

BOQ FOR CIVIL WORKS FOR DEVELOPMENT OF STORAGE OPEN YARD II AT 2X500 MW ANPARA 'D' TPS						
TENDER NO. BHEL/ NR/SCT/ ANPARA D/ YARD II / 673						
SI No	CODE	DESCRIPTION OF ITEM	UNIT	TOTAL QTY	RATE	AMOUNT
		<b>(A) CIVIL WORKS</b>				
		<b>EARTHWORK/SITE CLEARANCE/ROADWORK</b>				
1	C1	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.	sqm	15000.00		
2	C2	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 in all kinds of soil.	sqm	15000.00		
3	C3	Earth work in excavation in all types of ordinary and hard soil by mechanical means (Hydraulic excavator)/manual means including 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 50 meters and lift upto 1.5meter complete.	Cu.M	5.00		
4	C4	Back filling available excavated earth 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 Metre and lift upto 1.5 Meter.	Cu.M	2.00		
6	C6	<b>Preparation and consolidation</b> of site area with atleast 10 passes with power road roller of 8 to 12 tonne capacity after levelling, grading, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the subgrade and disposal of surplus earth lead upto 50 Mtrs	sqm	15000.00		
8	C8	<b>Supply and Laying</b> water bound macadam with specified stone aggregate stone screening and binding material including screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne capacity etc. complete with <b>supply for stone aggregate, screenings, kankar, moorum and red bajri etc.</b>				
	a)	Base course with 63 mm to 45 mm size including stone screening 13.2mm size.	cum	2250.00		
9	C9	<b>Providing and tilling</b> of quarry dust as <b>Filling/levelling course</b> compacting <b>the same with 8 to 10 ton road roller</b> complete in all respects as directed by Engineer-in Charge	cum	7500.00		
	C10	Providing and tilling of <b>murrum</b> as levelling course compacting the same with 8 to 10 ton road roller complete in all respects as directed by Engineer-in Charge	cum	375.00		
		<b>PCC</b>				

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14	C14	<b>Plain cement concrete</b> of mix 1:3:6 (1 cement : 3 coarse sand and 6, 20 mm down graded stone aggregate) for column footing, levelling, floors etc., including cost of all materials, lead, lift, labour charges, consolidation, shuttering, curing etc. complete.	Cu. M	2.00		
		<b>BRICKWORK</b>				
18	C18	<b>Brick work</b> with class designation 75 in <b>cement mortar</b> 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.	Cu. M	2.00		
19	C19	<b>Brick work</b> with brick of class designation 75 in <b>cement mortar</b> 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.	Sq. M	30.00		
		<b>RCC</b>				
20	C20	<b>Reinforced cement concrete</b> 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 etc. including cost of materials, lead lift, labour charges for concreting, curing etc. complete.	Cu. M.	1.00		
21	C21	<b>Centring and shuttering including providing all shuttering material</b> , strutting, propping etc. and removal of form work for : Lintels, beams, plinth beams, girders, bressumers and cantilevers.	sqm	10.00		
22	C22	<b>Providing and placing mild steel/ tor steel reinforcement</b> 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.	MT	0.10		
		<b>ROOFING</b>				
25	C25	Steel work in built up section/framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer and two coats of approved enamel paint using structural steel for gates, railings, frames, gratings, purlins etc.	kg	1000.00		
	C27	Providing and fixing <b>corrugated Asbestos cement sheet 6 mm thick</b> roofing and side cladding fixed with polymer coated J or L hooks bolts and nuts 8mm diameter with bitumen and GI limp washer complete including steel primer and 2 coats of approved paint at overlaps. as per tech. specification.	Sq.M	10.00		
		<b>FINISHING</b>				

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32	C32	50 mm thk. Ironc Topping Cement Concrete flooring consisting(1-admixture:1 coarse sand: 2-stone aggregate 6mm nominal size) by volume <b>with metallic hardening compound</b> 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.	Sq. M	9.00		
37	C38	<b>Plastering work</b> with cement mortor <b>1:6</b> (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.	Sq. M	57.00		
42	C44	<b>Providing and fixing steel glazed windows and ventilators</b> 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 <b>including providing and fixing of glass panels</b> 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 <b>provided with horizontal steel bars (8 mm x 8 mm)</b> , welded to the frame @ 150 mm including supply of MS frames, bars glazing etc. all complete	Sq. M	1.00		
44	C46	Providing and fixing ISI marked flush door shutters non decorative type , core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters 30 mm thick including ISI marked stainless steel butt hinges, handle,tower and slide bolts, complete with necessary screws and other accessories	Sq. M	2.00		
47	C49	Providing three coats of <b>white wash</b> to give a smooth and even shade including cost of materials, cleaning and preparation of surface, scaffolding etc. complete.	sqm	57.00		
		<b>FENCING</b>				
77	F1	<b>Providing and fixing 2.0 mtr high G.I chain link fabric fencing</b> with 'Y' shaped angle iron posts placed at 3 mtrs c/cand strutted at every 15 th post/last but one post/corner post of overall height 2.8 with Y arms of 450 mm length and effective height 300 mm, in mesh size 25x25 mm made of G.I wire of dia 3mm including strenthening with 2 mm dia wire or nuts, bolts and washers as required complete <b>including providing 6 rows ( 3 rows on each arm) of GI barbed wire 9.38 kg per 100m above 2mtr chainlink fabric</b> (Fencing height above ground=2.3 mtrs) <b>complete with supply of all materials, labour, T&amp;P except angle posts</b> as per the instructions of Engineer I/C				
		With G.I. Chain link fabric (Payment to be made for per metre of complete fencing)	Metre	360.00		

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SI No	CODE	DESCRIPTION OF ITEM	UNIT	TOTAL QTY	RATE	AMOUNT
78	F2	<b>Supplying and fixing at site 2.8 mtrs high 75x75x8 mm Angle iron post &amp; strut</b> of required size including bottom to be split and bent at right angle in opposite direction for 10 cm length and drilling holes upto 10 mm dia. Etc. complete <b>including a priming coat and two coats of enamel paint, earth excavation, providing PCC 1:3:6 (450X450X600 mm), shuttering if required, curing, surplus earth disposal, etc</b> complete in all respects.	kg	3650.00		
	F3	<b>Dismantling</b> and stacking within 50 metre lead of existing G.I.chain link fabric fencing ,fencing posts or struts including all earth work and dismantling of concrete base etc. complete in all respects.	RM	30.00		
		<b>(B) ELECTRICAL WORKS</b>				
	E23	<b>Laying</b> of following type of PVC Insulated, PVC armoured standard <b>aluminium conductor cable</b> confirming to IS:1554-1976 (part 1), glanding with single compression gland, termination of both end in DB & SFU. The cable has to be laid underground on sand cushion including backfilling, susitable clamp, clamping on surface including all materials etc. complete.This includes road crossing for which suitable GI Pipe to be provided by the contractor. <b>ONLY CABLE WILL BE SUPPLIED BY BHEL. ALL OTHER MATERIALS REQUIRED FOR THE WORK IS TO BE SUPPLIED BY THE CONTRACTOR.</b>				
100	E24	3 1/2 Core x 50 / 95 Sq.mm armoured cable	RM	200.00		
101	E25	2c/3c/4c upto 16 sq.mm armoured cable	RM	100.00		
		<b>GROSS TOTAL OF ALL THE ABOVE WORKS</b>				

**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 higher of the two shall be considered for evaluation and the lower of the two shall be considered for award.
- 4 The quantities indicated against each item above are tentative and are liable to vary depending upon the site requirement. The contractor has to supply / install actual quantities as per advice of BHEL Engineer and accordingly the final contract price shall be worked out.

(Signature, date &amp; seal of authorized representative of the bidder)