

TENDER SPECIFICATION

NO: BHE/PW/PUR/VNSR-ENB/1269

DEVELOPMENT OF OPEN STORAGE YARD (10,000 SQM) WITH INTERNAL ROADS, HARD SURFACING BY MURUM, FENCING ALONG WITH ITS ILLUMINATION, CONSTRUCTION OF RAISED CONCRETE PLATFORM.

AT

6X210 MW + 2X500 MW
NTPC VINDHYACHAL STPP (ESP ST-I & ST-II)
SINGRAULI, MADHYA PRADESH

VOLUME:II – PRICE BID-1269



BHARAT HEAVY ELECTRICALS LIMITED

(A GOVERNMENT OF INDIA UNDERTAKING)

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345, KINGSWAY - NAGPUR 440 001

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DEVELOPMENT OF OPEN STORAGE YARD (10,000 SQM) WITH INTERNAL ROADS, HARD SURFACING BY MURUM, FENCING ALONG WITH ITS ILLUMINATION, CONSTRUCTION OF RAISED CONCRETE PLATFORM.

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NTPC VINDHYACHAL STPP (ESP ST-I & ST-II)
SINGRAULI, MADHYA PRADESH**

EARNEST MONEY DEPOSIT: Please see Notice Inviting Tender.

LAST DATE FOR: Please see Notice Inviting Tender.

TENDER SUBMISSION:

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING **VOLUME-I-Tech Bid**, **VOLUME- II-Price Bid** AND **VOLIME-IBCD Rev-01** ARE ISSUED TO:

M/s.

PLEASE NOTE:

THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date:

BHEL PS WR NAGPUR
 TS NO : BHE/PW/PUR/VNSR-ENB/1269
 VOLUME-II- PRICE BID
 ENABLING WORKS AT NTPC Vindhyachal

BHEL:PSWR:NAGPUR							
ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
RATE SCHEDULE, SECTION - A							
NAME OF WORK: DEVELOPMENT OF OPEN STORAGE YARD OF AREA 10,000 SQM. WITH INTERNAL ROADS, MONSOON YARD AND FENCING AT NTPC VINDHYACHAL R&M PPROJECT.							
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	10000			
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 SOIL BROUGHT FROM CONTRACTOR'S OWN SOURCE (OUTSIDE OF PLANT)	M3	44			
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	250			

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ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
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. 2500 SQM AREA TO BE DEVELOPED BY 200MM THICK MURUM FOR CONSTRUCTION OF MONSOON YARD)	M3	550			
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	1931			
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	262.20			
Sec. A	B	IN SOFT/HARD ROCK	M3	13.80			

BHEL PS WR NAGPUR
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VOLUME-II- PRICE BID
ENABLING WORKS AT NTPC Vindhyachal

BHEL:PSWR:NAGPUR							
ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
Sec. A	7	BACK FILLING THE SIDES OF DRAINS, CULVERTS 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	508.00			
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	711.50			
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	628			
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	481			
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, COMPACTION 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	314			
Sec. A	12	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	44.00			

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ENABLING WORKS AT NTPC Vindhyachal

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ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
Sec. A	13	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 BUNK HOUSE AND WHEREVER REQUIRED ETC. INCLUDING SHUTTERING, FINISHING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	2.20			
Sec. A	14	PROVIDING AND LAYING OF RCC OF MIX 1:2:4 USING 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE FOR RCC SLAB OF CULVERT, 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	6.00			
Sec. A	15	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	0.60			
Sec. A	16 (A)	PROVIDING BRICK WORK IN CM 1:6 (1 CEMENT & 6 COARSE SAND) USING OPC GRADE 43/53 WITH LOCALLY AVAILABLE BURNT CLAY BRICKS (MIN STRENGTH 35 KG/CM²) 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	0.00			
Sec. A	16 (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/CM²) 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	92.00			
Sec. A	17	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	539.00			

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ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
Sec. A	18	40MM THICK COPING OVER THE DRAIN WALL TOP USING MIX - 1:2:4	M3	6.00			
Sec. A	19	PROVIDING 2 MM THICK NEAT CEMENT FINISH OVER CONCRETE BASE FOR FLOORING PAVING AND INTERNAL SURFACE OF BRICK DRAINS ETC.	M2	539.00			
Sec. A	20	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	65.00			
Sec. A	21	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, ENCASEMENT 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	0.00			
Sec. A	B	600mm dia	RM	16.00			
Sec. A	22	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	767			
Sec. A	23	REMOVAL OF WILD GROWTH, BUSHES VEGITATIONS AND DISPOSAL AS PER INSTRUCTION WITHIN THE PLANT BOUNDARY (SIZE OF STEM FROM 150MM TO 600MM DIA.)	NOS	20			

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ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
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Sec. A	24	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	25	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 10 M WIDE AND 20 M LONG -- 1NO.							
Sec. A	26	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	121			

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SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
Sec. A	27	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	63			
Sec. A	28	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	53			
Sec. A	29	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	31			
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	1			
SECA	31	EXTRA FOR BORING OVER 150 FT. DEPTH FOR EVERY ADDITIONAL 10 FT. OR PART THEREOF.	Per ft	25			
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.	60			
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.	1			

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ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
SEC A	34	EXTRA OVER INITIAL LENGTH OF HDPE SUCTION PIPE BEYOND 120 FT.	Per ft.	15			
Sec. A		TOTAL VALUE OF SECTION-A IN Rs.					
BHEL:PSWR:NAGPUR							
RATE SCHEDULE, SECTION - B							
NAME OF WORK- ILLUMINATION OF OPEN STORAGE YARD 10,000 SQM AT VINDHYACHAL R&M PROJECT							
Sec. B	SL.NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
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 THICHNNES 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			

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VOLUME-II- PRICE BID
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ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
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			
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.	22			

BHEL PS WR NAGPUR
 TS NO : BHE/PW/PUR/VNSR-ENB/1269
 VOLUME-II- PRICE BID
 ENABLING WORKS AT NTPC Vindhyachal

BHEL:PSWR:NAGPUR

ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.

SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
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 FROOM 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.	11			
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 GRIMP 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	226			

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ESTIMATE FOR ENABLING WORKS : DEVELOPMENT OF OPEN STORAGE YARD WITH INTERNAL ROADS, DRAINS, FENCING, ETC. AND ITS ILLUMUNATION, INCLUDING SUPPLY AND INSTALLATION OF BOREWELL, ALL COMPLETE AT NTPC VINDHYACHAL R&M.							
SECTION	SL. NO	DESCRIPTION OF WORK	UNIT	QTY.	RATE in Figure (In Rs)	RATE IN WORDS (In Rs)	AMOUNT (In Rs)
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	226			
Sec. B	17	SUPPLY OF CABLES 2 CORE X 10 SQMM ALUMINIUM ARMoured PVC INSULATED CABLE CONFIRMING TO IS 1554 (PART -I)	RM	660			
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	660			
Sec. B		TOTAL VALUE OF SECTION-B IN Rs.					
SUMMARY SHHET							Total Amount (In Rs)
1	SECTION -A	CONSTRUCTION OF OPEN STORAGE YARD 15000 SQM					
2	SECTION-B	ELECTRIFICATION OF OPEN STORAGE YARD					
GRAND TOTAL IN FIGURE (In Rs)							
GRAND TOTAL IN WORDS							
Rupees.....							
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