YARD AS PER INSTRUCTION OF BHEL ENGINEER.	M3	750			
Sec. A	4	PROVIDING & FILLING OF 200 MM COMPACTED THICK GRANULAR HARD MURUM IN LAYERS (THICKNESS OF EACH LAYER SHOULD NOT EXCEED 100MM) FOR PREPARING HARD SURFACE FOR STORAGE OF MATERIALS DURING MONSOON PERIOD IN THE SPECIFIED AREA AS SHOWN IN INDECATIVE DRAWING/SKETCH "AS MONSOON YARD", WATERING AND COMPACTION WITH 8-10T POWER/VIBRO ROLLER COMPLETE. RATE SHALL INCLUDE TRANSPORTATION, ROYALTY, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER. (APPROX.15000SQM. AREA TO BE DEVELOPED BY 200MM THICK MURUM FOR CONSTRUCTION OF MONSOON YARD)	M3	3000			
Sec. A	5	EXCAVATION FOR ROADWAY,MANSOON YARD IN ALL TYPES OF SOILS, SAND AND GRAVEL OR SOFT MURAM INCLUDING DRESSING OF SECTION TO THE REQUIRED GRADE, CAMBER & SIDE SLOPES AND SPREADING OF SURPLUS EXCAVATED EARTH UNIFORMLY OVER THE SPECIFIED AREA FOR SITE LEVELING & DEVELOPMENT OF REQUIRED DEPTH TO MAINTAIN UNIFORM GROUND LEVEL AS DIRECTED BY THE BHEL & CONSOLIDATION OF THE SURFACE INCLUDING SUB- BASE BY ROLLING THE SURFACE WITH 8 - 10 MT CAPACITY POWER/VIBRO ROLLER, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.AS PER DRAWINGS & SPECIFICATIONS.	M3	7477			
Sec. A	6	EXCAVATION FOR SIDE DRAIN/DRAINS AND CULVERTS IN ALL KINDS OF SOILS, TO THE SPECIFIED SECTION AS PER DRAWINGS & SPECIFICATIONS. INCLUDING SPREADING OF SURPLUS EXCAVATED EARTH UNIFORMLY OVER THE SPECIFIED AREA FOR SITE LEVELING & DEVELOPMENT OF REQUIRED DEPTH TO MAINTAIN UNIFORM GROUND LEVEL, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE. DIRECTED BY THE BHEL ENGINEER.					
Sec. A	A	IN ORDINARY SOIL	M3	582			
Sec. A	B	IN SOFT/HARD ROCK	M3	31			
Sec. A	7	BACK FILLING THE SIDES OF DRAINS, CULVERTS,STORAGE BLOCKS /YARD WITH GOOD EXCAVATED SOIL AVAILABLE FROM WORK IN LAYERS NOT EXCEEDING 15 CM THICKNESS INCLUDING WATERING AND CONSOLIDATING ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.	M3	1577			

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Sec. A	8	DISPOSAL OF EXCAVATED EARTH/ROCK (NOT SUITABLE FOR BACK FILLING) UPTO A MAXIMUM LEAD OF 2 KM OR PART THEREOF INCLUDING LOADING,UNLOADING ,CONVEYING AND SPREADING AS PER DIRECTION OF ENGINEER INCHARGE.AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.	M3	3944			
Sec. A	9	PROVIDING & FILLING OF 300MM COMPACTED THICK GRANULAR MURUM IN LAYERS (THICKNESS OF EACH LAYER SHOULD NOT EXCEED 150MM) IN SUB-BASE OF ROAD BELOW SOLING, WATERING AND COMPACTION WITH 8-10 T POWER ROLLER COMPLETE. RATE SHALL INCLUDE TRANSPORTATION, ROYALTY, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE ETC.	M3	1899			
Sec. A	10	PROVIDING AND LAYING SOLING 230 MM COMPACTED THICK WITH 150 -200 MM THICK BOULDER SIZE AND FILLING OF VOIDS WITH HAND BROKEN METAL OF SIZE 40-60 MM , SPREADING & PACKING MURRUM , ROLLING AND COMPACTION INCLUDING WATERING, WITH 8 - 10 MT CAPACITY ROAD ROLLER.	M3	1457			
Sec. A	11	PROVIDING 150 MM COMPACTED THICK WATER BOUND MACADAM (WBM) IN TWO LAYERS OF EACH 75 MM, WITH 40MM TO 60MM METAL (STONE AGGREGATE) INCLUDING SUPPLYING AND SPREADING GRAVEL/MURRUM OVER THE SOLING/CONSOLIDATED BASE, COMPACTING THE SAME WITH POWER ROLLER INCLUDING NECESSARY LABOUR, WATERING, MATERINGS ETC. COMPLETE, ALL AS PER RELEVANT SPECIFICATIONS AND DIRECTIONS OF BHEL ENGINEER (RATE SHALL BE INCLUSIVE OF ALL LABOUR, MATERIALS ETC., COMPLETE).	M3	951			
Sec. A	12 (A)	PROVIDING AND LAYING OF PLAIN CEMENT CONCRETE OF MIX 1:4:8 USING 20MM & DOWN SIZE HARD BROKEN GRANITE STONE JELLY FOR DRAINS, CULVERTS ETC. INCLUDING SHUTTERING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	108			
Sec. A	12 (B)	PROVIDING AND LAYING OF PLAIN CEMENT CONCRETE OF MIX 1:3:6 USING OPC GRADE 43/53, 20 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY WITH TROWEL FINISH FOR RAISED PLATFORM , WALK WAY / FOOT PATH OF OFFICE AND WHEREVER REQUIRED ETC. INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	5			
Sec. A	13	PROVIDING AND LAYING OF RCC OF MIX 1:2:4 USING 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE FOR RCC SLAB OF CULVERT, CONCRETE SLEEPER, RCC COPING OVER BRICK WALL OF DRAIN INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK AND CENTERING AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER	M3	59			
Sec. A	14	PROVIDING AND FIXING OF REINFORCEMENT INCLUDING CUTTING, BENDING AND FABRICATION OF REINFORCEMENT USING HIGH TENSILE TOR STEEL (Fe-415) AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL LEADS, LIFT AND MATERIALS, LABOUR AND MS BINDING WIRE 18/20 GAUGE ETC. COMPLETE.	MT	6			
Sec. A	15 (B)	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 WITH FLY ASH LIME BRICKS (FAL - MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR DRAINS, CULVERTS AND WHERE REQUIRED INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER .	M3	203			
Sec. A	16	PROVIDING AND PLASTERING WITH CEMENT MORTAR 1:6 (12MM THICK) OVER BOTH INTERNAL AND EXTERNAL FACES OF BRICKWORK AND CONCRETE SURFACES ETC. OF ALL HEIGHTS INCLUDING PREPARING THE SURFACE, RAKING JOINTS, SCAFFOLDING, CURING, COST OF ALL MATERIALS, LABOUR ETC. COMPLETE.	M2	1197			
Sec. A	17	40MM THICK COPING OVER THE DRAIN WALL TOP USING MIX - 1:2:4	M3	12			
Sec. A	18	PROVIDING 2 MM THICK NEAT CEMENT FINISH OVER CONCRETE BASE FOR FLOORING PAVING AND INTERNAL SURFACE OF BRICK DRAINS ETC.	M2	1197			
Sec. A	19	PROVIDING & FIXING OF WEEP HOLES WITH 75MM DIA. AC PIPES AT 3M C/C ON BOTH SIDES OF DRAIN WALL WITH FILTER MEDIA USING 40MM SIZE STONE GRIT OF SIZE (300X300X300MM).	RM	143			
Sec. A	20	SUPPLYING & FIXING IN POSITION OF RCC HUME PIPE OF NP2 WHEREVER DRAIN CROSSES THE ROADS INCLUDING ALIGNING, LEVELLING ETC. COMPLETE AS PER THE DIRECTION OF ENGINEER. INCLUDING P.C. & INCLUDING COLLAR JOINTS, ENCASMENT WITH CONCRETE 1:3:6 OF 300 MM DIA , ENCASING SHALL BE PAID EXTRA UNDER RESPECTIVE ITEMS OF CONCRETE..					
Sec. A	A	400mm dia	RM	58			

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Sec. A	B	600mm dia	RM	16			
Sec. A	21	PROVIDING AND FIXING BARBED WIRE FENCING AROUND OPEN STORAGE YARD AS PER BHEL DRAWING. POSTS SHALL BE SPACED AT 3M CENTRES AND STRUTS AT 30M CENTRES AND AT ALL TURNINGS WITH FOUNDATIONS, SUPPLYING AND FIXING GI BARBED WIRES, 10 HORIZONTAL LINES, TWO DIAGONALS BETWEEN POSTS BY MEANS OF GI STAPLES AS PER STANDARD PRACTICE. THE BARBED WIRE SHALL CONFORM TO IS 278 AND BE MADE OF TWO STRANDS OF GALVANISED TWISTED 2.5MM DIA (12.5 GAUGE) STEEL WIRE WITH FOUR POINT BARS. RATE QUOTED SHALL BE INCLUSIVE OF EXCAVATION, DISPOSAL OF SURPLUS EARTH, CONCRETE (1:3:6), FORM WORK AND ALL MATERIALS, COST OF POSTS, BARBED WIRES, TRANSPORTING, FIXING IN POSITION ETC. INCLUDING COST OF ALL LABOUR AND TWO COATS OF ENAMEL PAINT OF APPROVED SHADE WITH A SHOP COAT OF PRIMER IN ALL STRUCTURAL MEMBERS ETC COMPLETE.	RM	935			
Sec. A	22	REMOVAL OF WILD GROWTH, BUSHES VEGETATIONS AND DISPOSAL AS PER INSTRUCTION WITHIN THE PLANT BOUNDARY (SIZE OF STEM FROM 150MM TO 600MM DIA.)	NOS	20			
Sec. A	23	SUPPLY FABRICATION, AND FIXING IN POSITION OF MS GATES WITH STRUCTURAL/TUBULAR STEEL FRAMES AS PER BHEL DRAWING INCLUDING COST OF FOUNDATION & POSTS, PAINTING TWO COATS BY SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER, COST OF ALL MATERIALS, LABOUR, TRANSPORT ETC. COMPLETE.	MT	2			
Sec. A	24	SUPPLYING AT SITE OF WORK, TRENCHING, CARRYING TO TRENCHES AND LOWERING INTO TRENCHES AND ON WALLS, FLOORS ETC., LAYING TO PROPER ALIGNMENT, GRADE, LEVEL AND JOINTING WITH ALL NECESSARY SPECIALS, TEES, ELBOWS, UNIONS AND APPURTENANCES AND INCLUDING PRESSURE TESTING OF THE FOLLOWING SIZES OF GI PIPE LINES INCLUDING REFILLING OF TRENCHES WITH EXCAVATED EARTH IN LAYERS, WATERING AND RAMMING AND RESTORATION OF GROUND, ALL COMPLETE AS PER SPECIFICATIONS. RATE TO INCLUDE EARTH WORK EXCAVATION IN ALL SOILS, EXCEPT HARD ROCK REQUIRING BLASTING, SHORING, BALLING OR PUMPING OUT OF WATER WHEREVER REQUIRED, REMOVAL OF SLUSH ETC. REMOVING AND DEPOSITING SURPLUS EARTH AS DIRECTED BY THE BHEL ENGINEER INCLUDING ALL LEADS AND LIFTS AS PER SITE CONDITIONS.					
Sec. A	A	40MM DIA GI PIPE LINE WITH ALL SPECIALS	RM	200			
Sec. A	B	25MM DIA GI PIPE LINE WITH ALL SPECIALS	RM	100			
		CONSTRUCTION OF RAISED CONCRETE PLATFORM OF 8.5 M WIDE AND 70 M LONG -- 1NO.					
Sec. A	25	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH IN ALL KINDS OF SOIL (EXCEPT HARD ROCK AND SOFT ROCK) FOR RAISED CONCRETE PLATFORM ETC., SPREADING OF SURPLUS EXCAVATED EARTH UNIFORMLY OVER THE SPECIFIED AREA FOR SITE LEVELING & DEVELOPMENT OF REQUIRED DEPTH TO MAINTAIN UNIFORM GROUND LEVEL WITH PROPER COMPACTION AROUND THE RAISED CONCRETE PLATFORM & OTHER AREAS ETC. AS DIRECTED BY BHEL ENGINEER AND INCLUDING DEWATERING WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.	M3	360			
Sec. A	26	PROVIDING & FILLING OF 300MM COMPACTED THICK GRANULAR MURUM IN LAYERS (THICKNESS OF EACH LAYER SHOULD NOT EXCEED 150MM) IN THE BASE OF SOLING INCLUDING WATERING AND COMPACTION WITH 8-10 T POWER ROLLER COMPLETE. RATE SHALL INCLUDE TRANSPORTATION, ROYALTY, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE ETC.	M3	188			
Sec. A	27	PROVIDING AND LAYING SOLING 250 MM COMPACTED THICK WITH 150 -200 MM THICK BOULDER SIZE AND FILLING OF VOIDS WITH HAND BROKEN METAL OF SIZE 40-60 MM, SPREADING & PACKING MURRUM, ROLLING AND COMPACTION INCLUDING WATERING, WITH 10-12 MT CAPACITY ROAD ROLLER.	M3	157			
Sec. A	28	PROVIDING AND LAYING OF 150MM THICK PLAIN CEMENT CONCRETE OF MIX 1:3:6 BY USING OPC GRADE 43/53, 20 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY WITH TROWEL FINISH & REQUIRED CAMBER/SLOPE FOR RAISED CONCRETE PLATFORM ETC. INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	92			
	29	SUPPLY AND FIXING OF GI PIPE IN CONCRETE SLEEPER AS PER DRAWING AND INSTRUCTION OF ENGINEER INCHARGE	MT	1			
		PROVIDING 6" DIA.BOREWELL WITH SUBMERSIBLE PUMP OF 3HP CAPACITY --2NOs.					
SEC A	30	PROVIDING 6" DIA. BORING UPTO DEPTH OF 150 FT. WITH TRUCK MOUNTED MECHANICAL RIG MACHINE WITH YIELD TEST OF WATER.	Each	2			
SECA	31	EXTRA FOR BORING OVER 150 FT. DEPTH FOR EVERY ADDITIONAL 10 FT. OR PART THEREOF.	Per ft	50			

SEC A	32	SUPPLY & FIXING 6" DIA PVC HEAVY DUTY (8-10 KG PRESSURE) CASING PIPE OF STANDARD MAKE (KISHAN/KASTA OR EQUIVALENT.) WITH APPROVAL OF BHEL IN BOTH THE BORINGS.	Per ft.	120			
SEC A	33	SUPPLY AND INSTALLATION OF ELECTRICAL SUBMERSIBLE PUMP (MINIMUM 3 HP) OF STANDARD MAKE (CROMPTON GREAVES/CRI PUMPS OR EQUIVALENT) AS PER APPROVAL OF BHEL WITH ALL ACCESSORIES, CONSOLE PANEL, PVC COATED SLING WIRE, SUBMERSIBLE CABLE OF REQUIRED LENGTH & 1/4" DIA HDPE SUCTION PIPE 120FT. LENGTH.	Each.	2			
SEC A	34	EXTRA OVER INITIAL LENGTH OF HDPE SUCTION PIPE BEYOND 120 FT.	Per ft.	30			
Sec. A		TOTAL VALUE OF SECTION-A IN Rs.					
RATE SCHEDULE, SECTION - B							
SECTION B: NAME OF WORK- ILLUMINATION OF OPEN STORAGE YARD 30,000 SQM AT 2 X 800 MW NTPC LARA ESPPROJECT							
Sec. B	SL.N O	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words)	Amount
Sec. B	1	SUPPLY & INSTALLING 3 PHASE METERING AND POWER DISTRIBUTION BOARD COMPLETE WITH : (1) INCOMING SFU TPN 400 AMPS- 1NO, (2) OUTGOING SFU TPN 200 AMPS -2NOS. (3) OUTGOING SFU TPN 100 AMPS -2NOS. (4) OUTGOING SFU TPN 32 AMPS -2NOS. 3 PHASE ELECTRONIC ENERGY METER - BHEL / L&T / GEC MAKE. AMMETER, VOLTMETER AND SELECTOR SWITCHES FOR BOTH - AE AND KAYCEE MAKE. PHASE INDICATION LAMPS, HRC FUSES FOR IC AND OG FEEDERS, CABLE GLANDS, POWER TERMINALS FOR CABLES TERMINATION, CABLE LUGS AND PROVISION FOR DOUBLY EARTHING THE PANEL ENCLOSURE. PANEL ENCLOSURE SHALL BE MADE OF SHEET METAL THICHNNNESS NOT LESS THAN 1.6 MM AND SUITABLE FOR OUT DOOR INSTALLATION, MODULAR CONSTRUCTION, HINGED DOOR WITH LOCKING ARRANGEMENT, BASE FRAME, SHOULD HAVE SLOPPED CANOPY, DULY PAINTED WITH FIRST COAT OF PRIMER AND TWO COATS OF SYNTHETIC ENAMEL PAINT (INTERIOR WITH WHITE PAINT AND EXTERIOR WITH LIGHT GREY AS PER SHADE 5, IS 630) INTERNAL POWER DISTRIBUTION TO DEVICES SHALL BE WITH AL BUSBARS OR COPPER FLEXIBLE SINGLE CORE PVC CABLES OF 1.1 KV GRADE, CONTROL WIRING WITH 1.5 SQMM, SUITABLE STOOL MADE OUT OF MS STRUCTURE OF 1.2 METER HIGH FOR MOUNTING OF PANEL WITH ANCHORING ARRAGEMENT AT FOUNDATION, SUITABLE FOR BOTTOM ENTRY OF CABLES.	NO	1			
Sec. B	2	PROVIDING SUITABLE FOUNDATION FOR MOUNTING AC DISTRIBUTION BOARD AS SPECIFIED IN SL. NO.1 , INSTALLATION & COMMISSIONING OF PANEL	NO	1			
Sec. B	3	SUPPLY OF 415 VOLT AC, 3 PHASE /FOUR WIRE POWER FEEDER PILLAR BOARD , BOARD SHALL BE COMPRISES OF THREE NUMBER AND ONE NUMBER ALUMINIUM BUS BAR FOR PHASE & NEUTRAL RESPECTIVELY. BUS BAR RATING SHALL BE 200 AMPS AND SHALL BE MOUNTED ON EPOXY INSULATOR OF 1.1 KV GRADE, EACH BUS BAR SHALL HAVE DRILLED HOLE FOR CONNECTING INCOMING / OUT GOING CABLES, PROVISION FOR EARTHING THE PANEL ENCLOSURE. PANEL ENCLOSURE SHALL BE MADE OF SHEET METAL THICHNNNESS NOT LESS THAN 1.6 MM AND SUITABLE FOR OUT DOOR INSTALLATION, HINGED DOOR WITH LOCKING ARRAGEMENT , BASE FRAME , SHOULD HAVE SLOPPED CANOPY, DULY PAINTED WITH FIRST COAT WITH PRIMER AND TWO COATS OF SYNTHETIC ENAMEL PAINT (INTERIOR WITH WHITE PAINT AND EXTERIOR WITH SMOKE GREY AS PER IS), SUITABLE STOOL MADE OUT OF MS STRUCTURE OF 1.2 METER HIGH FOR MOUNTING OF PANEL WITH ANCHORING ARRAGEMENT AT FOUNDATION .	NO	1			
Sec. B	4	PROVIDING SUITABLE FOUNDATION FOR MOUNTING 415 VOLT AC POWER FEEDER PILLAR BOARD AS SPECIFIED IN SL. NO.12 . INSTALLATION & COMMISSIONING OF PANEL	NO	1			

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Sec. B	5	SUPPLYING, INSTALLATION & COMMISSIONING OF SODIUM VAPOUR LAMP STREET LIGHT FITTING 150 WATT SSG-2315 IH OF CROMPTON OR SIMILAR PHILIPS MAKE, COMPLETE WITH ONE PIECE CANOPY, INTEGRAL CONTROLGEAR COMPRISING OF COPPER WOUND CHOKE , IGNITOR , HPF CAPACITOR, HPSV LAMP AND SUITABLE FOR DIRECTLY SLIPPING OVER LIGHT MOUNTING BRACKET MADE OUT OF 40 MM OD PIPE AND SUITABLE FOR LAMPS, CONTROL GEAR BOX CABLING & TERMINATION OF ITEMS SUPPLIED (TO BE MOUNTED ON 9 MTR POLE - ITEM NO. 2).	NOS.	72			
Sec. B	6	SUPPLY AND ERECTING STEEL TUBULAR SWAGED POLES, 9 MTR LONG MADE OF SHEET STEEL HAVING ULTIMATE TENSILE STRENGTH 42 KG F/SQ.MM CONFIRMING TO BIS :2713 (RPART-II) COMPLETE WITH 300X300X6 MM THICK M. S. BASE PLATE FOR WELDING AT SITE AND SIZE AS PER CONFIGURATION GIVEN IN BIS FOR 410 SP-28 (113 KG- POLE WEIGHT) WITH 1.5 MTR. DEEP EXACAVATION, CONCRETING IN 1:4:8 RATIO SIZE 45 CMS X 45 CMS X 150 CMS AND POLE PLINTH IN 1:3:6 CEMENT CONCRETING HAVING 300 MM HEIGHT AND 300 MM DIA .INCLUDING DOUBLE EARTHING OF POLE WITH SUITABLE ARRANGEMENT, DULY PAINTED WITH TWO COATS OF RED OXIDE PAINT AND ONE COAT OF ALUMINIUM PAINT TO BE APPLIED AFTER ERECTION; THE LENGTH OF POLE BELOW GROUND TO BE PAINTED WITH TWO COATS OF BLACK BITUMINUS PAINT. THE POLE SHALL BE COMPLETE WITH JB, FUSE AND MINOR FABRICATION AS BELOW : I) DRILING 20 MM DIA HOLE AT ABOUT 2.5 MTR FROM GROUND LEVEL FOR WIRE LEADS FROM JUNCTION BOX TO LIGHT FIXTURE . II) DRILING 15MM DIA HOLES AT ABOUT 0.7 AND AT 2.5 MTR FROM GROUND LEVEL AND WELDING 12 MM NUTS FOR USING A 12 MM G.I BOLT FOR FASTENING EARTH CONDUCTERS. III) WELDING REQUIORED HOLES FOR FIXING POLE CAP OF STREET LIGHT BRACKET. IV) WELDING DIAMETRALLY 10 MM M.S. ROUND 30 MM BELOW POLE TOP EDGE FOR CLIPPING WIRE LEADS .	NOS.	36			
Sec. B	7	SUPPLY OF WEATHER PROOF FLOOD LIGHT LUMINIARIES OF CROMPTON MAKE (FBD 1425/40-WITH HIGH PRESSURE SODIUM VAPOUR LAMP 1X 400 WATT ALONG WITH NON- INTEGRAL TYPE CONTROL GEAR BOX HAVING ADEQUATE NUMBER OF TERMINAL CONNECTORS FOR TERMINATING TWO CABLE OF 3X 10 SQMM AL AND SUITABLE FOR OUT DOOR APPLICATION) OR EQUIVALENT IN BAJAJ, PHILLIPS ONLY , INCLUDING SUPPLY & FIXING CABLES BETWEEN THE CONTROL GEAR BOX AND LIGHT LUMINIARIES AND MOUNTING FIXTURE WITH HARDWARE FOR MOUNTING OF LIGHT LUMINIARIES AND CONTROL GEAR BOX ON POLE TYPE 410 SP-28.	NOS.	5			
Sec. B	8	INSTALLATION & COMMISSIONING OF FLOOD LIGHT LUMINIARIES, CONTROL GEAR BOX , CABLING & TERMINATION FOR SR.NO.03 (ITEMS SUPPLIED ABOVE)	NOS.	5			
Sec. B	9	ENGINEERING , SUPPLY AND INSTALLATION OF LATTICE TYPE STRUCTURAL TOWER OF HEIGHT 15M .TOWER SHALL BE FABRICATED IN THREE SECTION OF EQUAL LENGHT OF 5 METER EACH.PREPARATION OF FABRICATION DRAWING & ITS APPROVAL FROM BHEL. BRIEF DETAILS ARE AS GIVEN BELOW : TOWER SHALL BE ADEQUATELY STRONG TO WITHSTAND HEAVY WIND . NO STAY/GUY ROPES SHALL BE TIED WITH IT. AT TOP OF THE TOWER ADEQUATE SIZE OF PLATEFORM SHALL BE PROVIDED WITH RAILING AROUND THE PLATFORM FOR MOUNTING OF LIGHTING LUMINIARIES(TENTATIVELY TWEVEL FITTING ON EACH TOWER) AND MAINTENANCE PURPOSE , FLOOR OF PLATFORM SHALL BE COVERED WITH CHEQURED PLATE. A LADDER ALONG WITH PROTECTIVE CAGE SHALL BE PROVIDED ALONG THE HEIGHT OF TOWER. IT SHOULD BE PAINTED WITH ONE COAT RED OXIDE PRIMER AND TWO COATS OF ALUMINIUM PAINT AFTER INSTALLATION. EACH TOWER SHALL BE PROVIDED WITH POWER DISTRIBUTION BOX OUT DOOR TYPE AND SHOULD HAVE PROVISION OF TERMINATING ONE NUMBER INCOMING AND EIGHT OUT GOING CABLE .ERECTING AT SITE INCLUDING ALL CIVIL WORKS LIKE EXCAVATION, CASTING OF FOUNDATION OF REQUIRED SIZE AND DEPTH WITH CONCRETE OF GRADE 1:2:4 WITH BASE PLATES, GROUTING OF LATTICE STRUCTURE, ONE EARTH PIT AS PER BIS STANDARD IS TO BE MADE NEAR THE TOWER AND EARTHING OF THE TOWER INCLUDING SUPPLY OF MATERIAL ETC. COMPLETE.	NOS.	1			
Sec. B	10	SUPPLY, INSTALLATION & COMMISSIONING OF FLOOD LIGHT LUMINIARIES OF BAJAJ MAKE TYPE BGENF 22 OR EQUIVALENT IN CROMPTON , PHILLIPS ONLY, EACH LUMINIARIES SHALL BE WITH TWO NUMBER 400 WATT HPSV LAMPS AND CONTROL GEAR BOX INTEGRAL/ NON ITEGRAL TYPE INCLUDING CABLES FOR INTERCONNECTION . (THESE FITTING SHALL BE MOUNTED ON LIGHTING MAST /TOWER , ON EACH TOWER 8 SUCH FITTING SHALL BE MOUNTED).	NOS.	8			

T.S.No BHE/PW/PUR/LRPT-ENB/1240
VOLUME II PRICE BID SPECIFICATION

Sec. B	11	SUPPLY OF CABLES 3 -1/2 COREX 185 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	400			
Sec. B	12	INSTALLATION OF CABLES 3 -1/2 COREX 185 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM TRANSFORMER SUB STATION TO 415 VOLT AC DISTRIBUTION BOARD.	RM	400			
Sec. B	13	SUPPLY OF CABLES 3-1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I) (TO BE USED FORM SHEDS AS WELL AS OPEN STORAGE YARD WHEREVER REQUIRED)	RM	250			
Sec. B	14	INSTALLATION OF CABLES 3 -1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND, EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC COMPLETE. CABLES ARE TO BE LAID FROM 415 VOLT AC DISTRIBUTION BOARD TO FEEDER PILLAR BOARD .	RM	250			
Sec. B	15	SUPPLY OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	125			
Sec. B	16	INSTALLATION OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM FEEDER PILLER TO HIGH MAST TOWER	RM	125			
Sec. B	17	SUPPLY OF CABLES 2 CORE X 10 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I)	RM	2366			
Sec. B	18	INSTALLATION OF CABLES 2 CORE X 10 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC COMPLETE. CABLES ARE TO BE LAID FROM 415 VOLT AC POWER FEEDER PILLAR BOARD TO LIGHTING POLES & POLE TO POLE	RM	2366			
Sec. B	TOTAL VALUE OF SECTION-B IN Rs.						

RATE SCHEDULE, SECTION - C

SECTION C: CONSTRUCTION OF FOUNDATION UPTO FFL OF 1 Nos. - CLOSED STORAGE SHEDS (60 M X 15 M) FOUNDATION AT 2 X 800 MW NTPC LARA ESPPROJECT							
SECTION C	SL.N O	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words	Amount
SEC C	1(A)	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH IN ALL KINDS OF SOIL (EXCEPT SOFT ROCK AND HARD ROCK) FOR FOUNDATIONS, RAMPS ETC., AS DIRECTED BY BHEL ENGINEER INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	142			
SEC C	1(B)	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH FOR SOFT ROCK AND HARD ROCK (BY MANUALLY OR MECHANICALLY BUT WITHOUT BLASTING) FOR FOUNDATIONS, RAMPS ETC., AS DIRECTED BY BHEL ENGINEER INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	18			

SEC C	1(C)	EARTH WORK EXCAVATION FROM 2.0M TO 4.0 M DEPTH IN ALL KINDS OF SOIL (EXCEPT HARD ROCK AND SOFT ROCK) FOR FOUNDATIONS, RAMPS ETC., AS DIRECTED BY BHEL ENGINEER INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	9			
SEC C	1(D)	EXCAVATION IN ALL KINDS OF SOIL INCLUDING SOFT & HARD ROCK ((BY MANUAL CHISELING OR BY MECHANICAL MEANS BUT WITHOUT BLASTING) FROM 2 TO 4M DEPTH FOR FOUNDATIONS, RAMPS ETC WHEREVER REQUIRED INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	9			
SEC C	1(E)	SUB GRADE PREPARATION: CUTTING LEVELLING, FILING USING EXCAVATED EART, WATERING AND CONSOLIDATION FOR PLINTH PROTECTION AREA BEFORE LAYING THE PCC WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.	M2	1134			
SEC C	2	DISPOSAL OF EXCAVATED EARTH/ROCK (NOT SUITABLE FOR BACK FILLING) BEYOND INITIAL LEAD OF 50M AND UPTO A MAXIMUM LEAD OF 2 KM OR PART THEREOF INCLUDING LOADING, UNLOADING , TRANSPORTING AND SPREADING AS PER DIRECTION OF BHEL ENGINEER .	M3	76			
SEC C	3	BACKFILLING OF FOUNDATION ,FLOORS AND PLINTH IN LAYERS NOT EXCEEDING 150MM THICK. INCLUDING WATERING AND CONSOLIDATING ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.					
SEC C	A	WITH GOOD EXCAVATED SOIL AVAILABLE FROM THE EARTH WORK.	M3	309			
SEC C	B	WITH GRANULAR MURUM IN LAYERS (THICKNESS OF EACH LAYER SHOULD NOT EXCEED 150MM) BELOW FOUNDATIONS AND RAMP AS PER STANDARD SPECIFICATION, RELEVANT DRAWINGS AND INSTRUCTED BY BHEL ENGINEER INCLUDING ROYALTY. CONTRACTOR HAS TO SUBMIT ROYALTY CERTIFICATE FROM CONCERNED STATE GOVT. MINING DEPARTMENT	M3	21			
SEC C	C	WITH GOOD EARTH BROUGHT FROM OUTSIDE FROM CONTRACTOR'S OWN SOURCE INCLUDING ROYALTY ETC.	M3	100			
SEC C	D	PROVIDING STONE SOLING OF REUIRED THICKNESS AS PER DRAWING BELOW FLOORING, RAMP, COLUMN FOUNDATIONS OF STORAGE SHED ETC. BY USING 80 MM SIZE HARD BROKEN BLACK GRANITE/QUARTIZITE/GNEISS/TRAP STONE METAL INCLUDING GRANULAR MURRUM PACKING, WATERING & COMPACTION ETC COMPLETE.AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER	M3	242			
SEC C	4	PROVIDING AND LAYING OF PLAIN CEMENT CONCRETE OF MIX 1:4:8 USING OPC GRADE 43/53, 20 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY FOR FOUNDATION, FLOORING, COLUMN ETC. INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	12			
SEC C	5	PROVIDING AND LAYING OF 100 MM THICK PLAIN CEMENT CONCRETE OF MIX 1:3:6 USING OPC GRADE 43/53, 20 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY WITH TROWEL FINISH FOR PLINTH PROTECTION WITH TROWEL FINISH INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	12			
SEC C	6	PROVIDING AND LAYING OF RCC MIX 1:2:4 USING OPC GRADE 43/53, 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK & CENTERING AS PER DRAWING AND SPECIFICATION AND DIRECTED BY BHEL ENGINEER BUT EXCLUDING COST OF REINFORCEMENTS.	M3	96			
Sec. C	4(D)	PROVIDING AND LAYING OF RCC MIX 1:1.5:3 USING OPC GRADE 43/53 , 20MM DOWN SIZE HARD BROKEN GRANITE STONE 20MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY WITH TROWEL FINISH FOR FOUNDATION ,RAFT COLOUM,PLINTH BEAM AND WHEREVER REQUIRED INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK & CENTERING AS PER DRAWING AND SPECIFICATION AND DIRECTED BY BHEL ENGINEER BUT EXCLUDING COST OF REINFORCEMENTS.	M3	49			
SEC C	7	PROVIDING AND LAYING DPC (DAMP PROOF COURSE) 50MM THICK IN 1:2:4 CEMENT CONCRETE LAYER USING OPC GRADE 43/53AND WITH 6MM DOWN AGGREGATE, INCLUDING FORMWRK, BITUMEN FELT USING CEMENT WITH WATER PROOFING COMPOUND ETC. COMPLETE	M2	36			
SEC C	8	PROVIDING , CUTTING, BENDING AND FIXING IN POSITION REINFORCEMENT OF VARIOUS DIA. USING HIGH TENSILE TOR STEEL (Fe -415/500) FOR FOUNDATIONS, COLUMNS, BEAMS, FLOORS, SUNSHED, SLAB ETC. AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL MATERIALS, LEADS, LIFT, LABOURS, MS BINDING WIRE 18/20 GAUGE, TACK WELDING AND SUPPORTING AS REQUIRED COMPLETE.	MT	3			

T.S.No BHE/PW/PUR/LRPT-ENB/1240
VOLUME II PRICE BID SPECIFICATION

SEC C	9(B)	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 AND FLY ASH LIME BRICKS (MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR FOUNDATION, WALL, SEPTIC TANK ETC. INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER . EXCLUDING PLASTERING & PAINTING.	M3	24			
SEC C	14	PROVIDING AND FIXING OF IPS FLOORING 40MM THICK USING OPC GRADE 43/53 WITH CEMENT CONCRETE 1:2:4 (USING 12 MM DOWN AGGREGATES) AS PER STANDARD PRACTICE IN PANELS OF SIZE NOT EXCEEDING 2.0 x 2.0 SQ.M BY PROVIDING, FIXING GLASS STRIPS.INCLUDING CURING & CLEANING.	M2	945			
SEC C	15	PROVIDING 2MM THICK NEAT CEMENT FINISH USING OPC GRADE 43/53 OVER CONCRETE BASE FOR FLOORING, PAVING ,PLASTERED SURFACE ETC.INCLUDING CURING & CLEANING AND SCAFFOLDING COMPLETE.	M2	945			
SEC C	16	PROVIDING PLASTERING WITH CEMENT MORTAR -1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OVER BOTH INTERNAL AND EXTERNAL FACES OF BRICKWORK AND CONCRETE SURFACES, PARTITION WALLS ETC. AT ALL LEVELS INCLUDING PREPARING THE SURFACE, RAKING JOINTS, SCAFFOLDING, CURING, COST OF ALL MATERIALS, LABOUR ETC. COMPLETE.					
SEC C		(i) EXTERNAL PLASTERING - 18MM THICK	M2	90			
SEC C		(ii) INTERNAL PLASTERING -12MM THICK	M2	47			
SEC C	17(A)	PROVIDING & APPLYING COLOUR WASH -THREE COATS ON NEWLY PLASTERED EXTERNAL SURFACE OF SHED BY USING BEST SHALL LIME TO GIVE AN EVEN SHADE INCLUDING PREPARING THE SURFACE LIKE CLEANING AND BRUSHING & BROOMING OF WALLS AND IN ACCORDANCE WITH STANDARD SPECIFICATION. RATE INCLUDE COST OF ALL MATERIALS , COLOURING AGENT, BASE COAT OF WHITE WASH,APPROVED ADHESIVE, SCAFFOLDING AT ALL LEVEL, BRUSH ETC. COMPLETE.	M2	90			
SEC C	17(B)	PROVIDING & APPLYING WHITE WASH - THREE COATS ON NEWLY PLASTERED INTERNAL SURFACE OF SHED BY USING BEST SHALL LIME TO GIVE AN EVEN SHADE INCLUDING PREPARING THE SURFACE LIKE CLEANING AND BRUSHING & BROOMING OF WALLS AND IN ACCORDANCE WITH STANDARD SPECIFICATION. RATE INCLUDE COST OF ALL MATERIALS , COLOURING AGENT, APPROVED ADDESSIVE, SCAFFOLDING AT ALL LEVEL, BRUSH ETC. COMPLETE.	M2	47			
Sec. C	18	SUPPLYING & FIXING IN POSITION MS FOUNDATION BOLTS WITH HEXAGONAL NUTS (3 NOS. NUTS WITH EACH BOLT) IN RCC COLUMNS OF PEB SHED FOUNDATION AS PER DRAWINGS & DIRECTION OF BHEL ENGINEER	MT	1			
SEC C	19	MANUFACTURING, SUPPLYING AND FIXING OF 20 GAUGE MS ROLLING SHUTTERS OF SIZE 5M X 5 M AS PER I.S. SPECIFICATIONS , COMPLETE, MECHANICALLY OPERATED FROM IN AND OUTSIDE BOTH AS INSTRUCTED BY BHEL ENGINEER INCLUDING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER LOCKING ARRANGEMENT. RATE SHALL BE INCLUSIVE OF ALL THE ABOVE COMPLETE.	M2	25			
SEC C		TOTAL VALUE OF SECTION-C IN Rs.					

RATE SCHEDULE, SECTION D

SECTION D : INTERNAL ELECTRIFICATION WORK OF 1 NOS. CLOSED SHEDS (60M X 15M) AT 2 X 800 MW NTPC LARA ESPPROJECT

SEC. D	SL.NO	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words)	Amount
Sec. D	1	SUPPLYING & INSTALLING POWER DISTRIBUTION BOARD COMPLETE WITH: COMMON BOARD FOR ALL SHEDS. 1) INCOMING MCB TPH 100 AMPS. - 1 NO. 2) OUTGOING MCB TPH 32 AMPS. -3NOS. 3) RCCB DP 25/20 AMPS. - 2NOS. 4) OUTGOING MCB SP 6 AMPS - 6NOS. All RCCBs, MCBs SHALL BE MDS/INDO KOPP MAKE. DISTRIBUTION BOARDS SHALL BE SIEMENS / MDS / INDO KOPP MAKE WITH INTERNAL BUSBARS, INTERNAL WIRING, 2 NOS. EARTHING TERMINALS, EARTH CONNECTIONS, INCLUDING GLANDS, LUGS.	Set	1			
Sec. D	2	SUPPLYING & FIXING WALL MOUNTING TYPE LIGHTING PANELS , EACH WITH : (1) INCOMING MCB TPN -32 AMPS - 1NO. (2) RCCB DP 32 AMPS - 2NOS (3) MCB SP 6AMPS - 30 NOS.. All RCCBs, MCBs SHALL BE MDS/INDO KOPP MAKE. LIGHTING PANEL SHALL BE SIEMENS/MDS/INDO KOPP MAKE WITH INTERNAL BUSBARS, 2 NOS. EARTHING TERMINALS, EARTH CONNECTIONS, INCLUDING GLANDS, LUGS & WIRING FROM MAIN DB	Set	1			
Sec. D	3	PROVIDING AND INSTALLING WIRING USING 2.5 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR COMPUTER ROOM, OFFICE SHED & FOR REST OF SHEDS OPEN AND WHRERVER REQUIRED IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	64			
Sec. D	4	PROVIDING AND INSTALLING WIRING FOR USING 4.0 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR COMPUTER ROMM, OFFICE SHED & FOR REST OF SHEDS OPEN AND WHRERVER REQUIRED IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	3			
Sec. D	5	PROVIDING AND INSTALLING WIRING FOR MAINS USING 6.00 SQ.MM COPPER CONDUCTOR OF ISI MAKE , USING CONCEALED TYPE WIRING/PVC CONDUIT OF REQUIRED SIZE.	PER POINT	3			
Sec. D	6	PROVIDING AND INSTALLING WIRING FOR MAINS USING 16.00 SQ.MM COPPER CONDUCTOR OR ISI MAKE USING CONCEALED TYPE WIRING/PVC CONDUIT OF REQUIRED SIZE.	PER POINT	3			
Sec. D	7	PROVIDING AND INSTALLATION OF PLUG POINT OF 5A SOCKET (ANCHOR OR EQUIV.) OUTLET INCLUDING WIRING TERMINATION. THIS INCLUDES TUBE LIGHT FITTINGS ETC. COMPLETE.	NO	3			
Sec. D	8	PROVIDING AND INSTALLATION OF PLUG POINT OF 15A SOCKET (ANCHOR OR EQUIV.) OUTLET INCLUDING WIRING TERMINATION. THIS INCLUDES TUBE LIGHT FITTINGS V	NO	3			
Sec. D	9	PROVIDING AND FIXING ORDINARY TUBELIGHT WITH FRAME OF STANDARD MANUFACTURER LIKE PHILIPS/BAJAJ OR EQUIVALENT AS APPROVED BY BHEL. THIS INCLUDES TUBE LIGHT FITTINGS ETC. COMPLETE.	NO.	40			
Sec. D	10	PROVIDING AND FIXING CEILING FAN 48" DIAMETER OF APPROVED COMPANY SUCH AS CROMTAN GREEVES OR ANY OTHER STANDARD MANUFACTURER AS DIRECTED BY BHEL. THIS INCLUDES TUBE LIGHT FITTINGS ETC. COMPLETE.	NO	6			
Sec. D	11	PROVIDING AND FIXING CALLING BELLS (WITH INDICATOR LIGHT)	NO	1			
Sec. D	12	PROVIDING EARTHING PITS WITH 2 " DIA , 2 M LONG GI PIPES WITH FLANGE & GI WIRES WITH CHARCOAL, SALT AND AS PER THE STANDARD PRACTICE FOR ELECTRICAL CONNECTION.RATE SHALL BE INCLUSIVE OF ALL MATERIALS, LABOURS, ETC COMPLETE.	NO	1			
Sec. D	13	PROVIDING & FIXING ALUMINIUM DISPERSIVE LUMINAIRE ENAMELED GREEN AND WHITE WITH CAST ALUMINIUM FLANGE AND NIPPLE SUITABLE FOR USE WITH GLS LAMP, DOME 12" DIAMETER, WITH HANGING BRACKET AND 200W GLS LAMP OF CROMPTON OR EQUIVALENT BAJAJ/PHILIPS MAKE, COMPLETE.	Nos.	18			
Sec. D	14	WIRING WITH 2.5 SQ MM ISI MARK COPPER WIRE FOR ABOVE IN PVC CONDUIT ALONG WITH GI EARTH WIRE INCLUSIVE OF ALL MATERIAL, LABOUR ETC. COMPLETE	Per Point	3			

Sec. D	15	SUPPLY OF CABLES 2 CORE X 10 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I)	RM	50			
Sec. D	16	INSTALLATION OF CABLES 2 CORE X 10 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC COMPLETE. CABLES ARE TO BE LAID FROM 415 VOLT AC POWER FEEDER PILLAR BOARD BOARD TO LIGHTING POLES & POLE TO POLE	RM	50			
Sec. D	17	SUPPLY OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	30			
Sec. D	18	INSTALLATION OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM TRANSFORMER SUB STATION TO 415 VOLT AC DISTRIBUTION BOARD	RM	30			
Sec. D	19	SUPPLY OF CABLES 3 -1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	20			
Sec. D	20	INSTALLATION OF CABLES 3 -1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND, EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC COMPLETE. CABLES ARE TO BE LAID FROM 415 VOLT AC DISTRIBUTION BOARD TO FEEDER PILLAR BOARD , FEEDER PILLAR BOARD TO LIGHTING MAST / TOWER.	RM	20			
Sec. D	21	SUPPLY OF CABLES 3 -1/2 COREX 185 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	25			
Sec. D	22	INSTALLATION OF CABLES 3 -1/2 COREX 185 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM TRANSFORMER SUB STATION TO 415 VOLT AC DISTRIBUTION BOARD.	RM	25			
Sec. D	TOTAL VALUE OF SECTION-D IN Rs.						

RATE SCHEDULE, SECTION - E

SECTION E: CONSTRUCTION OF MESS BUILDING (6MX12M) AT 2 X 800 MW NTPC LARA ESPPROJECT

SECTION E	SL.NO	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words	Amount
SEC-E	1(A)	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH IN ALL KINDS OF SOIL (EXCEPT SOFT ROCK AND HARD ROCK) FOR FOUNDATIONS, SOAK PIT, RAMPS ETC., AS DIRECTED BY BHEL ENGINEER INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	36			
SEC-E	1(B)	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH FOR SOFT ROCK AND HARD ROCK (BY MANUAL CHISELING OR BY MECHANICAL MEANS BUT WITHOUT BLASTING) FOR FOUNDATIONS, SOAK PIT, RAMP ETC., AS DIRECTED BY BHEL ENGINEER INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	8			

SEC-E	1(C)	SUB GRADE PREPARATION: CUTTING LEVELLING, FILLING WITH EXCAVATED EARTH, WATERING AND CONSOLIDATION FOR MESS BUILDING AREA AND PLINTH PROTECTION AROUND THE BUILDING AREA WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.	M2	91			
SEC-E	2	DISPOSAL OF EXCAVATED EARTH/ROCK (NOT SUITABLE FOR BACK FILLING) BEYOND INITIAL LEAD OF 50M AND UPTO A MAXIMUM LEAD OF 2 KM OR PART THEREOF INCLUDING LOADING, UNLOADING , TRANSPORTING AND SPREADING AS PER DIRECTION OF BHEL ENGINEER .	M3	33			
SEC-E	3	BACKFILLING OF FOUNDATION ,FLOORS AND PLINTH IN LAYERS NOT EXCEEDING 150MM THICK. INCLUDING WATERING AND CONSOLIDATING ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.					
SEC-E	A	WITH GOOD EXCAVATED SOIL AVAILABLE FROM THE EARTH WORK.	M3	11			
SEC-E	B	WITH GRANULAR MURUM IN LAYERS (THICKNESS OF EACH LAYER SHOULD NOT EXCEED 150MM) BELOW FLOORING, AND RAMP ETC AS PER STANDARD SPECIFICATION, RELEVANT DRAWINGS AND INSTRUCTED BY BHEL ENGINEER INCLUDING ROYALTY. CONTRACTOR HAS TO SUBMIT ROYALTY CERTIFICATE FROM CONCERNED STATE GOVT. MINING DEPARTMENT	M3	19			
SEC-E	C	WITH GOOD EARTH BROUGHT FROM OUTSIDE FROM CONTRACTOR'S OWN SOURCE INCLUDING ROYALTY ETC.	M3	6			
SEC-E	D	PROVIDING & FILLING IN SOAK PIT WITH BRICK BATS 40-80MM INCLUDING SAND PACKING ETC. COMPLETE, AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.	M3	11			
SEC-E	4(A)	PROVIDING AND LAYING OF PLAIN CEMENT CONCRETE OF MIX 1:4:8 USING OPC GRADE 43/53, 40 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY FOR FOUNDATION, FLOORING, COLUMN ETC. INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	14			
SEC-E	4(B)	PROVIDING AND LAYING OF 100 MM THICK PLAIN CEMENT CONCRETE OF MIX 1:3:6 USING OPC GRADE 43/53, 20 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY WITH TROWEL FINISH FOR PLINTH PROTECTION WITH TROWEL FINISH INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	5			
SEC-E	5	PROVIDING AND LAYING OF RCC MIX 1:2:4 USING OPC GRADE 43/53 , 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK & CENTERING AS PER DRAWING AND SPECIFICATION AND DIRECTED BY BHEL ENGINEER BUT EXCLUDING COST OF REINFORCEMENTS.	M3	19			
SEC-E	6	PROVIDING AND LAYING DPC (DAMP PROOF COURSE) 50MM THICK IN 1:2:4 CEMENT CONCRET LAYER USING OPC GRADE 43/53AND WITH 6MM DOWN AGGREGATE, INCLUDING FORMWRK, BITUMEN FELT USING CEMENT WITH WATER PROOFING COMPOUND ETC. COMPLETE	M2	10			
SEC-E	7	PROVIDING , CUTTING, BENDING AND FIXING IN POSITION REINFORCEMENT OF VARIOUS DIA. USING HIGH TENSILE TOR STEEL (Fe - 415/500). AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL MATERIALS, LEADS, LIFT, LABOURS, MS BINDING WIRE 18/20 GAUGE, TACK WELDING AND SUPPORTING IF REQUIRED COMPLETE.	MT	3			
SEC-E	8 (B)	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 AND FLY ASH LIME BRICKS (FAL - MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR FOUNDATION, WALL ETC. INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER . EXCLUDING PLASTERING & PAINTING.	M3	57			
SEC-E	9	PROVIDING AND FIXING OF BEST QUALITY COUNTRY WOOD DOORS COMPRISING OF FRAME 95 X 70MM AND 38/40MM THICK FLUSH SHUTTERS OF SOLID CORE TYPE USING COMMERCIAL PLY INCLUDING HOLD FASTS, WIND APPLIANCES, HANDLES, TOWER BOLTS AND ALDROPS, MORTISE OR SUITABLE LOCKS ETC. AS PER THE STANDARD PRACTICE AND APPLYING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED SHADE &COLOR OVER A COAT OF PRIMER AS DIRECTED BY BHEL ENGINEER.	M2	3			
SEC-E	10	PROVIDING AND FIXING OF 18 GUAGE M.S. SHEET DOOR WITH FRAME WORK 40 X 40 X 6 MM M.S. ANGLE INCLUDING LOCKING ARRANGEMENTS, HOLD FAST , APPLYING ANTICORROSSIVE PRIMER COAT OF RED LEAD PAINT AND 2 COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR COMPLETE AS DIRECTED BY BHEL ENGINEER.	M2	3			

T.S.No BHE/PW/PUR/LRPT-ENB/1240
VOLUME II PRICE BID SPECIFICATION

SEC-E	11	SUPPLING, MANUFACTURING AND FIXING IN POSITION OF STEEL WINDOWS AND VENTILATORS INCLUDING FRAMES & IRON BARRED (GUARD BAR OF SQUARE SECTION @ 100 MM C/C) AND GLAZED WITH 4MM PLAIN GLASS AS PER STANDARD SPECIFICATIONS & RELEVANT IS CODE AND INSTRUCTIONS OF BHEL ENGINEER. THE COST SHALL BE INCLUSIVE OF ALL ACCESSORIES FITTINGS, HOLD FASTS, PAINTING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER ETC. COMPLETE.					
SEC-E	A	STEEL WINDOWS	M2	12			
SEC-E	B	STEEL LAUVERED VENTILATORS :-	M2	1			
SEC-E	12	PROVIDING AND LAYING OF 5.5 MM THICK CERAMIC TILES OF REQUIRED SIZE LAID OVER THE BED OF CM - 1:4 (1 CEMENT & 4 COARSE SAND) USING OPC GRADE 43/53.TILES FROM REPUTED MANUFACTURER LIKE JONSON OR EQUIVALENT INCLUDING ALL MATERIALS COMPLETE AS PER STANDARD PRACTICE AND SPECIFICATION.					
SEC-E	A	FLOORING -600MM X600MM	M2	51			
SEC-E	B	FLOORING -300MM X300MM	M2	21			
SEC-E	C	SKIRTING - 300MM X 150MM	M2	8			
SEC-E	13	SUPPLYING AND FIXING OF WHITE GLAZED VITRIFIED TILES OF REQUIRED SIZES LAID OVER THE BED OF CM - 1:4 (1 CEMENT & 4 COARSE SAND) USING OPC GRADE 43/53 . DADO IN TOILET & PANTRY ROOM UP TO 1.5 M ELEVATIONS INCLUDING PEREPARATION OF BASE LAYING UNDERBED, FINISHING AND ROUNDING CORNERS AND JUNCTIONS, CURING ETC. COMPLETE AS PER DRAWINGS AND SPECIFICATIONS.					
SEC-E	A	FLOORING (5.0MM TO 6.0MM THICK OF SIZE 300MM X 300MM)	M2	10			
SEC-E	B	DADO (5MM TO 6MM THICK OF SIZE 150MM X 150MM) - 1.5M HEIGHT FROM FINISHED FLOOR LEVEL	M2	15			
SEC-E	14	PROVIDING PLASTERING WITH FOLLOWING CEMENT MORTAR AND GIVEN THICKNESS USING OPC GRADE 43/53 OVER BOTH INTERNAL AND EXTERNAL FACES OF BRICKWORK AND CONCRETE SURFACES, PARTITION WALLS ETC. AT ALL LEVELS INCLUDING PREPARING THE SURFACE, RAKING JOINTS, SCAFFOLDING, CURING, COST OF ALL MATERIALS, LABOUR ETC. COMPLETE.					
SEC-E	A	EXTERNAL PLASTERING - 18MM THICK - -1:6 (1 CEMENT & 6 COARSE SAND)	M2	126			
SEC-E	B	INTERNAL PLASTERING -12MM THICK - -1:6 (1 CEMENT & 6 COARSE SAND)	M2	179			
SEC-E	C	CEILING PLASTERING - 6MM THICK. - -1:3 (1 CEMENT & 3 FINE SAND)	M2	72			
SEC-E	15(A)	PROVIDING & APPLYING COLOUR WASH -THREE COATS ON NEWLY PLASTERED EXTERNAL SURFACE OF WALL BY USING BEST SHALE LIME TO GIVE AN EVEN SHADE INCLUDING PREPARING THE SURFACE LIKE CLEANING AND BRUSHING & BROOMING OF WALLS AND IN ACCORDANCE WITH STANDARD SPECIFICATION. RATE INCLUDE COST OF ALL MATERIALS , COLOURING AGENT, BASE COAT OF WHITE WASH,APPROVED ADDESSIVE, SCAFFOLDING AT ALL LEVEL, BRUSH ETC. COMPLETE.	M2	76			
SEC-E	15(B)	PROVIDING & APPLYING WHITE WASH - THREE COATS ON NEWLY PLASTERED INTERNAL SURFACE OF WALL BY USING BEST SHALE LIME TO GIVE AN EVEN SHADE INCLUDING PREPARING THE SURFACE LIKE CLEANING AND BRUSHING & BROOMING OF WALLS AND IN ACCORDANCE WITH STANDARD SPECIFICATION. RATE INCLUDE COST OF ALL MATERIALS , APPROVED ADDESSIVE, SCAFFOLDING AT ALL LEVEL, BRUSH ETC. COMPLETE.	M2	50			
SEC-E	15(C)	PROVIDING & APPLYING TO INTERIOR SURFACES OF MESS BUILDING BY TWO COATS OF OIL BOUND DISTEMPER (OBD) OF APPROVED SHADE .COLOR AND 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 LIKE CLEANING AND BRUSHING & BROOMING OF WALLS , SCAFFOLDING AT ALL LEVEL ETC, COMPLETE. SURFACE PREPARATION SHALL BE DONE BY APPLYING PUTTY/PLASTER OF PARISH (POP) INCLUDING COST OF MATERIAL, LABOUR ETC. COMPLETE.	M2	179			
SEC-E	16	PROVIDING AND FIXING OVER HEAD HYDRAULIC DOOR CLOSER (HEAVY DUTY) OF APPROVED BRAND AND SIZE ON NECESSARY DOORS AS DIRECTED BY BHEL ENGINEER.	NO.	2			

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VOLUME II PRICE BID SPECIFICATION

SEC-E	17	PROVIDING AND FIXING WHITE GLAZED VITREOUS CHINA WASH HAND BASIN OF 55 CM X 40 CM SIZE INCLUDING COLD WATER PILLER TAP, BRACKETS, STOP TAP, CHROMIUM PLATED BOTTLE TRAP AND NECESSARY PIPE CONNECTIONS INCLUDING UPVC WASTE PIPE AND TRAP UPTO THE OUT SIDE FACE OF THE WALL, MAKING GOOD THE DAMAGED SURFACE, TESTING ETC. COMPLETE. PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE.	NO	1			
SEC-E	18	PROVIDING AND FIXING IN POSITION OF HIGH CLASS BELGIUM OR SUPERIOR MAKE BEVELLED EDGE MIRROR OF SIZE 450MM X 550MM X 6MM WITH 16 MM DIA & 550MM LENGTH NICKEL PLATED TOWEL ROD MOUNTED ON 6 MM THICK PLYWOOD OR PLASTIC FOLDER SHEET. RATE TO INCLUDE COST OF ALL MATERIALS, LABOUR FOR FIXING THE WOODEN PLUGS WITH CP BRASS SCREWS AND WASHERS ETC. COMPLETE.	NO	1			
SEC-E	19 (A)	PROVIDING AND FIXING IN POSITION OF 15 MM DIA NOMINAL SIZE SCREW DOWN TYPE CHROMIUM PLATES BRASS BIB COCKS OF STANDARD TYPE OF APPROVED MAKE AND QUALITY (LEADER MAKE OR EQUIVALENT) AS PER STANDARD SPECIFICATION.RATE INCLUDES JOINTING MATERIALS,SOCKETS,UNION NUT,TESTING, LABOURS FOR CARRYING AND FIXING ETC. COMPLETE	NO	2			
SEC-E	19(B)	PROVIDING AND FIXING IN POSITION OF 25 MM DIA GATE VALVE.INCLUDING ALL NACESSARY FITTING & FIXTURE ETC. COMPLETE AS PER STANDARD SPECIFICATION.	NO	2			
SEC-E	19 (C)	PROVIDING AND FIXING IN POSITION OF 40 MM DIA GATE VALVE.INCLUDING ALL NACESSARY FITTING & FIXTURE ETC. COMPLETE AS PER STANDARD SPECIFICATION.	NO	2			
SEC-E	20	PROVIDING AND FIXING IN POSITION OF 15 MM DIA NOMINAL SIZE SCREW DOWN TYPE CHROMIUM PLATES BRASS STOP COCKS OF APPROVED MAKE AND QUALITY (LEADER MAKE OR EQUIVALENT) AS PER STANDARD SPECIFICATION.RATE INCLUDES COST OF JOINTING MATERIALS, SOCKETS,UNION NUT,TESTING, LABOURS FOR CARRYING AND FIXING ETC. COMPLETE	NO	2			
SEC-E	21	PROVIDING AND FIXING IN POSITION OF 100MM X 50MM HCI "NAHANT" TRAP WITH HCI GRATINGS, BENDS, CONNECTING PIECES OF CI PIPE UPTO OUTSIDE FACE OF THE WALL. MAKING GOOD THE DAMAGED SURFACE,TESTING ETC COMPLETE AS PER STANDARD SPECIFICATIONS. RATE TO BE ALL INCLUSIVES.	NO	2			
SEC-E	22	PROVIDING AND FIXING IN POSITION OF 150MM SALT GLAZED STONE WARE GULLY TRAP WITH HCI GRATINGS AND CI COVER OF SIZE 300X300 MM OF APPROVED MAKE (WEIGHT NOT LESS THAN 2 KG) AND QUALITY AS PER STANDARD SPECIFICATIONS. RATE TO BE ALL INCLUSIVE.	NO	2			
SEC-E	23	PROVIDING AND LAYING WITH REQUIRED GRADING & LEVELING IN TRENCHES MEDIUM GRADE (TYPE) GALVANISED IRON (G I) PIPE HAVING EMBOSSED ISI MARK ON IT, OF REQUIRED DIAMETER WITH SCREWED, SOCKETS, JOINTS, NECESSARY GALVANISED IRON FITTINGS SUCH AS SOCKETS, BACK NUTS, ELBOWS, BENDS, TEES, REDUCERS, ENLARGERS, PLUGS, CLAMPS ETC. INCLUDING ALL NECESSARY EXCAVATION, BACK FILLING, FIXING WITH CLAMPS, TESTING ETC. COMPLETE. (PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE.)					
SEC-E	A	40MM DIA	RM	50			
SEC-E	B	25MM DIA	RM	25			
SEC-E	C	20MM DIA	RM	25			
SEC-E	D	15MM DIA	RM	25			
SEC-E	24	PROVIDING AT WORKING SITE, CARRYING AND LOWERING INTO TRENCHES, LAYING TO PROPER ALIGNMENT, LEVEL AND GRADE, JOINTING WITH CM (1:1) AND TESTING OF JOINTS ETC. OF THE FOLLOWING SIZE OF SALT GLAZED STONWARE PIPE INCLUSIVE OF ALL NECESSARY SPECIALS TARRED HEMP YARN AND ALL JOINTING MATERIALS COMPLETE AS PER STANDARD SPECIFICATIONS INCLUDING ALL NECESSARY EXCAVATION ,BACKFILLING,DISPOSAL OF SURPLUS EARTH ,LEAD AND LIFT AS PER SITE CONDITIONS. RATE SHALL INCLUDE COST OF ALL MATERIALS, LABOUR CHARGES AND INCIDENTAL CHARGES ETC. COMPLETE.					
SEC-E	A	100MM DIA STONWARE PIPELINE INCLUDING ALL SPECIALS COMPLETE.	RM	50			
SEC-E	25	PROVIDING AND FIXING IN POSITION OF PVC OVERHEAD WATER TANK OF SYNTEX OR ANY APPROVED MAKE OF FOLLOWING CAPACITY WITH PROVISION FOR OVERFLOW ARRANGEMENT VALVES, INLET AND OUTLET ETC. COMPLETE. SUPPORTING STEEL STRUCTURE FOR FIXING THE TANK SHELL BE PAID IN THE RELAVENT ITEM.					
SEC-E	A	1000 LITRE	NO	1			

SEC-E	26	CONSTRUCTION OF 230MM THICK BURNT CLAY / FLY ASH LIME BRICK CHAMBER (USING OPC GRADE 43/53) OF THE FOLLOWING DIMENSIONS (INNER DIMENSION) WITH 20MM THICK INTERNAL & EXTERNAL CEMENT PLASTER OF MIX CM 1:5 (1 CEMENT & 5 COARSE SAND) , NEAT CEMENT FINISH , TOP CI – COVER AND CONNECTORS FOR SEWER LINES. RATE SHALL BE INCLUSIVE OF ALL NECESSARY EXCAVATION & FILLING, PCC 100 MM THICK OF 1:3:6 FOR BEDDING ON 100MM THICK OVERSIZER SOLING WITH 80 MM METAETC. COMPLETE.					
SEC-E	A	600X450X450 WITH C.I COVER	NO	1			
SEC-E	B	900X600X450 WITH C.I. COVER	NO	1			
SEC-E	27	PROVIDING AND FIXING OF PRECAST 80 MM THICK RCC COVER OF MIX 1:1.5:3 FOR MAN HOLES OF VARIOUS SIZES WITH REINFORCEMENT OF 10 MM DIA BOTH WAY TIED WITH TACK WELDING @ 150 MM C/C WITH 2 HOOKS OF 12 MM DIA BARS ETC.COMPLETE.					
SEC-E	A	750MM x 600MM	Nos.	1			
SEC-E	B	1050MM x 750MM	Nos.	1			
SEC-E	28	PROVIDING AND FIXING CHROMIUM PLATED TOWEL ROD 16 MM DIA. AND 75CM. IN LENGTH INCLUDING ALL ACCESSORIES COMPLETE. (PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE).	NO.	1			
SEC-E	29	PROVIDING & FIXING OF LIQUID SOAP DISPENSER AT ALL WASH BASIN LOCATION.	NO.	1			
SEC-E	30	PROVIDING AND FIXING OF METALLIC DECORATIVE TYPE HEAVY DUTY PELMET ROD FOR DOORS AND WINDOWS. RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR ETC. AS APPROVED BY BHEL ENGINEER.	EACH	6			
SEC-E	31	PROVIDING AND FIXING OF AQUA-GUARD OR EQUIVALENT WATER PURIFIER, ALONG WITH ALL FITTINGS. RATE TO INCLUDE ALL NECESSARY FITTINGS & FIXTURES, LABOUR ETC.AS APPROVED & DIRECTED BY BHEL ENGINEER.	NOS.	1			
SEC-E	32	PROVIDING AND FIXING OF 1 No. 18"X24" SIZE STAINLESS STEEL SINK WITH ALL FITTINGS LIKE DRAIN PIPE, STOP VALVE ETC.RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR ETC.AS APPROVED & DIRECTED BY BHEL ENGINEER.	NOS.	1			
SEC-E	33	PROVIDING AND FIXING 40MM THICK BEST QUALITY KADDAPPA SLAB OF REQUIRED SHAPE FOR FIXING SS SINK FOR KITCHEN COUNTER AND RACKS FOR KITCHEN STORE AREA ETC.COST INCLUSIVE OF MAKING OPENING AND FINISHING COMPLETE.	Sqm.	15			
SEC-E	34	SUPPLYING AND INSTALLATION OF 4 SEATER INDUSTRIAL TYPE SS (STAINLESS STEEL) DINNING TABLE WITH SS STOOL (FOLDING/ ADUSTABLE TYPE) FROM STANDARD MANUFACTURER (APPROVAL OF BHEL IS REQUIRED BEFORE PROCUREMENT).	LS	1			
SEC-E		TOTAL VALUE OF SECTION-E IN Rs.					
RATE SCHEDULE, SECTION - F							
SECTION F: ELECTRIFICATION OF MESS BUILDING (6MX12M) AT 2 X 800 MW NTPC LARA ESPPROJECT							
SECTION F	SL.N O	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words)	Amount
SECTION F	1	SUPPLY OF 415 VOLT AC , 3 PHASE /FOUR WIRE POWER FEEDER PILLAR BOARD , BOARD SHALL BE COMPRISES OF THREE NUMBER AND ONE NUMBER ALUMINIUM BUS BAR FOR PHASE & NEUTRAL RESPECTIVELY. BUS BAR RATING SHALL BE 200 AMPS AND SHALL BE MOUNTED ON EPOXY INSULATOR OF 1.1 KV GRADE, EACH BUS BAR SHALL HAVE DRILLED HOLE FOR CONNECTING INCOMING / OUT GOING CABLES, PROVISION FOR EARTHING THE PANEL ENCLOSURE. PANEL ENCLOSURE SHALL BE MADE OF SHEET METAL THICHNNES NOT LESS THAN 1.6 MM AND SUITABLE FOR OUT DOOR INSTALLATION, HINGED DOOR WITH LOCKING ARRAGEMENT , BASE FRAME , SHOULD HAVE SLOPPED CANOPY, DULY PAINTED WITH FIRST COAT WITH PRIMER AND TWO COATS OF SYNTHETIC ENAMEL PAINT (INTERIOR WITH WHITE PAINT AND EXTERIOR WITH SMOKE GREY AS PER IS), SUITABLE STOOL MADE OUT OF MS STRUCTURE OF 1.2 METER HIGH FOR MOUNTING OF PANEL WITH ANCHORING ARRAGEMENT AT FOUNDATION .	Set	1			

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VOLUME II PRICE BID SPECIFICATION

SECTION F	2	PROVIDING AND INSTALLING WIRING USING 2.5 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	20			
SECTION F	3	PROVIDING AND INSTALLING WIRING FOR USING 4.0 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	4			
SECTION F	4	PROVIDING AND INSTALLING WIRING FOR USING 6.0 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	4			
SECTION F	5	PROVIDING AND INSTALLING WIRING FOR USING 16.0 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	4			
SECTION F	6	POVIDING AND INSTALLATION OF PLUG POINT OF 5A SOCKET (ANCHOR OR EQUIV.) OUTLET FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER INCLUDING WIRING TERMINATION.	NO	4			
SECTION F	7	POVIDING AND INSTALLATION OF PLUG POINT OF 15A SOCKET (ANCHOR OR EQUIV.) OUTLET FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER INCLUDING WIRING TERMINATION.	NO	4			
SECTION F	8	PROVIDING AND FIXING ORDINARY TUBELIGHT WITH FRAME OF STANDARD MANUFACTURER LIKE PHILIPS/BAJAJ OR EQUIVALENT AS APPROVED BY BHEL. THIS INCLUDES TUBE LIGHT FITTINGS , ALL NECESSARY ELECTRICAL FITTINGS (STARTER AND CHOCK ETC) ETC. COMPLETE.	NO.	12			
SECTION F	9	PROVIDING AND FIXING EXHAUST FANS 12" DIAMETER WITH FRAME OF STANDARD MANUFACTURER LIKE CROMPTAN GREEVES OR EQUIVALENT AS APPROVED BY BHEL.	NO.	2			
SECTION F	10	PROVIDING AND FIXING CEILING FAN 48" DIAMETER OF APPROVED COMPANY SUCH AS CROMTAN GREEVES OR ANY OTHER STANDARD MANUFACTURER AS DIRECTED BY BHEL.	NO	8			
SECTION F	11	PROVIDING AND FIXING CALLING BELLS WITH INDICATOR LIGHT OF STANDARD MANUFACTURER OR EQUIVALENT AS APPROVED BY BHEL. INCLUDING ALL FITTINGS .	NO	1			
SECTION F	12	SUPPLYING, INSTALLATION & COMMISSIONING OF SODIUM VAPOUR LAMP STREET LIGHT FITTING 150 WATT SSG-2315 IH OF CROMPTON OR SIMILAR PHILIPS MAKE, COMPLETE WITH ONE PIECE CANOPY, INTEGRAL CONTROLGEAR COMPRISING OF COPPER WOUND CHOKE , IGNITOR , HPF CAPACITOR, HPSV LAMP AND SUITABLE FOR DIRECTLY SLIPPING OVER LIGHT MOUNTING BRACKET MADE OUT OF 40 MM OD PIPE AND SUITABLE FOR LAMPS, CONTROL GEAR BOX CABLING & TERMINATION OF ITEMS SUPPLIED (TO BE MOUNTED ON 9 MTR POLE - ITEM NO. 13).	NOS.	1			
SECTION F	13	SUPPLY AND ERECTING STEEL TUBULAR SWAGED POLES, 9 MTR LONG MADE OF SHEET STEEL HAVING ULTIMATE TENSILE STRENGTH 42 KG F/SQ.MM CONFIRMING TO BIS :2713 (RPART-II) COMPLETE WITH 300X300X6 MM THICK M. S. BASE PLATE FOR WELDING AT SITE AND SIZE AS PER CONFIGURATION GIVEN IN BIS FOR 410 SP-28 (113 KG- POLE WEIGHT) WITH 1.5 MTR. DEEP EXACAVATION, CONCRETING IN 1:4:8 RATIO SIZE 45 CMS X 45 CMS X 150 CMS AND POLE PLINTH IN 1:3:6 CEMENT CONCRETING HAVING 300 MM HEIGHT AND 300 MM DIA .INCLUDING DOUBLE EARTHING OF POLE WITH SUITABLE ARRANGEMENT, DULY PAINTED WITH TWO COATS OF RED OXIDE PAINT AND ONE COAT OF ALUMINIUM PAINT TO BE APPLIED AFTER ERECTION; THE LENGTH OF POLE BELOW GROUND TO BE PAINTED WITH TWO COATS OF BLACK BITUMINUS PAINT. THE POLE SHALL BE COMPLETE WITH JB, FUSE AND MINOR FABRICATION AS BELOW : I) DRILING 20 MM DIA HOLE AT ABOUT 2.5 MTR FROM GROUND LEVEL FOR WIRE LEADS FROM JUNCTION BOX TO LIGHT FIXTURE . II) DRILING 15MM DIA HOLES AT ABOUT 0.7 AND AT 2.5 MTR FROM GROUND LEVEL AND WELDING 12 MM NUTS FOR USING A 12 MM G.I BOLT FOR FASTENING EARTH CONDUCTERS. III) WELDING REQUIORED HOLES FOR FIXING POLE CAP OF STREET LIGHT BRACKET. IV) WELDING DIAMETRALLY 10 MM M.S. ROUND 30 MM BELOW POLE TOP EDGE FOR CLIPPING WIRE LEADS .	NOS.	1			
SECTION F	14	PROVIDING EARTH PITS WITH 2" DIA., 2.5 MTR. LONG GI PIPES WITH FLANGE AND 8 SWG GI WIRE WITH CHARCOAL, SALT AND AS PER IS 3043. RATE SHALL BE INCLUSIVE OF ALL MATERIAL, LABOUR ETC. COMPLETE. A BRICK WALL CHAMBER WITH CI COVER FOR ALL EARTH PITS SHALL BE PROVIDED.	NOS.	1			
SECTION F	15	SUPPLY OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	20			

SECTION F	16	INSTALLATION OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM TRANSFORMER SUB STATION TO 415 VOLT AC DISTRIBUTION BOARD	RM	20			
SECTION F	17	SUPPLY OF CABLES 3 -1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	20			
SECTION F	18	INSTALLATION OF CABLES 3 -1/2 CORE X 95 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND, EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC COMPLETE. CABLES ARE TO BE LAID FROM 415 VOLT AC DISTRIBUTION BOARD TO FEEDER PILLAR BOARD , FEEDER PILLAR BOARD TO LIGHTING MAST / TOWER.	RM	20			
SECTION F		TOTAL VALUE OF SECTION--F IN Rs.					
RATE SCHEDULE, SECTION - G							
SECTION G		CONSTRUCTION OF TOILET COMPLEX (5MX3.6M) AT 2 X 800 MW NTPC LARA ESPPROJECT					
SECTION G	SL.N O	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words)	Amount
SECTION G	1(A)	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH IN ALL KINDS OF SOIL (EXCEPT SOFT ROCK AND HARD ROCK) FOR SEPTIC TANK, SOAK PIT, FOUNDATION, BRICK KERB WALL AND WHEREVER REQUIRED ETC., AS DIRECTED BY BHEL ENGINEER INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	10			
SECTION G	1(E)	SUB GRADE PREPARATION: CUTTING LEVELLING, FILLING WITH EXCAVATED EARTH, WATERING AND CONSOLIDATION WITH 8-10 MT POWER ROLLER TO ACHIVE REQUIRED DENSITY (90% OF PROCTOR DENSITY) FOR OFFICE OFFICE COMPLEX AREA, BEFORE LAYING THE PCC WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.	M2	18			
SECTION G	2	DISPOSAL OF EXCAVATED EARTH/ROCK (NOT SUITABLE FOR BACK FILLING) BEYOND INITIAL LEAD OF 50M AND UPTO A MAXIMUM LEAD OF 2 KM OR PART THEREOF INCLUDING LOADING, UNLOADING , TRANSPORTING AND SPREADING AS PER DIRECTION OF BHEL ENGINEER .	M3	10			
SECTION G	3	BACKFILLING OF RAISED PLATFORM FOR PLACEMENT OF OFFICE , PANTRY AND TOILET BLOCK ETC AND WHEREVER REQUIRED IN REQUIRED THICKNESS (LAYERS NOT EXCEEDING 150MM THICK). INCLUDING WATERING AND CONSOLIDATING WITH 8-10 MT POWER ROLLER ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.					
SECTION G	A	WITH GOOD EXCAVATED SOIL AVAILABLE FROM THE EARTH WORK AND LEAD UP TO 200 M.	M3	5			
SECTION G	D	PROVIDING STONE SOLING OF REUIRED THICKNESS AS PER DRAWING FOR FLOORING OF PANTRY AND TOILET BLOCK AND WHEREVER REQUIRED ETC. BY USING 80 MM SIZE HARD BROKEN BLACK GRANITE/ QUARTIZITE/ GNEISS/ TRAP STONE METAL INCLUDING GRANULAR MURRUM PACKING, WATERING & COMPACTION ETC COMPLETE. AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER	M3	4			
SECTION G	4	PROVIDING AND LAYING OF PLAIN CEMENT CONCRETE OF MIX 1:4:8USING OPC GRADE 43/53, 20 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY WITH TROWEL FINISH FOR RAISED PLATFORM , WALK WAY / FOOT PATH OF OFFICE AND WHEREVER REQUIRED ETC. INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	5			
SECTION G	5	PROVIDING AND LAYING OF RCC MIX 1:2:4 USING OPC GRADE 43/53, 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE FOR ROOF SLAB OF PANTRY AND TOILET BLOCK , SLAB OF SEPTIC TANK ETC AND WHREVER REQUIRED AS PER DRAWING AND SPECIFICATION AND DIRECTED BY BHEL ENGINEER INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK & CENTERING BUT EXCLUDING COST OF REINFORCEMENTS.	M3	3			

T.S.No BHE/PW/PUR/LRPT-ENB/1240
VOLUME II PRICE BID SPECIFICATION

SECTION G	6	PROVIDING AND LAYING DPC (DAMP PROOF COURSE) 50MM THICK IN 1:2:4 CEMENT CONCRET LAYER USING OPC GRADE 43/53AND WITH 6MM DOWN AGGREGATE, INCLUDING FORMWORK, BITUMEN FELT USING CEMENT WITH WATER PROOFING COMPOUND ETC. COMPLETE	M2	4			
SECTION G	7	PROVIDING , CUTTING, BENDING AND FIXING IN POSITION REINFORCEMENT OF VARIOUS DIA. USING HIGH TENSILE TOR STEEL (Fe - 415/500) FOR ROOF SLAB OF PANTRY AND TOILET BLOCK , SLAB OF SEPTIC TANK ETC AND FOR WHREVER REQUIRED AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL MATERIALS, LEADS, LIFT, LABOURS, MS BINDING WIRE 18/20 GAUGE, TACK WELDING AND SUPPORTING IF REQUIRED COMPLETE.	MT	1			
SECTION G	8 (A)	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 AND FLY ASH LIME BRICKS (FAL - MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR FOUNDATION, WALL ETC. INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER . EXCLUDING PLASTERING & PAINTING.	M3	21			
SECTION G	12(A)	PROVIDING AND FIXING OF BEST QUALITY COUNTRY WOOD DOORS COMPRISING OF FRAME 95 X 70MM AND 38/40MM THICK FLUSH SHUTTERS OF SOLID CORE TYPE USING COMMERCIAL PLY INCLUDING HOLD FASTS, WIND APPLIANCES, HANDLES, TOWER BOLTS AND ALDROPS, MORTISE OR SUITABLE LOCKS ETC. AS PER THE STANDARD PRACTICE AND APPLYING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED SHADE & COLOR OVER A COAT OF PRIMER AS DIRECTED BY BHEL ENGINEER.	M2	3			
SECTION G	12(B)	PROVIDING AND FIXING 24 MM THICK BEST QUALITY PVC DOORS OF SINTEX MAKE OR APPROVED EQUIVALENT FOR TOILETS INCLUDING PVC FRAME OF SIZE 48MM X 40MM, ALL FITTINGS, FIXTURES, FRAMES, HOLDFAST ETC. COMPLETE AS PER SPECIFICATIONS AND INSTRUCTION OF BHEL ENGINEER.	M2	3			
SECTION G	13	SUPPLING, MANUFACTURING AND FIXING IN POSITION OF STEEL WINDOWS AND VENTILATORS INCLUDING FRAMES & IRON BARRED (GUARD BAR OF SQUARE SECTION @ 100 MM C/C) AND GLAZED WITH 4MM PLAIN GLASS AS PER STANDARD SPECIFICATIONS & RELEVANT IS CODE AND INSTRUCTIONS OF BHEL ENGINEER. THE COST SHALL BE INCLUSIVE OF ALL ACCESSORIES FITTINGS, HOLD FASTS, PAINTING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER ETC. COMPLETE.					
SECTION G	A	STEEL WINDOWS	M2	3			
SECTION G	B	STEEL LAUVERED VENTILATORS	M2	2			
SECTION G	16	SUPPLYING AND FIXING OF WHITE CERAMIC TILES OF REQUIRED SIZES LAID OVER THE BED OF CM - 1:4 (1 CEMENT & 4 COARSE SAND) USING OPC GRADE 43/53 FOR PANTRY ROOM , TOILET AND WHEREVER REQUIRED ETC. INCLUDING PEREPARATION OF BASE LAYING UNDERBED, FINISHING AND ROUNDING CORNERS AND JUNCTIONS, CURING ETC. COMPLETE AS PER DRAWINGS AND SPECIFICATIONS.					
SECTION G	A	FLOORING (5.0MM TO 6.0MM THICK OF SIZE 300MM X 300MM)	M2	20			
SECTION G	B	DADO (5MM TO 6MM THICK OF SIZE 150MM X 150MM) - 1.5M HEIGHT FROM FINISHED FLOOR LEVEL IN TOILET	M2	29			
SECTION G	17	PROVIDING PLASTERING WITH CEMENT MORTAR -1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 OVER BOTH INTERNAL AND EXTERNAL FACES OF BRICKWORK AND CONCRETE SURFACES, PARTITION WALLS ETC. AT ALL LEVELS INCLUDING PREPARING THE SURFACE, RAKING JOINTS, SCAFFOLDING, CURING, COST OF ALL MATERIALS, LABOUR ETC. COMPLETE.					
SECTION G	A	EXTERNAL PLASTERING - 18MM THICK	M2	77			
SECTION G	B	INTERNAL PLASTERING -12MM THICK	M2	85			
SECTION G	C	CEILING PLASTERING -6MM THICK WITH CEMENT MORTAR -1:4 (1 CEMENT & 4 FINE SAND)	M2	57			
SECTION G	18(A)	PROVIDING & APPLYING COLOUR WASH -THREE COATS ON NEWLY PLASTERED EXTERNAL SURFACE BY USING BEST SHALE LIME TO GIVE AN EVEN SHADE INCLUDING PREPARING THE SURFACE LIKE CLEANING AND BRUSHING & BROOMING OF WALLS AND IN ACCORDANCE WITH STANDARD SPECIFICATION. RATE INCLUDE COST OF ALL MATERIALS , COLOURING AGENT, BASE COAT OF WHITE WASH,APPROVED ADDESSIVE, SCAFFOLDING AT ALL LEVEL, BRUSH ETC. COMPLETE.	M2	56.76			

T.S.No BHE/PW/PUR/LRPT-ENB/1240
VOLUME II PRICE BID SPECIFICATION

SECTION G	18(C)	PROVIDING & APPLYING TO INTERIOR SURFACES OF STORE OFFICE AND C&I ROOM BY TWO COATS OF OIL BOUND DISTEMPER (OBD) OF APPROVED SHADE ,COLOR AND 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 LIKE CLEANING AND BRUSHING & BROOMING OF WALLS , SCAFFOLDING AT ALL LEVEL ETC, COMPLETE. SURFACE PREPARATION SHALL BE DONE BY APPLYING PUTTY/PLASTER OF PARISH (POP) INCLUDING COST OF MATERIAL, LABOUR ETC. COMPLETE.	M2	62			
SECTION G	19	PROVIDING AND FIXING OVER HEAD HYDRAULIC DOOR CLOSER (HEAVY DUTY) OF APPROVED BRAND AND SIZE ON NECESSARY DOORS AS DIRECTED BY BHEL ENGINEER.	NO.	3			
SECTION G	20	PROVIDING AND FIXING WHITE GLAZED VITREOUS CHINA WASH HAND BASIN OF 55 CM X 40 CM SIZE INCLUDING COLD WATER PILLER TAP, BRACKETS, STOP TAP, CHROMIUM PLATED BOTTLE TRAP AND NECESSARY PIPE CONNECTIONS INCLUDING UPVC WASTE PIPE AND TRAP UPTO THE OUT SIDE FACE OF THE WALL, MAKING GOOD THE DAMAGED SURFACE, TESTING ETC. COMPLETE. PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE.	NO	1			
SECTION G	21	PROVIDING AND FIXING EUROPEAN TYPE WHITE GLAZED VITREOUS CHINA W.C.PAN WITH UPVC SEAT AND LID WITH CHROMIUM PLATED BRASS HINGES AND RUBBER BUFFERS INCLUDING UPVC VENT PIPE (APPROX. 2M. HT. WITH COWL)) ON THE OUTSIDE FACE OF WALL, 10 LITRE PVC LOW LEVEL FLUSHING CISTERN WITH ALL FITTINGS, PIPE AND STOP COCK, BRACKETS FOR FIXING CISTERN, 32 MM DIA. UPVC FLUSH PIPE WITH FITTINGS AND CLAMPS, 20 MM DIA. UPVC OVERFLOW PIPE, FLOAT VALVES, CUTTING AND MAKING GOOD TO THE WALLS AND FLOORS, TESTING ETC. COMPLETE. PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE.	NO	2			
SECTION G	22	PROVIDING AND FIXING IN POSITION OF WHITE GLAZED EARTHENWARE FLAT BACK/CORNER TYPE LIPPED FRONT URINALS OF 430MM X 260MM X 350MM / 340X460X265 MM OF APPROVED MAKE AND QUALITY WITHOUT FLUSHING CISTERN, GI FLUSH PIPE AND SPREADERS WITH BRASS UNIONS, GI CLAMPS, CUTTING OF WALLS AND MAKING GOOD OF ALL DAMAGES AND FINISHING TO MATCH THE EXISTING WORK ETC. COMPLETE. RATE QUOTED SHALL INCLUDE COST OF ALL MATERIALS AND LABOUR FOR CARRYING, LAYING & FIXING AND ALL OTHER INCIDENTAL CHARGES ETC. COMPLETE.	NO	3			
SECTION G	23	PROVIDING AND FIXING IN POSITION OF HIGH CLASS BELGIUM OR SUPERIOR MAKE BEVELLED EDGE MIRROR OF SIZE 450MM X 550MM X 6MM WITH 16 MM DIA & 550MM LENGTH NICKEL PLATED TOWEL ROD MOUNTED ON 6 MM THICK PLYWOOD OR PLASTIC FOLDER SHEET. RATE TO INCLUDE COST OF ALL MATERIALS, LABOUR FOR FIXING THE WOODEN PLUGS WITH CP BRASS SCREWS AND WASHERS ETC. COMPLETE.	NO	1			
SECTION G	24	PROVIDING AND FIXING IN POSITION OF 15 MM DIA CONCUSSION PUSH BUTTON TYPE BRASS/ GUN MATEL SELF CLOSING TAP INCLUDING NACESSARY SOCKET,TESTING ETC COMPLETE FOR URINALS AS DIRECTION OF BHEL ENGINEER.	NO	2			
SECTION G	25	PROVIDING AND FIXING IN POSITION OF 15 MM DIA NOMINAL SIZE SCREW DOWN TYPE CHROMIUM PLATES BRASS BIB COCKS OF STANDARD TYPE OF APPROVED MAKE AND QUALITY (LEADER MAKE OR EQUIVALENT) AS PER STANDARD SPECIFICATION. RATE INCLUDES JOINTING MATERIALS, SOCKETS, UNION NUT, TESTING, LABOURS FOR CARRYING AND FIXING ETC. COMPLETE.	NO	3			
SECTION G	26	PROVIDING AND FIXING IN POSITION OF 25 MM DIA GATE VALVE INCLUDING ALL NACESSARY FITTING & FIXTURE ETC. COMPLETE AS PER STANDARD SPECIFICATION.	NO	1			
SECTION G	27	PROVIDING AND FIXING IN POSITION OF 40 MM DIA GATE VALVE INCLUDING ALL NACESSARY FITTING & FIXTURE ETC. COMPLETE AS PER STANDARD SPECIFICATION.	NO	1			
SECTION G	28	PROVIDING AND FIXING IN POSITION OF 15 MM DIA NOMINAL SIZE SCREW DOWN TYPE CHROMIUM PLATES BRASS STOP COCKS OF APPROVED MAKE AND QUALITY (LEADER MAKE OR EQUIVALENT) AS PER STANDARD SPECIFICATION. RATE INCLUDES COST OF JOINTING MATERIALS, SOCKETS, UNION NUT, TESTING, LABOURS FOR CARRYING AND FIXING ETC. COMPLETE	NO	5			
SECTION G	29	PROVIDING AND FIXING IN POSITION OF 100MM X 50MM HCI "NAHANT" TRAP WITH HCI GRATINGS, BENDS, CONNECTING PIECES OF CI PIPE UPTO OUTSIDE FACE OF THE WALL. MAKING GOOD THE DAMAGED SURFACE, TESTING ETC COMPLETE AS PER STANDARD SPECIFICATIONS. RATE TO BE ALL INCLUSIVES.	NO	4			
SECTION G	30	PROVIDING AND FIXING IN POSITION OF 150MM SALT GLAZED STONE WARE GULLY TRAP WITH HCI GRATINGS AND CI COVER OF SIZE 300X300 MM OF APPROVED MAKE (WEIGHT NOT LESS THAN 2 KG) AND QUALITY AS PER STANDARD SPECIFICATIONS. RATE TO BE ALL INCLUSIVE.	NO	2			

SECTION G	31	PROVIDING AND LAYING WITH REQUIRED GRADING & LEVELING IN TRENCHES MEDIUM GRADE (TYPE) GALVANISED IRON (GI) PIPE HAVING EMBOSSED ISI MARK ON IT, OF REQUIRED DIAMETER WITH SCREWED, SOCKETS, JOINTS, NECESSARY GALVANISED IRON FITTINGS SUCH AS SOCKETS, BACK NUTS, ELBOWS, BENDS, TEES, REDUCERS, ENLARGERS, PLUGS, CLAMPS ETC. INCLUDING ALL NECESSARY EXCAVATION, BACK FILLING, FIXING WITH CLAMPS, TESTING ETC. COMPLETE. (PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE.)					
SECTION G	A	40MM DIA	RM	100			
SECTION G	B	25MM DIA	RM	50			
SECTION G	C	20MM DIA	RM	25			
SECTION G	D	15MM DIA	RM	20			
SECTION G	32	PROVIDING AT WORKING SITE, CARRYING AND LOWERING INTO TRENCHES, LAYING TO PROPER ALIGNMENT, LEVEL AND GRADE, JOINTING WITH CM (1:1) AND TESTING OF JOINTS ETC. OF THE FOLLOWING SIZE OF SALT GLAZED STONEWARE PIPE INCLUSIVE OF ALL NECESSARY SPECIALS TARRED HEMP YARN AND ALL JOINTING MATERIALS COMPLETE AS PER STANDARD SPECIFICATIONS INCLUDING ALL NECESSARY EXCAVATION, BACKFILLING, DISPOSAL OF SURPLUS EARTH ,LEAD AND LIFT AS PER SITE CONDITIONS. RATE SHALL INCLUDE COST OF ALL MATERIALS, LABOUR CHARGES AND INCIDENTAL CHARGES ETC. COMPLETE.					
SECTION G	A	100MM DIA STONEWARE PIPELINE INCLUDING ALL SPECIALS COMPLETE.	RM	50			
SECTION G	33	PROVIDING AND FIXING IN POSITION OF PVC OVERHEAD WATER TANK OF SYNTEX OR ANY APPROVED MAKE OF FOLLOWING LITRE CAPACITY WITH PROVISION FOR OVERFLOW ARRANGEMENT VALVES, INLET AND OUTLET ETC. COMPLETE.					
SECTION G	A	1000 LITRE CAPACITY	NO	1			
SECTION G	34	CONSTRUCTION OF 230MM THICK BURNT CLAY / FLY ASH LIME BRICK CHAMBER (USING OPC GRADE 43/53) OF THE FOLLOWING DIMENSIONS (INNER DIMENSION) WITH 20MM THICK INTERNAL & EXTERNAL CEMENT PLASTER OF MIX CM 1:5 (1 CEMENT & 5 COARSE SAND) , NEAT CEMENT FINISH , TOP CI – COVER AND CONNECTORS FOR SEWER LINES. RATE SHALL BE INCLUSIVE OF ALL NECESSARY EXCAVATION & FILLING, PCC 100 MM THICK OF 1:3:6 FOR BEDDING ON 100MM THICK OVERSIZER SOLING WITH 80 MM METALET. COMPLETE.					
SECTION G	A	600X450X450 WITH C.I COVER	NO	2			
SECTION G	B	900X600X450 WITH C.I. COVER	NO	3			
SECTION G	35	PROVIDING AND FIXING OF PRECAST 80 MM THICK RCC COVER OF MIX 1:1.5:3 FOR MAN HOLES OF VARIOUS SIZES WITH REINFORCEMENT OF 10 MM DIA BOTH WAY TIED WITH TACK WELDING @ 150 MM C/C WITH 2 HOOKS OF 12 MM DIA BARS ETC.COMPLETE.					
SECTION G	A	1050MM x 750MM	Nos.	1			
SECTION G	36	PROVIDING AND FIXING CHROMIUM PLATED TOWEL ROD 16 MM DIA. AND 75CM. IN LENGTH INCLUDING ALL ACCESSORIES COMPLETE. (PRIOR APPROVAL OF SAMPLE AND BRAND BY BHEL ENGINEER IS NECESSARY BEFORE USE).	NO.	1			
SECTION G	37	PROVIDING & FIXING OF LIQUID SOAP DISPENSER AT ALL WASH BASIN LOCATION.	NO.	2			
SECTION G	38	PROVIDING & FIXING IN POSITION OF CI VENT PIPE OF DIA. 100MM (APPROX. HT. 3M) IN SEPTIC TANK. RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR ETC.	RM	4			
SECTION G	39	PROVIDING AND FIXING OF METALLIC DECORATIVE TYPE HEAVY DUTY PELMET ROD FOR DOORS AND WINDOWS. RATE TO INCLUDE ALL NECESSARY FITTING & FIXTURE, LABOUR ETC. AS APPROVED BY BHEL ENGINEER.	EACH	2			
SECTION G	40	PROVIDING AND FIXING 18MM THICK BEST QUALITY SINGLE PIECE GRANITE SLAB OF REQUIRED SHAPE AND COLOUR FOR FIXING SS SINK FOR KITCHEN COUNTER OF PANTRY BLOCK .CUT OUT FOR SINK SHALL BE MADE AS PER THE DIMENSION.COST INCLUSIVE OF MAKING OPENING, POLISHING CUT PICES/DROP/FACIA AND REQUIRED FINISHING COMPLETE.	Sqm.	4			
SECTION G	41	PROVIDING ANG MAKING EDGE MOULDING AND NOSING TO 18MM THICK GRANITE STONE SLAB, COUNTERS,VANITIES AND WHEREVER REQUIRED.INCLUDING POLISHING TO EDGE TO GIVE HIGH GLOSS FINISH ETC . COMPLETE AS PER DESIGN APPROVED BY BHEL ENGINEER.	Rmt	4			

SECTION G	42	PREPARING INSTANT LAWN :- EXCAVATING THE GROUND TO A REQUIRED DEPTH OF 20CMS. REMOVING AND CONVEYING UNWANTED STUFF TO, REQUIRED DISTANCE AS, DIRECTED PROVIDING & FILLING FRESH GARDEN SOIL & MANURE IN EXCAVATED AREA IN 3:1 PROPORTION TO HEIGHT OF 20 CMS. MIXING GARDEN SOIL & MANURE THOROUGHLY WELL LEVELLING, WITH REQUIRED SLOPES LIGHT WATERING ON PREVIOUS NIGHT FIXING READYMADE LAWN TRUF ROLLS, OR SLABS OF REQUIRED VARIETY AS DIRECTED RAMMING ON IT FOR PROPER FIXING & MAINTAINING TILL WELL ESTABLISHED BY WATERING, WEEDEENG, CLIPPING ROLLING ETC. COMPLETE.(This provision is made for office area)	M2	110			
SECTION G		TOTAL VALUE OF SECTION-G IN Rs.					
		RATE SCHEDULE, SECTION - H					
Sec. H		ELECTRIFICATION OF TOILET COMPLEX (5MX3.6M) AT 2 X 800 MW NTPC LARA ESPPROJECT					
Sec. H	SL.NO	DESCRIPTION OF WORK	UNIT	QTY	RATE (Rs) In Figures	Rate (Rs) In words	Amount
Sec. H	1	SUPPLY OF 415 VOLT AC , 3 PHASE /FOUR WIRE POWER FEEDER PILLAR BOARD , BOARD SHALL BE COMPRISES OF THREE NUMBER AND ONE NUMBER ALUMINIUM BUS BAR FOR PHASE & NEUTRAL RESPECTIVELY. BUS BAR RATING SHALL BE 200 AMPS AND SHALL BE MOUNTED ON EPOXY INSULATOR OF 1.1 KV GRADE, EACH BUS BAR SHALL HAVE DRILLED HOLE FOR CONNECTING INCOMING / OUT GOING CABLES, PROVISION FOR EARTHING THE PANEL ENCLOSURE. PANEL ENCLOSURE SHALL BE MADE OF SHEET METAL THICHNNNESS NOT LESS THAN 1.6 MM AND SUITABLE FOR OUT DOOR INSTALLATION, HINGED DOOR WITH LOCKING ARRAGEMENT , BASE FRAME , SHOULD HAVE SLOPPED CANOPY, DULY PAINTED WITH FIRST COAT WITH PRIMER AND TWO COATS OF SYNTHETIC ENAMEL PAINT (INTERIOR WITH WHITE PAINT AND EXTERIOR WITH SMOKE GREY AS PER IS), SUITABLE STOOL MADE OUT OF MS STRUCTURE OF 1.2 METER HIGH FOR MOUNTING OF PANEL WITH ANCHORING ARRAGEMENT AT FOUNDATION .	Set	1			
Sec. H	2	PROVIDING AND INSTALLING WIRING USING 2.5 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	5			
Sec. H	3	PROVIDING AND INSTALLING WIRING FOR USING 4.0 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	5			
Sec. H	4	PROVIDING AND INSTALLING WIRING FOR USING 6.0 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	4			
Sec. H	5	PROVIDING AND INSTALLING WIRING FOR USING 16.0 SQ.MM COPPER CONDUCTOR THROUGH PVC CONDUIT OF REQUIRED SIZE WITH ACCESSORIES AND FIXTURES .WIRING SHALL BE CONCEALED TYPE FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER IN PVC CONDUIT OF REQUIRED SIZE.	PER POINT	4			
Sec. H	6	POVIDING AND INSTALLATION OF PLUG POINT OF 5A SOCKET (ANCHOR OR EQUIV.) OUTLET FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER INCLUDING WIRING TERMINATION.	NO	4			
Sec. H	7	POVIDING AND INSTALLATION OF PLUG POINT OF 15A SOCKET (ANCHOR OR EQUIV.) OUTLET FOR WHRERVER REQUIRED AS PER INSTRUCTED BY BHEL ENGINEER INCLUDING WIRING TERMINATION.	NO	4			
Sec. H	8	PROVIDING AND FIXING ORDINARY TUBELIGHT WITH FRAME OF STANDARD MANUFACTURER LIKE PHILIPS/BAJAJ OR EQUIVALENT AS APPROVED BY BHEL. THIS INCLUDES TUBE LIGHT FITTINGS , ALL NECESSARY ELECTRICAL FITTINGS (STARTER AND CHOCK ETC) ETC. COMPLETE.	NO.	7			
Sec. H	9	PROVIDING AND FIXING EXHAUST FANS 12" DIAMETER WITH FRAME OF STANDARD MANUFACTURER LIKE CROMPTAN GREEVES OR EQUIVALENT AS APPROVED BY BHEL.	NO.	3			
Sec. H	10	PROVIDING AND FIXING CEILING FAN 48" DIAMETER OF APPROVED COMPANY SUCH AS CROMTAN GREEVES OR ANY OTHER STANDARD MANUFACTURER AS DIRECTED BY BHEL.	NO	2			

Sec. H	12	SUPPLYING, INSTALLATION & COMMISSIONING OF SODIUM VAPOUR LAMP STREET LIGHT FITTING 150 WATT SSG-2315 IH OF CROMPTON OR SIMILAR PHILIPS MAKE, COMPLETE WITH ONE PIECE CANOPY, INTEGRAL CONTROLGEAR COMPRISING OF COPPER WOUND CHOKE , IGNITOR , HPF CAPACITOR, HPSV LAMP AND SUITABLE FOR DIRECTLY SLIPPING OVER LIGHT MOUNTING BRACKET MADE OUT OF 40 MM OD PIPE AND SUITABLE FOR LAMPS, CONTROL GEAR BOX CABLING & TERMINATION OF ITEMS SUPPLIED (TO BE MOUNTED ON 9 MTR POLE - ITEM NO. 2).	NOS.	2			
Sec. H	13	SUPPLY AND ERECTING STEEL TUBULAR SWAGED POLES, 9 MTR LONG MADE OF SHEET STEEL HAVING ULTIMATE TENSILE STRENGTH 42 KG F/SQ.MM CONFIRMING TO BIS :2713 (RPART-II) COMPLETE WITH 300X300X6 MM THICK M. S. BASE PLATE FOR WELDING AT SITE AND SIZE AS PER CONFIGURATION GIVEN IN BIS FOR 410 SP-28 (113 KG- POLE WEIGHT) WITH 1.5 MTR. DEEP EXCAVATION, CONCRETING IN 1:4:8 RATIO SIZE 45 CMS X 45 CMS X 150 CMS AND POLE PLINTH IN 1:3:6 CEMENT CONCRETING HAVING 300 MM HEIGHT AND 300 MM DIA .INCLUDING DOUBLE EARTHING OF POLE WITH SUITABLE ARRANGEMENT, DULY PAINTED WITH TWO COATS OF RED OXIDE PAINT AND ONE COAT OF ALUMINIUM PAINT TO BE APPLIED AFTER ERECTION; THE LENGTH OF POLE BELOW GROUND TO BE PAINTED WITH TWO COATS OF BLACK BITUMINUS PAINT. THE POLE SHALL BE COMPLETE WITH JB, FUSE AND MINOR FABRICATION AS BELOW : I) DRILING 20 MM DIA HOLE AT ABOUT 2.5 MTR FROM GROUND LEVEL FOR WIRE LEADS FROM JUNCTION BOX TO LIGHT FIXTURE . II) DRILING 15MM DIA HOLES AT ABOUT 0.7 AND AT 2.5 MTR FROM GROUND LEVEL AND WELDING 12 MM NUTS FOR USING A 12 MM G.I BOLT FOR FASTENING EARTH CONDUCTERS. III) WELDING REQUIRED HOLES FOR FIXING POLE CAP OF STREET LIGHT BRACKET. IV) WELDING DIAMETRICALLY 10 MM M.S. ROUND 30 MM BELOW POLE TOP EDGE FOR CLIPPING WIRE LEADS .	NOS.	1			
Sec. H	15	SUPPLY OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE (THREE AND HALF CORE) CONFIRMING TO IS 1554 (PART -I)	RM	150			
Sec. H	16	INSTALLATION OF CABLES 3 -1/2 COREX 35 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I) INCLUDING LAYING OF CABLE BELOW GROUND , EXCAVATION OF TRENCH OF 600 MM DEPTH IN ALL KIND OF SOIL, TERMINATION OF CABLES CORES WITH CRIMP TYPE LUGGS, PROVIDING SAND LAYER BELOW/ ABOVE THE CABLE, BRICK LAYING BOTH SIDE /ABOVE THE ABOVE THE CABLE AND BACK FILLING ETC. CABLES ARE TO BE LAID FROM TRANSFORMER SUB STATION TO 415 VOLT AC DISTRIBUTION BOARD	RM	150			

SECTION H TOTAL VALUE OF SECTION-H IN Rs.

RATE SCHEDULE, SECTION - I

SECTION-I		CONSTRUCTION OF SECURITY CABIN (2 Nos)					
SECTION-I	SL.N O	DESCRIPTION OF WORK	UNIT		RATE (Rs) In Figures	Rate (Rs) In words	Amount
SECTION-I	1(A)	EARTH WORK EXCAVATION FROM 0 (ZERO) TO 2 M DEPTH IN ALL KINDS OF SOIL (EXCEPT SOFT ROCK AND HARD ROCK) FOR FOUNDATIONS, SOAK PIT, RAMPS ETC., AS DIRECTED BY BHEL ENGINEER INCLUDING REMOVING THE EXCAVATED MATERIALS UP TO A DISTANCE OF 50M, DEWATERING (BOTH GROUND WATER AS WELL AS RAIN WATER) AND KEEP THE AREA DRY TILL COMPLETION OF ALL THE WORKS, LABOURS, MATERIALS AND REQUIRED T&Ps ETC. COMPLETE.	M3	17			
SECTION-I	1(C)	SUB GRADE PREPARATION: CUTTING LEVELLING, FILLING WITH EXCAVATED EARTH, WATERING AND CONSOLIDATION FOR MESS BUILDING AREA AND PLINTH PROTECTION AROUND THE BUILDING AREA WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.	M2	6			
SECTION-I	2	DISPOSAL OF EXCAVATED EARTH/ROCK (NOT SUITABLE FOR BACK FILLING) BEYOND INITIAL LEAD OF 50M AND UPTO A MAXIMUM LEAD OF 2 KM OR PART THEREOF INCLUDING LOADING, UNLOADING , TRANSPORTING AND SPREADING AS PER DIRECTION OF BHEL ENGINEER .	M3	11			
SECTION-I	3	BACKFILLING OF FOUNDATION FLOORS AND PLINTH IN LAYERS NOT EXCEEDING 150MM THICK. INCLUDING WATERING AND CONSOLIDATING ETC. COMPLETE AS PER STANDARD SPECIFICATION AND INSTRUCTED BY BHEL ENGINEER.					

SECTION-I	A	WITH GOOD EXCAVATED SOIL AVAILABLE FROM THE EARTH WORK.	M3	6			
SECTION-I	4(A)	PROVIDING AND LAYING OF PLAIN CEMENT CONCRETE OF MIX 1:4:8 USING OPC GRADE 43/53, 20 MM DOWN SIZE HARD BROKEN GRANITE STONE JELLY FOR FOUNDATION, FLOORING, COLUMN ETC. INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	4			
SECTION-I	5	PROVIDING AND LAYING OF RCC MIX 1:2:4 USING OPC GRADE 43/53, 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK & CENTERING AS PER DRAWING AND SPECIFICATION AND DIRECTED BY BHEL ENGINEER BUT EXCLUDING COST OF REINFORCEMENTS.	M3	2			
SECTION-I	6	PROVIDING AND LAYING DPC (DAMP PROOF COURSE) 50MM THICK IN 1:2:4 CEMENT CONCRET LAYER USING OPC GRADE 43/53AND WITH 6MM DOWN AGGREGATE, INCLUDING FORMWRK, BITUMEN FELT USING CEMENT WITH WATER PROOFING COMPOUND ETC. COMPLETE	M2	5			
SECTION-I	7	PROVIDING , CUTTING, BENDING AND FIXING IN POSITION REINFORCEMENT OF VARIOUS DIA. USING HIGH TENSILE TOR STEEL (Fe - 415/500). AS PER DRAWING AND SPECIFICATION AND AS DIRECTED BY BHEL ENGINEER INCLUDING COST OF ALL MATERIALS, LEADS, LIFT, LABOURS, MS BINDING WIRE 18/20 GAUGE, TACK WELDING AND SUPPORTING IF REQUIRED COMPLETE.	MT	1			
SECTION-I	8 (A)	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 AND LOCALLY AVAILABLE BURNT CLAY BRICKS (MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR FOUNDATION, SUPER STRUCTURE ETC. INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER . EXCLUDING PLASTERING & PAINTING.	M3	24			
SECTION-I	8 (B)	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 AND FLY ASH LIME BRICKS (FAL - MIN STRENGTH 35 KG/CM ²) AS PER DRAWING AND SPECIFICATION FOR FOUNDATION, WALL ETC. INCLUDING COST OF ALL MATERIALS, LABOUR, SCAFFOLDING, CURING , AT ALL ELEVATIONS AND LEVELS , RAKING OUT JOINTS ETC. COMPLETE AND AS DIRECTED BY ENGINEER . EXCLUDING PLASTERING & PAINTING.	M3	9			
SECTION-I	9	PROVIDING AND FIXING OF BEST QUALITY COUNTRY WOOD DOORS COMPRISING OF FRAME 95 X 70MM AND 38/40MM THICK FLUSH SHUTTERS OF SOLID CORE TYPE USING COMMERCIAL PLY INCLUDING HOLD FASTS, WIND APPLIANCES, HANDLES, TOWER BOLTS AND ALDROPS, MORTISE OR SUITABLE LOCKS ETC. AS PER THE STANDARD PRACTICE AND APPLYING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED SHADE &COLOR OVER A COAT OF PRIMER AS DIRECTED BY BHEL ENGINEER.	M2	5			
SECTION-I	11	SUPPLING, MANUFACTURING AND FIXING IN POSITION OF STEEL WINDOWS AND VENTILATORS INCLUDING FRAMES & IRON BARRED (GUARD BAR OF SQUARE SECTION @ 100 MM C/C) AND GLAZED WITH 4MM PLAIN GLASS AS PER STANDARD SPECIFICATIONS & RELEVANT IS CODE AND INSTRUCTIONS OF BHEL ENGINEER. THE COST SHALL BE INCLUSIVE OF ALL ACCESSORIES FITTINGS, HOLD FASTS, PAINTING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER ETC. COMPLETE.					
SECTION-I	A	STEEL WINDOWS	M2	7			
SECTION-I	14	PROVIDING PLASTERING WITH FOLLOWING CEMENT MORTAR AND GIVEN THICKNESS USING OPC GRADE 43/53 OVER BOTH INTERNAL AND EXTERNAL FACES OF BRICKWORK AND CONCRETE SURFACES, PARTITION WALLS ETC. AT ALL LEVELS INCLUDING PREPARING THE SURFACE, RAKING JOINTS, SCAFFOLDING, CURING, COST OF ALL MATERIALS, LABOUR ETC. COMPLETE.					
SECTION-I	A	EXTERNAL PLASTERING - 18MM THICK - -1:6 (1 CEMENT & 6 COARSE SAND)	M2	45			
SECTION-I	B	INTERNAL PLASTERING -12MM THICK - -1:6 (1 CEMENT & 6 COARSE SAND)	M2	45			
SECTION-I	C	CEILING PLASTERING - 6MM THICK. - -1:3 (1 CEMENT & 3 FINE SAND)	M2	13			
SECTION-I	15(A)	PROVIDING & APPLYING COLOUR WASH -THREE COATS ON NEWLY PLASTERED EXTERNAL SURFACE OF WALL BY USING BEST SHALE LIME TO GIVE AN EVEN SHADE INCLUDING PREPARING THE SURFACE LIKE CLEANING AND BRUSHING & BROOMING OF WALLS AND IN ACCORDANCE WITH STANDARD SPECIFICATION. RATE INCLUDE COST OF ALL MATERIALS , COLOURING AGENT, BASE COAT OF WHITE WASH,APPROVED ADDESSIVE, SCAFFOLDING AT ALL LEVEL, BRUSH ETC. COMPLETE.	M2	47			

SECTION-I	16	PROVIDING AND FIXING 40MM THICK BEST QUALITY KADDAPPA SLAB OF REQUIRED SHAPE FOR FIXING SS SINK FOR KITCHEN COUNTER AND RACKS FOR KITCHEN STORE AREA ETC.COST INCLUSIVE OF MAKING OPENING AND FINISHING COMPLETE.	Sqm.	2			
SECTION-I	17	ALL ELECTRICAL FITTING INCLUDING ONE TUBE LIGHT,ONE CEILING FAN,ONE 5AMP POINT ,SWITCH BOARD ETC FOR TWO SECURITY CABIN	LUMPSU MP	1			
SECTION-I	TOTAL VALUE OF SECTION-I IN Rs.						
GRAND TOTAL							
	TOTAL SUMMARY			AMOUNT AS QUOTED IN RESPECTIVE SECTIONS			
	Total of Section A - CONSTRUCTION OF OPEN STORAGE YARD(30000 SQM)						
	Total of Section B - INTERNAL AND EXTERNAL ELECTRIFICATION FOR THE ABOVE						
	Total of Section C - CONSTRUCTION OF FOUNDATION OF ONE CLOSED SHED						
	Total of Section D - INTERNAL AND EXTERNAL ELECTRIFICATION FOR THE ABOVE						
	Total of Section E - CONSTRUCTION OF MESS BUILDING (12MX6M)						
	Total of Section F - INTERNAL AND EXTERNAL ELECTRIFICATION FOR THE ABOVE						
	Total of Section G- CONSTRUCTION OF TOILET COMPLEX						
	Total of Section H - INTERNAL AND EXTERNAL ELECTRIFICATION FOR THE ABOVE						
	Total of Section I CONSTRUCTION OF SECURITY CABIN						
	GRAND TOTAL IN Rs. (In figures						
	GRAND TOTAL IN Rs. (In Words)						