

TENDER NO.: DLI/BHAT3&4/R&M-INFRA/07_051

TENDER SPECIFICATION

FOR

**CONSTRUCTION OF STORAGE SHED AND OTHER
INFRASTRUCTURE FACILITIES FOR R&M WORKS OF 2 X 110 MW
GURU NANK DEV THERMAL POWER STATION, UNITS 3 & 4, AT
BATHINDA, DISTRICT BATHINDA,
STATE OF PUNJAB, INDIA.**

PART II – PRICE BID



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



ISO 9001-2000, ISO 14001
and OHSAS 18001 certified
Company

Regional Service Centre

Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northren Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301.INDIA
Phone: 0091-0120-2515408 / 2515441 / 2515449
Fax 091-0120-2515484 / 2515467
Email: kaushik@bhelnsnr.co.in / rkm@bhelnsnr.co.in

TENDER NO. BHEL: [DLI/BHAT3&4/R&M-INFRA/07_051](#)

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THIS TENDER SPECIFICATION ISSUED TO:

M/S-----

RATE SCHEDULE					
FOR CONSTRUCTION OF STORES & INFRASTRUCTURE AT 2 x 110 MW, GNDTP, BATHINDA					
DLI/BHAT3&4/R&M-INFRA/07_051					
S. No.	Description of Item	Qty	Unit	Unit Rates in Rs (Figure & Words)	Total Amount in Rs. (Figure & Words)
	CIVIL WORKS				
	EARTH WORKS				
1.	Clearing jungle including uprooting of rank vegetation, grass, brushwood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 200 m outside the periphery of the area cleared.	5000	SQM		
2.	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50m and lift upto 1.5m All kinds of soil	5000	SQM		
3.	Earth work in excavation in all types of ordinary and hard soil including removal of vegetation, shrubs and debris, getting out and stacking the excavated soil, dressing of sides and ramming of bottom, dewatering of accumulated water from any source and keeping the surface dry for subsequent works such as concreting form work etc. and disposal of surplus excavated soil as directed, disposed soil to be neatly levelled and dressed lead upto 100 meters and lift upto 2.0 meter complete.	200	CUM		
4.	Back filling available excavated earth (excluding rock) in trenches, plinth, slides of foundations etc., including re-excavating the deposited soil excavated earlier, breaking clods, laying at all depths and heights in layers not exceeding 20 cm in-depth, consolidating each deposited layer by ramming and watering complete lead upto 50 Meter and lift upto 1.5 Meter.	125	CUM		
5.	Disposal of surplus excavated earth and debris including re-excavating the deposited soil earlier, transportation, loading, unloading, laying at all depths and heights, leveling and dressing both the area (viz. From where earth is transported and where it is deposited) to required levels and slopes, complete with all lifts as directed. (upto 2 KM)	125	CUM		
6.	Supplying the good earth from outside the site including the cost of filling the same within the site in layer not exceeding 20cm in depth & consolidating each deposited layer by ramming and watering including all leads & lifts etc. complete.	500	CUM		
7.	Providing approved quality Yellow/silver sand and filling the same where required under floors etc., watering, ramming, consolidating, grading and finishing to final levels and slopes for all lifts and leads involved, complete as directed (Payment to be made for solid measure of the consolidated filling).	175	CUM		
	PCC				
8.	Plain cement concrete of mix 1:4:8 (1 cement : 4 coarse sand and 8, 40 mm down graded stone aggregate) for column footing, leveling, floors etc., including cost of all materials, lead, lift, labour charges, consolidation, shuttering, curing etc. comp.	175	CUM		
9.	9 Making plinth protection 75 mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth .	300	SQM		
10.	Providing and laying and laying damp proof course 40 mm thick with concrete grade 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size and applying a coat of residual petroleum of penetration 80/100 of approved quality using 1.7 kg per sq. meter on damp proof coarse after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in KEROSENE OIL.	50	SQM		
	BRICKWORK				
11.	Brick work with class designation 75 in cement mortar 1:6 (1 cement : 6 coarse sand) in foundation, plinth and super structure in thickness of 230 mm including cost of all materials, lead lifts, labour charges, mixing mortar, laying bricks, racking joints, curing etc. all complete as per drawing and specification and direction of Engineer In-charge.	275	CUM		
12.	Brick work with brick of class designation 75 in cement	300	SQM		

	mortar 1:4 (1 cement : 4 coarse sand) in super structure in thickness of 115 mm including cost of all materials, lead lifts, labour charges, mixing mortar, laying bricks, racking joints, curing etc. all complete as per drawing and specification. 2 nos. MS rods of 6 mm dia are to be provided after every 3rd layer for which no additional payment will be made.				
	RCC				
13.	Reinforced cement concrete of mix 1:1.5:3 (1 cement, 1.5 coarse sand and ,3 :20 mm down graded aggregate) for column footing, sunshades, shelves, lintels, PLINTH BEAMS etc. including cost of materials, lead lift, labour charges for concreting, shuttering, curing etc. complete.	45	CUM		
13.A	Cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) in pavements, laid to required slope and camber in panels as required including minimum reinforcement, consolidation, finishing and tamping complete.	70	CUM		
13.B	Providing and placing precast RCC 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) in sleepers , laid to required shape including minimum reinforcement, hooks,anchors as reqd consolidation, finishing and tamping complete.	30	CUM		
14.	Centering and shuttering including strutting, propping etc. and removal of form work for : Lintels, beams, plinth beams, girders, bressumers and cantilevers.	250	CUM		
15.	Providing and placing mild steel/ tor steel reinforcement for RCC work including cost of all materials, labour for cutting, bending, binding and placing in position complete as per drawing and instruction of Engineer.	4	MT		
16.	Fabricating and fixing in position, M.S.Holding down bolts with sleeves and washers, nuts and lock nuts etc. including threading of required length and type as per instructions of Engineer I/C a) Upto 20 mm dia. bolt	150	KG		
	ROOFING				
17.	Supply fabrication and erection of structural steel beams, channels, plates, steel tubular trusses, purlines, gates, wind ties, base plates, gusset plates, bolts, nuts etc. complete as per drawings, specifications & instructions of engineer including cost of all materials leads, lifts labour charges etc. and one coat of primer and two coats of approved enamel paint for finished products at site complete as per technical specification and direction of engineer.				
a)	Trusses (medium grade pipes),Purlins side ties, bottom ties	30	MT		
b)	structural steel for columns, PLATES, etc	5	MT		
c)	Wind ties (Flats) 50 x 6 mm thick, angles, box sections,etc	3	MT		
18.	Supplying , fitting & fixing steel rolling shutter , profile type in 18 B.G of approved type of steel lathe section 75 mm wide fitted with coil wire spring to necessitate the fitting of required nos of C.J pulley's on heavy type solid drawn gearless steel tube complete with locking arrangements both side and outside specially built up side guide channels including, providing a hood for the rolling shutter painting with two coats of approved brand of aluminum paint over a coat of red lead primer				
a)	Manually Operated	10	SQM		
b)	Motor operated and manually Operated	20	SQM		
19.	Providing and fixing corrugated AC sheet roofing fixed with GI J or L hooks bolts and nuts 8mm diameter with bitumen and GI limpet washer complete (upto a pitch of 60 degrees) as per tech. specification.	1600	Sq.M		
20	Providing and fixing corrugated Translucent Plastic sheet roofing fixed with GI J or L hooks bolts and nuts 8mm diameter with bitumen and GI limpet washer complete (upto a pitch of 60 degrees) including steel primer and 2 coats of approved paint at overlaps. as per tech. specification.	120	Sq.M		
21.	Providing and fixing AC ridges including supply and fixing J or L bolts and nuts bitumen & GI washers etc. complete as per Technical Specification including Bitumen coating at all joints .	90	RM		
22.	Providing and fixing PVC pipe (2.5 kg/cm ²) of 110 mm dia. as rain water pipe in above item complete in all respect including required shoes, bends, etc.	20	RM		

FINISHING					
23.	Providing and fixing plain asbestos cement sheets of thickness 6 mm for false ceiling of approved quality fixed over approved quality wooden frame work of not more than 610x610 mm square consisting of 100x50 main rafter and 50x50 cross rafter with supporting arrangements from bottom cord of trusses and providing and fixing wooden beading frame work of not more than 610x610 mm square from bottom for aesthetic as well as support ply wood as per drawing including cost of all materials labour for fixing etc. complete (measurement for payment will be finished ceiling surface). Opening size of 0.1 M 2 or above will not be considered for payment.	150	Sq. M		
24.	50 mm thk. Ironic Topping Cement Concrete flooring consisting(1-admixture:2-stone aggregate 6mm nominal size) by volume with metallic hardening compound of approved quality is mixed in the ratio(4:1) (4 cement : 1 metallic floor) hardening compound of approved quality by weight including cement slurry rounding off edges and strips etc. but excluding the cost of nose of steps etc. complete.	1350	Sq. M		
25.	Providing and laying Ceramic glazed floor tiles 300 x 300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to NITCO, ORIENT, SOMANY KAJRIA, or equivalent make in colors such as white, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including the joints with white cement and matching pigment etc. complete.	100	Sq.M		
26.	Plastering work with cement mortar 1:6 (1 cement : 6 fine sand) 12 mm thick after scrapping and cleaning the masonry joints including scaffolding, cost of materials, labour, mixing , leads & lifts, curing etc. complete.	1000	Sq. M		
27.	Plastering work with cement mortar 1:6 (1 cement : 6 fine sand) 15 mm thick after scrapping and cleaning the masonry joints including scaffolding, cost of materials, labour, mixing , leads & lifts, curing etc. complete.	1000	Sq. M		
28.	Providing and fixing steel glazed windows and ventilators of operable standard rolled steel section joints mitred and welded with 15 x 3 mm lugs, 10 cm long, with steel lugs embedded in cement concrete blocks 15 x 10 x 10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 approved graded hard stone aggregate 20 mm nominal size) or with wooden plugs and screws or raw plugs and screws or with fixing clips or with bolts and nuts as required including providing and fixing of glass panels with glazing clips and special metal sash putty of approved make complete including painting with two coats of approved quality synthetic enamel paint over a base coat of red oxide zinc chromate primer including the cost of minor repair work, if required. Windows and ventilators will be provided with horizontal steel bars i8 mm x 8 mm), welded to the frame @ 150 mm including supply of MS frames, bars glazing etc. all complete	45	Sq. M		
29.	Providing and fixing solid core flush door shutters non decorative type, core of black board construction with frame of Ist class hard wood and well matched commercial ply centering with vertical grains or cross bands and face veneers on both faces of shutters 35 mm thick including all supply and fixing of door frames made up of 40x40x5 Tee section with 15x3 mm, 10cm long lugs embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded aggregate 20 mm size) including all accessories like aluminum handle/ tower bolt and iron hinges, aldop etc., as per drawings, applying of coat of primer and two coats of enamel paint of approved brand etc., complete as per specification complete.	25	Sq. M		
30.	Providing and laying Ceramic glazed wall tiles 300x200 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 13755 of NITCO, ORIENT, SOMANY KAJARIA, or equivalent make in colors such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement Mortar 1:4 (1 cement : 4 Coarse sand) including pointing the joints with white cement and matching pigment etc., complete(2.1 m.ht.).	90	Sq. M		
31.	Providing three coats of white wash to give a smooth and even shade including cost of materials, cleaning and preparation of	1000	sq.M		

	surface, scaffolding etc. complete.				
32.	Finishing walls/ surfaces with water proofing cement paint of approved brand and manufacture and of required shade to give an even shade.	1000	sq.M		
33.	Distempering with Oil bound washable distemper of approved brand and manufacture and of required shade to give an even shade on new wall (2 or more coats) over and including priming coat with cement primer.	300	sq.M		
34.	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade in two or more coats on new work	250	sqm		
	SANITARY/SEWAGE				
35.	Providing and fixing white vitreous china pedestal type water closet (European type WC pan) with seat and lid 10 Ltr low level white P.V.C. flushing system with manually controlled device(handle lever) confirming to IS: 7231,Parryware/ Hindware/Seabird/ Orient (coral) with all Fittings and fixtures complete including cutting and making good the wall and floor wherever required W.C. pan with ISI marked white solid plastic seat and lid.	1	nos.		
36.	Providing and fixing white vitreous china water closet squatting pan (Indian type / Oriss pattern WC pan) size 580 x 440 mm with 100 mm sand cast iron P trap, 12.5 Lit. high level CI flushing clastern with fittings RS or CI brackets 32 mm dia meter galvanised iron flush pipe with fitting and clamps 20 mm GI over flow pipe with special and mosquito proof coupling of approved design and GI chain and pull complete including painting of clastern and fittings, cutting and making good the walls and floors where required.	1	No.		
37.	Providing & fixing flat back white vitreous china wash basin 550 x 400 mm size with single 15 mm C.P. brass pillar with R.S. or C.I. brackets painted white 15 cm C.P. brass pillar taps C.P. brass chain with rubber plug, 32 mm dia CP Brass trap and M.I. unions, C.P. waste, C.P. connection, soap dish , waste pipe complete including cutting and making good the walls wherever required.	2	No.		
38.	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm size respectively with automatic flushing cistern with C.I. Brackets, standard size of G.I. Flush pipe and spreaders with brass union and G.I. clamps, P.V.C. waster pipe etc. complete including painting on the inner surface of cistern with anticorrosive bitumastic pain and two coats of synthetic enamel paint over a coat of approved steel primer on the outer face of cistern brackets etc. and cutting and making good the walls and floors wherever required. a) Range of 1 urinal basin with 5 litre automatic flushing cistern. b) 10 Ltrs. C.I. Automatic flushing cistern with three urinals.	1 1	Set Set		
39.	Proving and fixing Salam Stainless steel A ISI 304 (18/8) kitchen sink as per I S 13983 with C.I. Brackets and stainless steel plugs 40 mm including painting and fittings and brackets, cutting and making the good the walls wherever required: Kitchen sink with drain board 510 x 1040 mm bowl depth 178 mm.	2	no.		
40.	Providing and fixing 300x450 mm beveled edge not less then 5 mm thick mirror of superior glass of approved quality complete with 6 mm thick ply board back fixed to wooden cleats with C.P.screws and washer etc. complete all as specified.	3	Nos.		
41.	Providing and fixing 600x20 mm size PTMT towel rail complete with 2 nos. C.P. brass brackets fixed to wooden cleats with CP brass screws.	2	Nos.		
42.	Providing, laying and jointing glazed stone ware pipes grade A with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc., complete 100 mm dia pipe.	100	RM		
43.	Providing, laying, fitting and jointing medium grade GI pipes , confirming to IS 1239 for water lines at various elevations with all fittings stop cock, valve bends, elbows, tees, reducers., etc. making grooves in the brick wall, etc. (Internal work),				

	trenching, refilling etc. (external work) Including cost of all materials, labour charges etc. complete as per specifications and drawings.				
a)	80 mm dia G.I. Pipe (External work)	10	RM		
b)	50 mm dia G.I. Pipe (External work)	30	RM		
c)	25 mm dia G.I. Pipe (External work)	100	RM		
d)	20 mm dia G.I. Pipe (Internal work)	70	RM		
e)	15 mm dia G.I. Pipe (Internal work)	30	RM		
44.	Providing and fixing brass full way valve with C.I wheel of approved quality etc. complete.				
a)	25 mm nominal bore.	3	No.		
b)	50 mm nominal bore.	2	No.		
c)	80 mm nominal bore.	1	No.		
45.	Providing and fixing 3" non return brass valve of approved quality etc. complete.	1	No.		
46.	Providing and fixing C.P. brass 15 mm stop cock of approved quality of weight not less than 250 gms.	5	Nos.		
47.	Providing and fixing C.P. brass 15 mm bib cock of approved quality of weight not less than 250 gms.	4	No.		
48.	Construction brick masonry manholes of inside size 90x80 cm and 45-60 cm deep with 75 class designation bricks in cement mortar 1: 5 (1 cement : 5 fine sand), RCC top slabs with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm size), foundation concrete 1:1:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded aggregate of 20 mm nominal size) neatly finished complete as per standard design including CI manhole cover.	2	Nos.		
49.	Connection of all underground drain lines of new water and sanitary system with existing drain lines of water and sanitary system at site. Item includes all material, labour, leads, lifts etc., complete including C.I / piping.	1	set.		
50.	Providing and fixing square mouth stone ware gully trap grade'A' conforming to IS:651 complete with G.I. Grating, brick masonry chamber with bricks of class designation '50' and water tight C.I. Cover with frame of 300 x 300 mm size (inside), the weight of cover to be not less than 4.5 kgs and frame to be not less than 2.70 kg as per specification. 100X100 MM P TYPE	5	Nos.		
51.	Providing & fixing 100 mm x 100 mm sand cast iron trap of self cleaning design with sand cast iron screwed down or hinged painting with or without vent arm complete including cost of cutting and making good the walls floors etc. all as specified	10	Nos.		
52.	Construction soak pit of 2 Mtr dia and 3 Mtr depth filled with brick bats including S.W. drain pipe 100 mm dia and 1.2 meter long complete as per standard design.	1	No.		
53.	Providing and laying of S&S cast iron pipes (class LA) of 100 mm dia.	20	RM		
54.	Supplying and installation of HDPE cylindrical and vertical water tank capacity 1000 Ltrs with closed top of SINTEX or approved equivalent of under mentioned capacity with all necessary fittings including supplying and fixing input and out put lines including support of brick pillars of height of 3 Mtrs each complete and float valve at inlet.	1	set		
55.	Providing and Laying of non-Pressure NP2 class (light duty) RCC Pipe with collar of 250 mm dia jointed with stiff mixture of cement mortar in proportion of 1:2 (1 cement :2 fine sand) including testing of joints etc complete	200	RM		
56.	Construction of brick masonry road gully chamber 50 cm x 45 cm x 60 cm with MPS Brick of class 75 kg in cement mortar (1 cement : 6 fine sand) including 500 , 450 mm RCC precast horizontal with frame completed as per standard specification	5	EACH		
	FENCING				
57.	Providing, fabricating and erection of barbed wire fencing including 2 Nos lockable main gates as per drawing with 65 x 65 x 6 angle posts spaced @ 3 Mtr. C/c and embedded in cement concrete block 45 x 45 x 60 cm of mix 1:3:6 (1 cement:	450	RM		

	3 coarse sand: 6 graded stone aggregate 20 mm nominal size) corner and every 10th post to be strutted and provided with 12 horizontal lines and two diagonals of GI barbed wire 9.38 kg/100 Mr. properly fixed with wire hooks spaced at 250 c/c approx. including supply of all materials, excavation, concrete, fabrication, painting of posts with 2 coats of synthetic enamel paint over a coat of primer paint as per direction of engineer, complete as per standard specification.				
58.	Providing and fixing at ground level precast 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) cement concrete reinforced with 1.6 mm MS wire in kerbs, edgings, drains, etc. as per approved pattern and placed in position with cement mortar 1:3 (1 cement:3 coarse sand) including the cost of reqd. centering, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement:3 fine sand) on exposed surface complete in all respects	7	cum		
59.	Steel work in built up section/framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel for gates, railings, frames, gratings etc. 12 nos posts of 7.0 mtr finished height by increasing the fencing posts heights are to be kept for mounting storage area lightings.	300	kgs		
60.	Supply and fixing of welded Tubular (ERW) 4" diameter MS post with support frame for mounting of helozen light fittings of finished height 7.0 mtr. after grouting Including base plate size 30 cms x 30 cms x 10 mm and welded top cap duly painted with anti corrosive paint and 2 coats of silver paint etc.complete in all respects. Quantity of poles 6 Nos.	450	kgs.		
61.	Preparation of subgrade by excavating earth to an average of 22.5cm depth, dressing to camber and consolidating with road roller including making good the undulations etc and disposal of surplus earth lead upto 50mtrs.	900	sq.m		
62.	Consolidation of subgrade with power road roller of 8 to 12 tones capacity including making good the undulations etc with quarry spoils/suitable subgrade material	900	sq.m.		
63.	Supplying and Laying water bound macadam with specified stone aggregate stone screening and blinding material including screening, sorting, spreading to template, watering and consolidation with power road roller of 8 to 10 tone capacity etc. complete including supply of Base course with 63 mm to 45 mm size including stone screening 13.2mm size, kankar, moorum and 6 mm thick red bajri etc. as per standards and instructions of Engineer I/C	600	cum		
64.	75 mm tick back filling for pitching above 200 mm thick boulder (nominal size 120 mm)soling with moorum and binder including supply of reqd. materials, grading to reqd slope, watering and consolidation with 8-12 T roller complete with supply of boulders, moorum, binding earth and stone aggregate 40 mm nominal size as per instructions of Engr I/C	4000	sqm		
	Water Pumping system				
65.	Supply, installation and commissioning of one no. 3 HP submersible/non submersible water pumps set of reputed makes like Jyoti, Crompton, Kirloskar etc. or of reputed make with starter, inlet and outlet piping, isolating valves, nonreturn valves, electrical switches, power supply cabling, boring for installation of pumps, and complete supply and installation of all items required for arrangin g water supply system as per the BHEL's scheme. For distribution system a 3" pipe header is to be provided at the outlet of pump along with water recirculation arrangement. A 2" water supply is to be connected to main supply to BHELs water system. Three terminal points are to be installed on discharge header with 2" isolation valves and with threaded dummy caped ends.	1	Set		
	ELECTRICAL WORK				
66.	Supply & fixing factory fabricated cubicle panel floor mounted indoor type comprising of 315A MCCB as incomer built-in with Earth Fault and Over Current protection consisting of 1 x 100A Four Pole MCB, 1 X 63A TPN MCB, 4 X 32A TPN MCB as outgoing with necessary interconnection from bus bar and MCB's , terminations, floor/wall mounting indoor type with adapter box for incoming/outgoing cabling etc as the common	1	SET		

	main panel for including all accessories along with 1 no of Ammeter, voltmeter with selector switch, indicating lamps , energy meter 3 phase 4 wire system with 3 phase neutral Copper Busbar.1.6 mm thick sheet steel factory fabricated with hinged door and lockable arrangement Power Distribution Board (PDB) 415 Volts,on surface /recess, complete with neutral link, earth bar and earth stud, internal interconnections including painting,earthing & earthing pit etc				
67.	Supplying and fixing, three pole and neutral, 1.6 mm thick sheet steel factory fabricated with hinged door and lockable arrangement Power Distribution Board (PDB) 415 Volts,on surface/recess, complete with neutral link, earth bar and earth stud, internal interconnections including painting,earthing & earthing pit etc Comprising of following- MCBs complete with connections.Testing and commissioning etc. as required for following PDB,s:				
68A	Incomer 100A Four Pole switch with Cu bus bars &, out going 2 x 32 A and 1 x 63A MCB four poles and one no. Distribution Box for mounting of 15 nos SPCB of RATING 10A to 25A and 1 no 4 pole 63 Amps MCB including interconnection from main distribution board arrangement for cable etc (For the lighting and power Distribution Board for store sheds at different places in the stores shed I, II and Semiclosed Shed)- PDB - I	1	set		
68B.	2 x 32A SPCB & 11 X 10 A and 16 x 25 A SPCB mounted in a distribution box including interconnections from main DB (for lighting and power ; Distribution Board for shed II functional area) - PDB - II	1	set		
68C.	Incomer to 3 phase 63 A on / off TPN switch to 4 nos 25 A single phase circuit breaker for storage lighting system and one no 16A switch socket and 3 nos 6A on / off switches for power and lighting at security kiosk including interconnection arrangement from main panel (for lighting and power Distribution switch Board at security kiosk) - PDB - III	1	set		
	CABLES & FITTINGS				
69.	Supply, Laying & termination of 1.1 kv grade 3.5 C X 185 sqmm Al Cond pvc insulated Armored Cable in ground as per standards/site condition incl termination on both side. As the Main cable from outside source to common panel.	200	RM		
70.	Supply, Laying & termination of 1.1 kv grade 3.5 X 95 sqmm Al Cond pvc insulated armoured Cable in ground as per standard/site condition incl termination on both side as the main cable As the outgoing cable from Common main panel to feeder panel for office stores DBs	10	RM		
71.	Supply, Laying & termination of 1.1 kv grade 3.5 X 50 sqmm Al Cond pvc insulated armoured Cable in wall /tress as per standard/site condition incl termination on both side as the main cable As the outgoing cable from Common main panel to mask light system,security gate/fence lighting system	75	RM		
72.	Supplying and Wiring for light, fans, call bells, and exhauster fans etc with 2.5 Sqmm size PVC insulated copper wire single core , multi strend wires in surface / recessed PVC conduit complete with MS boxes (weather proof box for outer lighting and other boxes suitable for inside stores mounting), individual control switchs etc. complete as required.Including Submain wiring for store light points/ ceilingfans fittings / Exhaust fan fitting and for 3 pin 5 Amps point and switches point with MS boxes to be fitted inside the wall/ concealed with hylum/ sunmika sheets and for the earthing the third pin with 1.5 Sqmm size PVC insulated copper multi-core wire complete as required for all stores as per following (tentative qty)	2000	RM		
72A.	Providing and fixing of 2 x 40 w Batten type flourescent tube fitting lights sets((Crompton / Philips / Bajaj make), fabricated from CRCA sheet steel and finished with stove enamel paint complete with Accessories like flourescent lamp,copper wound polyester choke, starter, seat, rotor holder and terminal block duly pre-wired with copper conductor, including connections, fixing on wall, false ceiling or under roof tusties with clamps as required.	15	nos		
72B.	Providing and fixing of 1200 mm sweep ceiling fan (Khaitan / Crompton / Usha / Bajaj make) with regulator including fixing of assembly with required accessories, making connections,	15	nos		

	loop earthing etc.				
72C.	Providing and fixing of 300mm sweep exhaust fan (Khaitan / Crompton / Usha / Bajaj make) single phase alongwith gravity louvers, frame / tripod for holding the motor including making necessary opening in wall, supply & fixing of assembly with grouting bolts, making onnections, loop earthing etc.	3	nos.		
72D.	Supply & fixing 10 way call bell indicator approved make with indicator lamp reset switch housed in sheet metal boxes of required size including making connections etc. as required along with 8 nos. calling push buttons and connections as decided at site.	1	set		
73.	Supply and wiring for power sockets with 4 Sqmm size PVC insulated copper wire single core multistrand cables in surface / recessed PVC conduit complete as required. Including Submain wiring for store power points 3 pin 5 / 15 Amps socket with switch with MS boxes to be fitted weather proof box for outer lighting fixed inside the wall/ concealed with hylum/ sunmika seats and for the earthing the third pin with 2.5 Sqmm size PVC insulated copper single core multi-strand wire complete as required for all stores to be provided. (tentative qty -power points- 36 nos as detailed below)	1000	RM		
73A.	Providing & fixing of 240 V, 5 / 15 Amp 6 Pin Power socket outlet point (with 15 A switch). Switch / socket to be fitted in suitable size 20 SWG metal type box with 3mm sunmica sheet.	25	nos		
73B.	Supplying, installation, connecting, testing and commissioning of fixtures / luminaires including making hanging/fixing arrangements in false ceiling / ceiling with lamps copper ballast, capacitor etc. as required at site and fixing 1 x 125 W HPMV out door type fittings (Crompton / Philips/BajaJ / Mayfare make), complete with lamp, ballast control box, fixing clamp etc. (qty shed I - 8 nos, Shed II - 4 nos and 3 nos near semi-closed shed)	10	nos		
74.	Supply & Laying of 1.1 kv grade 2 C X 4 sqmm Al Cond pvc insulated armoured Cable mounting in fencing masts and poles along with local junction boxes outdoor mounting type and 2c x 2.5 sqmm Al Cond pvc insulated armoured cable (about 200mtr) from JV to Light point as per standard/site condition including termination on both side as the main cable for the outgoing cable for mask light system, security gate/fence lighting system (Tentative qty.- 30 light points from the PDB-III at security keosk and 1 no for water pumping from PDB-II along with a local on / off outdoor mounted starter near the pump) Details are as below:	600	RM		
74A.	Providing and fixing 500 W Halogen fittings, out door street light (Crompton / Philips/Bajaj / Mayfare make) mounted on poles complete with lamp, earth work , CC pedestal with MS outdoor type switch box with switches mounted on a suitable location for easy operation. (Poles covered at sl. no.60)	6	Nos.		
74b.	Providing and fixing 500 W Halogen fittings, out door street light (Crompton / Philips/Bajaj / Mayfare make) complete with lamp, mounted on barbed wire fence structural posts at 4.5 mtr height with MS outdoor type switch box and switches mounted at suitable location, supply and fixing of suitable MS angle with support frame of height 7.0 mtr. painted with approved anti corrosive paint and 2 coats of silver paint etc.complete in all respects (structural posts covered and payable at item no. 59).	12	No.		
75	Wiring for power sockets with 6 Sqmm size PVC insulated copper wire multistrend in surface /recessed PVC conduit complete as required.Including submain wiring for Air Conditioner points alongwith one no. 20Amps DP switch to be fitted on the wall with the earthing wire of size 2.5 Sqmm size PVC insulated copper multi-strand wire to be provided for CM room.	50	mtr		
76.	Supply and erection of pipe earth Electrode in earth pit with reqd salt, charcoal & other works as per IS 3043/ as per sire condition .	2	No.		
77.	Providing and laying of earth Flat of 30X6 mm GI Flat for earthing	50	mtrs		
78.	Providing and laying of earth wire of 1.5 mm copper wiring for earthing	200	mtr		
79.	Providing plants in earth/cement pot with metallic stand	100	nos		
80.	Providing portable cabin / bunk house as per specification in	2	Nos.		

	Gen. scope of work & Drawing No. PSNR/BUNK HOUSE/0002 of approved make by engineer I/C.				
	TOTAL VALUE				

Notes:

1. In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item.
2. The rate shall be entered in figures as well as in words. In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.
3. The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the lower of the two shall be considered for evaluation and award.
4. The quantities indicated against each item above are tentative and same are liable to vary depending upon the site requirement. The contractor has to handle all items indicated by BHEL Engineer for completion of work.
5. In the event of reverse auction, the relevant terms indicated in Tender-Notice (page:5&6 of part-1 Bid) shall be applicable.

(Signature and seal of tenderer)