

**Name of the work - Renovation of NCBS Field station at  
Pachmarhi, Madhya Pradesh.**

**Abstract of Cost**

<b>PART</b>	<b>Description</b>	<b>Amount</b>
A	Amarak	
B	Dormitory	
C	Flats/Residential Apartments	
D	External PH works	
<b>Total Rs.</b>		

**Total amount in words:-**

**Signature of the contractor:**

**Date:**

**Address:**

**Seal:**

**Name of the work - Renovation of NCBS Field station at Pachmarhi, Madhya Pradesh.**

**PART-A (Amarak)**

**Schedule of Quantities**

<b>Sl. No</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
<b>I</b>	<b>Civil works</b>				
1	Dismantling doors, windows and clearstorey windows (steel or wood) shutters including chowkhats, archi-trave, holdfasts, etc; complete and stacking the material at NCBS scrapyard etc., complete.				
	Of area 3 sqm and below	No	16.00		
2	Dismantling the existing ceramic tile dadoing work/skirting laid in cement mortor 1:4, inclusive of cement plaster upto a depth of 20 mm, shifting the debries from the work site upto a lead of 50 m and as directed by Engineer In charge etc., complete.				
	For thick ness of tile 10mm to 25mm	Sqm	40.00		
3	Demolishing brick work in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50m lead.	Cum	4.00		
4	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable materials within 50m lead.	Sqm	26.00		
5	Removing of roofing tiles including purlins, necessary chasing of walls wherever necessary. Including stacking the removed materials as directed by EIC	Sq.M	760.00		
6	Removing white or colour wash by scrapping, sand papering the surface smooth including necessary repairs, etc complete.	Sqm	1600.00		
7	Dismantling the existing GI pipe line of 20 mm carefully with out damaging including removal of GI specials and stacking in position as directed by Engineer In Charge etc., complete.	Rmt	15.00		
8	Earthwork in excavation by mechanical means (hydraulic excavator) / manual means for FOUNDATION TRENCHES / Electrical trenches in ALL KINDS OF SOILS including dressing of sides, ramming of bottom, disposing the surplus excavated materials within a distance of 50m and lift 1.50m complete as per specifications. (Disposed soil to be levelled by breaking clods if any and neatly dressed).	cum	15.00		
	<u>NOTES FOR EARTHWORK ITEMS:</u>				

Sl. No	Description	Unit	Qty	Rate	Amount
	No working space shall be considered beyond the width of the foundation concrete (mud-mat) shown in the drawings. The contractor shall consider working space if required while quoting the rate. The quoted rate shall include the quantity of earthwork to be done for working space if required and also for re-filling the foundation. For payment, the measurement shall be restricted only to the foundation width shown in the drawings. No extra shall be permitted and measured for payment on account of working space / battering / benching for excavation and refilling around foundation.				
9	Filling available excavated approved earth (excluding rock) in trenches, sides of foundations, plinth, etc; in layers not exceeding 15cm depth breaking clods, consolidating each deposited layer by ramming, watering and dressing, etc; complete for lead up to 50m and all lifts etc., complete as per specifications.	cum	15.00		
10	POST-CONSTRUCTIONAL ANTITERMITE TREATMENT of junction of walls and floor (by drilling holes of 12mm dia 300mm apart at junction of wall and floor and injecting chemicals like Chloropyripos emulsifiable (IS 8944-1978) 20 EC, mixed with water in 1:19 ratio to achieve 1% concentration (i.e., 1 litre of chemical to 19 litres of water). The emulsion is injected till refusal or max 1 litre/hole till the soil underneath soaks and then holes are to be sealed).	rm	110.00		
11	POST-CONSTRUCTIONAL ANTITERMITE TREATMENT for doors/ windows chowkhats: Drilling holes of 6mm dia at 150mm c/c at downward angle of 45° to be drilled and should cover the entire frame work and chemicals like Chloropyripos emulsifiable (IS 8944-1978) 20 EC, mixed with water in 1:19 ratio to achieve 1% concentration (i.e., 1 litre of chemical to 19 litres of water). The emulsion is to be injected till refusal or maximum 1/2 litre/hole and then holes to be sealed.	rm	80.00		
12	POST-CONSTRUCTIONAL ANTITERMITE TREATMENT to entire floor area by drilling holes of 12mm dia at 300mm intervals both ways and injecting chemical till refusal or maximum 1 litre / hole till the soil underneath soaks using the Chemicals like Chloropyripos emulsifiable (IS 8944-1978) E.C 20% with 1% concentration mixed with water in 1:19 ratio (i.e., 1 litre of Chemical to 19 litres of water). The holes are to be plugged with CM 1:2 (cement : coarse sand) to match with the existing floor.	sqm	100.00		
13	Providing and constructing BRICK MASONRY in cement mortar as per mixes stipulated below using approved well burnt bricks of class designation (Classification as per IS 1077-1986) as specified below including raking out joints 10mm deep, scaffolding, curing, etc; complete as per specifications IN SUPERSTRUCTURE UPTO FLOOR FIVE LEVEL. (The mix ratio specified is for cement : coarse river sand)	Cu.M	3.00		
	Using bricks of class designation '3.5' (minimum average compressive strength not less than 3.5N/sqmm) in cement mortar 1:6				

Sl. No	Description	Unit	Qty	Rate	Amount
14	Providing and constructing HALF BRICK MASONRY walls/partitions in following mixes using approved well burnt bricks of class designation (Classification as per IS 1077-1986) as specified below, including scaffolding, raking out joints, curing, etc; all as directed by the engineer-in-charge in SUPERSTRUCTURE UPTO FLOOR FIVE LEVEL. (The mix ratio specified is for cement : coarse river sand)				
	Using bricks of class designation '3.5' (minimum average compressive Strength not less than 3.5N/sqmm) in cement mortar 1:4	Sq.M	10.00		
15	Providing and laying cement concrete using 20mm nominal size graded hard granite stone aggregate obtained from approved quarry including compaction, finishing top surface to level, curing, cost of formwork, etc; complete all as per specifications. Mix ratio specified is for cement : coarse river sand : graded stone aggregate. IN FOUNDATION AND PLINTH/SUB-BASE TO FLOORS.				
15.1	PCC 1:3:6	cum	1.00		
15.2	PCC 1:2:4	cum	1.00		
16	Providing and laying cement concrete using 20mm nominal size graded hard granite stone aggregate obtained from approved quarry including compaction, finishing top surface to level, curing but excluding cost of formwork, etc; complete all as per specifications. Mix ratio specified is for (cement : coarse river sand : graded stone aggregate) In WALLS (any thickness), retaining walls, return walls including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets up to floor five level, with:				
16.1	PCC 1:3:6	cum	2.00		
16.2	PCC 1:2:4	cum	1.00		
17	Providing and laying cement concrete using graded hard granite stone aggregate of 20mm nominal size obtained from approved quarry including formwork, compaction, finishing, plastering the concrete surface in CM 1:2 - 12mm thick, curing, etc; IN BED BLOCKS, ANCHOR BLOCKS, WINDOW CILLS, COPING BLOCKS, etc; up to floor five level complete all as per specifications. Mix ratio specified is for cement : coarse river sand : graded stone aggregate. The work includes providing throating/ drip mould wherever required as per standard engineering practice of size not be less than 40mm X 15mm. The rate is inclusive for making drip mould & no extra cost will be paid for.				
	PCC 1:3:6	cum	1.00		
18	Supplying, fabricationg, welding, fixing in position using bolting/welding/screwing/etc,. steel works in Tubler and other sections of roof purlins, side supports, roof purlins/truss bracings and tie runners, gutter supports, glazing supports and the like fabricated as required at site including applying a priming coat of red oxide zinc chromate primer and painting with two coats of synthetic enamel paint , etc,. at all leads and at all height.	KG	3500		

Sl. No	Description	Unit	Qty	Rate	Amount
19	Providing and laying Ceramic tile flooring / dadoing of approved quality, size, colour and thickness according to the dimensions of tiles and having scratch hardness and other parameter conforming to IS 15622, (Bell or Naveen or Spartek or Jhonson or Kajaria or Somany or equivalent make) laid over a bed / backing as specified below, with cement slurry at 3.30kg /sqm, close jointed and pointed with matching white cement slurry mixed with approved pigment and finishing to required level, curing etc., complete all as per specification and as directed by engineer-in-charge at all floors.				
19.1	in flooring with approved colour floor tiles (Regular / plain or dark colour / glossy or mat series) size 300mm X 300mm as per IS 15622, over bed / backing of 20mm thick in CM 1:4.	Sqm	30.00		
19.2	in dado with approved colour wall tiles (Regular / plain or dark colour / glossy or mat series) size 300mm X 450mm as per IS 15622, over a bed / backing of 12mm thick in CM 1:3.	Sqm	35.00		
	<u>NOTES FOR FLOORING ITEMS:</u>				
	1) The brand name / local name specified for coloured marble / slabs / granite stone slabs are meant for the approved quality available in the region.				
	2) White cement wherever specified for items shall be of Birla White or equivalent.				
	3) The newly laid floor shall be protected with a layer of gypsum / POP (Plaster of Paris) laid over a polythene sheet by covering the entire finished surface as directed till the finished items like painting / polishing etc. are completed inside the building. This shall be done irrespective of whether mention has been made in the individual flooring items or not at no extra cost.				
20	Providing and fixing seasoned, first class TEAK WOOD FRAMED & BATTENED DOOR shutters, frame made with teak wood with 12mm deep grooves to fit in the teak wood battens of thickness as specified below with uniform width varying between 75mm to 100mm with minimum 12mm rebated / tongue and grooved joints excluding cost of builder's hardware but including labour for fixing the same, etc; complete all as shown in drawing and as per specifications.				
	Using 25mm thick teak wood battens, styles 100mm wide, top rail 100mm wide, lock rail and bottom rail 200mm wide in single shutters, 35mm thick shutter	sqm	10.00		
21	Providing and fixing FULLY GLAZED TEAK WOOD WINDOWS / VENTILATORS / CLEAR- STOREY WINDOWS with openable shutters 30mm thick as per standard drawings using seasoned First class teak wood for styles, rails and Teak wood beading of appropriate size. Styles and rails are 65mm wide, 30mm thick etc; and glazing with plain glass / frosted glass of thicknesses as specified below including cost of glass, teakwood, putty as required and labour for fixing builder's hardware and locking arrangement, etc; complete all as per specifications but excluding cost of builder's hardware and locking arrangements issued by the department free of cost.				

Sl. No	Description	Unit	Qty	Rate	Amount
21.1	Single shutter using 4.5mm to 5.0mm thick plain glass. For windows/ventilators	sqm	10.00		
21.2	Double shutter using 4.5mm to 5.0mm thick plain glass. For windows/ventilators	sqm	10.00		
22	Providing and fixing MS round or square guard bars at required spacing including welding, grinding, providing counter sunk holes in the center frame for fixing the screws for wooden frames etc., of windows / ventilators / clerestory windows, etc: complete all as per drawings and directions of engineer-in-charge.	kg	25.00		
23	Providing and fixing MS grills of required pattern in wooden / steel frames of windows, ventilators, clerestory windows, etc; with MS flats, square or round bars with round headed bolts and nuts or by screws, etc; complete all as per drawings and directions of engineer-in-charge. The rate shall including applying a priming coat of red oxide zinc chromate primer and painting with two coats of synthetic enamel paint , etc,. at all leads and at all height.				
	Plain grill (with vertical, horizontal members or a combination of both)	kg	25.00		
24	Providing second class seasoned TEAK WOOD in frames of doors, windows, ventilators, railings, architraves, beadings and other frames etc; wrought, FRAMED & fixed in position with standard MS hold fasts and concrete blocks of 1:3:6 mix or with MS Bolts / T.W Plugs and G.I. Screws as required including tarring back of the frames, etc; complete all as per specifications.	cum	4.00		
25	Providing and fixing second class seasoned TEAK WOOD fully FRAMED & PANELLER DOOR shutters panelled with 16mm thick teak wood flat sunk panels with teak wood rails and styles, styles 100mm wide, top rail 100mm wide, lock and bottom rail 200mm wide including labour for fixing builder's hardware and locking arrangement etc; complete all as per specifications but excluding cost of builders hardware and locking arrangement issued with screws by the department free of cost.				
	Double shutter 35mm thick	sqm	8.00		
26	Providing and fixing SS (Grade 316) fly proof mesh of size 1/16" x 24 gauge including fixing with first class seasoned teak wood (With a maximum permissible moisture content 12%)beading of size 62 x 19mm etc; complete all as per specifications	Sqm	15.00		
	NOTES FOR WOOD WORKS: Maximum permissible moisture contents in timber as per IS 287 of 1960 shall not exceed 12%.				

Sl. No	Description	Unit	Qty	Rate	Amount
27	Providing and fixing precoated galvanised iron profile(tile pattern) sheetsof clay tile coloured roofing sheet (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+0.05 %) total coated thickness with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineerin-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	sqm	760.00		
27.1	Plain sheet for gutter/vally	sqm	100.00		
27.2	For ridges	sqm	50.00		
28	Providing and fixing using bolting, screwing, etc, 20mm thick 250mm deep Carved SECOND CLASS TEAK WOOD Eve Boards as per existing shape and pattern including one coat of wood primer, two coats of enamel paint, etc,. complete as per specification and as directed by Engineer-in-charge at all levels and height.	Mt	150.00		
29	Plastering 20mm thick with cement mortar specified below finished smooth with lime neeru, including scaffolding, curing, etc; complete for INTERNAL SURFACES of stone masonry/brick masonry walls, sills, jambs, etc; complete all as per specifications at all heights Mix specified is for cement : fine sand.				
	with CM 1:6.	Sqm	15.00		
30	Plastering 20mm thick with cement mortar specified below finished smooth , including scaffolding, curing, etc; complete for INTERNAL SURFACES of stone masonry/brick masonry walls, sills, jambs, etc; complete all as per specifications at all heights Mix specified is for cement : fine sand. NOTE: CM 1:3 OR CM 1:4 is generally applicable for ceilings and RCC surfaces unless otherwise specified: with CM 1:6.	Sqm	20.00		
31	Plastering 20mm thick with cement mortar specified below finished rough including scaffolding, curing, etc; complete for EXTERNAL SURFACES of stone masonry / brick masonry walls, sills, jambs, soffits, etc; complete all as per specifications for heights up to 10m above GL, mix specified is for cement : coarse river sand.				
	with CM 1:6	sqm	50.00		
32	Painting external plastered surfaces with two or more coats of 100% acrylic exterior emulsion paint of approved make and colour (weather coat of Berger or apcolite apex of Asian or equivalent) having protection against fungal growth, flaking, fading, alkali and UV degradation and to give an even shade with required finish including cleaning the surfaces, applying one coat of primer, filling the crevices with approved filler, scaffolding, etc., complete all as per specifications.	sqm	1250.00		

Sl. No	Description	Unit	Qty	Rate	Amount
33	Painting wood work with TWO or more coats of SYNTHETIC ENAMEL PAINT of I quality and approved colour to give an even shade over a coat of synthetic enamel primer including cleaning the surfaces, filling the crevices with approved filler, applying a coat of approved putty on whole surface and rubbing the surface to achieve desired smooth surface, scaffolding, etc; complete all as per specifications. (Rate to include cost of synthetic enamel primer, putty also).	Sqm	300.00		
34	Painting steel work with TWO or more coats of SYNTHETIC ENAMEL PAINT of first quality and approved colour to give an even shade over a coat of red oxide zinc chromate primer including cleaning the surfaces, applying a coat of approved putty on whole surface and rubbing the surface to achieve desired smooth surface, scaffolding, etc; complete all as per specifications (Rate to include cost of zinc chromate primer, putty also).	Sqm	25.00		
35	Providing and applying Wall PUTTY ( JK OR BIRLA PUTTY) over plastered surface to prepare the surface even and smooth complete.	sqm	1600.00		
36	Painting internal plastered surfaces with two or more coats of Acrylic emulsion paint of approved brand and colour (Berger or Asian or equivalent) to give an even shade with required finish over a coat of water thinnable cement primer including cleaning the surfaces, filling the crevices with approved filler, scaffolding, etc., complete all as per specifications.	sqm	1600.00		
37	Supplying & fixing of factory made composite door shutter with frame and single shutter manufactured by M/s. Fimen Fibre Products Pvt. Ltd., or equivalent with door frame of size 70x50mm. The door shutter shall be of rigid G.R.P sandwich composite structure of 26mm thick (minimum) laminated on all sides with G.R.P skin fabricated using U.V. stabilized Isophthalic gel coat and one layer of 450 GSM E glass chopped strand mat (CSM) impregnated with polyster resin. The thickness of skins shall not be less than 1.5mm.	Sqm	5.00		
	Expanded polysterene structural foam panel of density 20kg/cum shall be used as core material for the whole areas of door except the wooden frame structure. The wooden reinforcements made of seasoned salwood block of minimum cross section of 70x26 for lock side 40x26 all round forming the framework for shutter and minimum of 75mm wide intermediate strip for the width of the door for fixing locks and fixture and shall conform to IS-4020-1998. The finish of the shutter be without grains and of approved colour etc., complete all as per manufacturers specifications at all heights.				



Sl. No	Description	Unit	Qty	Rate	Amount
	<p>NOTES FOR FINISHING WORKS:</p> <p>Unless and otherwise specified:</p> <p>1) Plaster mix specified is for cement : fine sand.</p> <p>2) The wording "more coats" indicate the additional coats to be painted, wherever the desired finish has not been achieved after the application of the specified number of coats given. No extra payment will be made for the additional coats required to be rendered on account of the above.</p> <p>3) Rates for all finishing items and lift charges from FFL / GL for all heights, depths and levels.</p> <p>4) All the RCC faces like beam, slab, lintels, columns, flush with internal or external wall faces are plastered with CM 1:5 and measured under wall plastering and not under item of CM 1:4 for RCC surfaces.</p>				
38	<p>Providing and fixing at all heights / in all floors with all leads False ceiling with false ceiling materials as specified, cut to shape and size and in the required grid pattern supported on anodised aluminium frame work of approved make consisting of Bulbed Tee of section 23.5mm x 23.5mm x 1.5mm @ 0.212kg / m for wall angles, cross tees and Bulbed Tee of section 36.5mm x 23.5mm x 1.5mm @ 0.267kg / m for main tees, including providing and fixing MS tab hangers, 6mm diameter MS standard suspenders and providing necessary openings and additional framework required for light and A/C fittings and upturn as pelmet attends along walls for return air in the false ceiling as required and painting the steel work with one coat of red oxide zinc chromate primer, etc; complete all as per specifications.</p>				
	<p>(i) Wooden blocks such as wooden gutty or rawl plugs should not be placed in concrete as they will shrink and fall down in due course when loads are applied. Hence anchor fasteners of 8mm diameter to take SWL of not less than 200kg or MS box as detailed below shall be used (ii) Mild steel hook of 6mm diameter and approx 300mm long, welded to MS Box made out of 18 G MS Sheet 80mm diameter and 50mm high shall be provided in the slabs before concreting of floor / roof slabs. The MS hook arrangement shall be placed in the predetermined positions as per the false ceiling details. (iii) The MS box and hooks shall be applied with 1 coat of red oxide zinc chromate primer before placing them in position. The projected length of the rods beyond the MS Box shall be suitably tied with the slab reinforcement. (iv) The location of Tab hangers shall follow the false ceiling layout. (v) The Aluminium anodisation for the aluminium extruded sections should be 15 micron thick.</p>				
	Providing and fixing plain E-board sheets 6mm thick.	sqm	600.00		

Sl. No	Description	Unit	Qty	Rate	Amount
<b>II</b>	<b>PH Works</b>				
39	<p>Providing and Fixing European Water Closet Suite (with polymer cistern) comprising of:</p> <p>A) Best Indian make white glazed vitreous Chinaware European water closet, with wash down pattern of approved make with trap as mentioned below conforming IS 2556 Part-II bearing ISI mark fixed to floor with necessary teak wood plugs, CP brass screws No. 8x37 etc.</p> <p>B) 10 litre capacity approved quality and make polymer low level flushing cistern with all internal fittings conforming to IS 7231 fixed to wall with necessary brackets, screws and plugs with matching chromium plated flush bend.</p> <p>C) 15mm heavy quality flexible PVC inlet connection with CP brass hexagonal check nuts and washers at both ends.</p> <p>D) white plastic seat and cover of approved make with CP pillar hinges conforming to IS:2548</p> <p>E) 15mm NB CP brass angle-cock/stop cock conforming to IS:781 of approved make with a minimum weight of 400gm on the inlet to the cistern.</p> <p>F) 15mm GI over flow pipe with CP brass mosquito proof jali and ckecknuts.</p> <p>Complete all as specified above with approved fittings. (Refer fig. No. CED:PH:1.1 of specifications for PH Engineering works).</p>	No	2.00		
40	<p>Providing and Fixing Indian make wash hand basin (with CP bottle trap) comprising of: A) Best Indian make white glazed vitreous chinaware wash hand basin of approved make of size mentioned below conforming to IS:2556 Part-IV with single tap hole and bearing ISI mark supported on a pair of painted CI brackets conforming to IS:775 B) One 15mm CP brass pillar cock of approved make with hot or cold water indication as required conforming to IS:1795 with minimum weight of 577gm. C) One 15mm heavy quality flexible PVC inlet pipe connection with CP brass hexagonal check nuts with washer at both ends. D) One 15mm CP brass angle-cock/stop cock of approved make conforming to IS:781 of approved make with a minimum weight of 400gm on the inlet to the basin.</p> <p>E) One 32mm heavy quality CP brass waste coupling with rubber plug and CP chain. F) One 32mm heavy quality CP brass bottle trap with extension piece and wall flange. G) One 32mm medium quality GI waste pipe with specials from extension piece of the bottle trap to the floor trap, length not exceeding 1 m concealed in wall. H) One no. 40mm GI bend and 40mm dia 250mm long GI pipe connection waste pipe to floor trap. All as per specifications and as directed with approved fittings. .Size 450X300mm</p>	No	4.00		
41	Providing and Fixing in position stain less steel floor drainer with popup, all as per specifications, site condition and directions of Engineer - In - Charge etc complete.	No	4.00		
42	Supply and installation of Jaquar make -ALD-573 health focet flex tube all as per specifications, site condition and directions of Engineer - In - Charge etc complete.	No	2.00		

Sl. No	Description	Unit	Qty	Rate	Amount
43	Supply, Laying and Fixing in position under floor, against wall in chases PVC SWR Drainage pipes and specials, rubber rings conforming to Type 'B' of IS:13592 'Supreme' or equivalent approved make as per manufacturers specification including cutting the pipes to required lengths, necessary excavation, chasing and restoring to original conditions, testing etc. complete. (Specials at junction of lateral pipe and vertical stack must have access door for inspection)				
43.1	75mm dia (min wall thickness 3.2mm)	Rmt	10.00		
43.2	110mm dia (min wall thickness 3.2mm)	Rmt	20.00		
44	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes (SDR 13.5) conforming to IS:15778, having thermal stability for hot and cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and cost of cutting chases and making good the same with CM 1:3, including testing of joints complete as per direction of engineer-in-charge etc., for CONCEALED WORKS with:				
	CPVC pipes, 20mm outer dia	Rmt	10.00		
45	Providing, laying and jointing unplasticized PVC pipes and specials of working pressure as mentioned below conforming to IS:4985 including cost of necessary jointing materials, labour for excavation of trenches, testing, refilling etc., complete all as per specifications.				
	6 kg/sqcm and 40mm OD	Rmt	25.00		
46	Providing and fixing Approved make of double coat hook of jaquar make CAN-1161N for toilet including necessary charges for materials, labour etc., complete and as directed by E In C	No	2.00		
47	Providing and Fixing in position jaquar make AHS-1553 toilet paper roll holder of approved make with necessary CP screws and washers fixed to wall including cutting wall, fixing and making good the surface etc, Complete all as specified and directed.	No	2.00		
48	Providing and fixing the mirror of required shape and size 600x750mm with MS bracket of approved make including necessary charges for bowled edge and polish, materials, labour etc., complete and as directed by E In C	No	4.00		
49	Providing and fixing Jaquar make Connection hose pipes of ALD-801B 600mm long including necessary charges for materials, labour etc., complete and as directed by E In C	No	4.00		
<b>(A) Amarak - Total Amount (Civil and PH Works) Rs.</b>					
<b>Note:-</b> The contractor shall quote his rates in this schedule of quantity. Submission of tender in any other format is liable for rejection.					

**Total amount in words:-**

Signature of Tenderer

**Name of the work - Renovation of NCBS Field station at Pachmarhi, Madhya Pradesh.**

**PART-B (Dormitory)**

**Schedule of Quantities**

<b>Sl. No</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
<b>I</b>	<b>Civil Works:</b>				
1	Demolishing brick work in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50m lead.	cum	20.00		
2	Dismantling tile work in floors and roofs laid in cement including stacking material within 50m lead				
2.1	For Flooring	Sqm	30.00		
2.2	For Dadoing	Sqm	160.00		
3	Providing and constructing HALF BRICK MASONRY walls/partitions in following mixes using approved well burnt bricks of class designation (Classification as per IS 1077-1986) as specified below, including scaffolding, raking out joints, curing, etc; all as directed by the engineer-in-charge in SUPERSTRUCTURE UPTO FLOOR FIVE LEVEL. (The mix ratio specified is for cement : coarse river sand)				
3.1	Using bricks of class designation '3.5' (minimum average compressive Strength not less than 3.5N/sqmm) in cement mortar 1:4	Sqm	72.00		
4	Plastering 20mm thick with cement mortar specified below finished smooth with lime neeru, including scaffolding, curing, etc; complete for INTERNAL SURFACES of stone masonry/brick masonry walls, sills, jambs, etc; complete all as per specifications at all heights Mix specified is for cement : fine sand. NOTE: CM 1:3 OR CM 1:4 is generally applicable for ceilings and RCC surfaces unless otherwise specified: with CM 1:6. EXCLUDING LIME NEERU.	Sqm	235.00		
5	Providing and laying Ceramic tile flooring / dadoing of approved quality, size, colour and thickness according to the dimensions of tiles and having scratch hardness and other parameter conforming to IS 15622, (Bell or Naveen or Spartek or Jhonson or Kajaria or Somany or equivalent make) laid over a bed / backing as specified below, with cement slurry at 3.30kg /sqm, close jointed and pointed with matching white cement slurry mixed with approved pigment and finishing to required level, curing etc., complete all as per specification and as directed by engineer-in-charge at all floors.				
5.1	in flooring with approved colour floor tiles (Regular / plain or dark colour / glossy or mat series) size 300mm X 300mm as per IS 15622, over bed / backing of 20mm thick in CM 1:4.	Sqm	32.00		
5.2	in dado with approved colour wall tiles (Regular / plain or dark colour / glossy or mat series) size 300mm X 200mm as per IS 15622, over a bed / backing of 12mm thick in CM 1:3.	Sqm	145.00		

Sl. No	Description	Unit	Qty	Rate	Amount
6	Supplying & fixing of factory made composite door shutter with frame and single shutter manufactured by M/s. Fimen Fibre Products Pvt. Ltd., or equivalent with door frame of size 70 x 50mm. The door shutter shall be of rigid GRP sandwich composite structure of 30mm thick (minimum) laminated on all sides with GRP skin fabricated using U.V. stabilized Isophthalic gel coat and one layer of 450 GSM E glass chopped strand mat (CSM) impregnated with polyester resin. The thickness of skins shall not be less than 1.5mm. Expanded polystyrene structural foam panel of density 20kg/cum shall be used as core material for the whole areas of door except the wooden frame structure. The wooden reinforcements made of seasoned salwood block of minimum cross section of 70 x 26 for lock side 40 x 26 all round forming the framework for shutter and minimum of 75mm wide intermediate strip for the width of the door for fixing locks and fixture and shall confirm to IS-4020-1998. The finish of the shutter be without grains and of approved colour etc., complete all as per manufacturers specifications at all heights.				
6.1	Supplying & fixing of factory made composite door shutter with frame and single shutter manufactured by M/s. Fimen Fibre Products Pvt. Ltd., or equivalent with door frame of size 70 x 50mm. The door shutter shall be of rigid GRP sandwich composite structure of 26mm thick (minimum) laminated on all sides with GRP skin fabricated using U.V. stabilized Isophthalic gel coat and one layer of 450 GSM E glass chopped strand mat (CSM) impregnated with polyester resin. The thickness of skins shall not be less than 1.5mm. Expanded polystyrene structural foam panel of density 20kg/cum shall be used as core material for the whole areas of door except the wooden frame structure. The wooden reinforcements made of seasoned salwood block of minimum cross section of 70 x 26 for lock side 40 x 26 all round forming the framework for shutter and minimum of 75mm wide intermediate strip for the width of the door for fixing locks and fixture and shall confirm to IS-4020-1998. The finish of the shutter be without grains and of approved colour etc., complete all as per manufacturers specifications at all heights.	Sqm	15.00		
7	Providing and laying 20 thick polished Granite stone slab for wash basin counter anchored/fixied into the wall with necessary groove cutting in the wall including cutting to required size, filling the gaps with cement mortar 1:4 with matching pigment, laid to required level, curing etc., complete all as per specifications and directions of engineer-in-charge in all floors at all heights.				
	Machine polished on one side and other side finished to even surface and with machine cut edges	sqm	15.00		
8	Extra for providing opening of required size & shape for wash basins / kitchen sink in kitchen platform, vanity counters and similar location in marble / stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete, per opening.	Nos	9.00		

Sl. No	Description	Unit	Qty	Rate	Amount
9	Extra for nosing in marble / granite stone for treads.	Rmt	15.00		
10	Painting internal plastered surfaces with two or more coats of super acrylic emulsion paint of approved brand and colour (Berger or Asian or equivalent) to give an even shade with required finish over a coat of water thinnable cement primer including cleaning the surfaces, filling the crevices with approved filler, scaffolding, etc., complete all as per specifications.	Sqm	1600.00		
11	Painting external plastered surfaces with two or more coats of 100% acrylic exterior emulsion paint of approved make and colour (weather coat of Berger or apcolite apex of Asian or equivalent) having protection against fungal growth, flaking, fading, alkali and UV degradation and to give an even shade with required finish including cleaning the surfaces, applying one coat of primer, filling the crevices with approved filler, scaffolding, etc., complete all as per specifications.	Sqm	900.00		
12	Painting wood work/steel work with TWO or more coats of SYNTHETIC ENAMEL PAINT of first quality and approved colour to give an even shade over a coat of red oxide zinc chromate primer including cleaning the surfaces, applying a coat of approved putty on whole surface and rubbing the surface to achieve desired smooth surface, scaffolding, etc; complete all as per specifications (Rate to include cost of zinc chromate primer, putty also).	sqm	400.00		
13	Painting clay tile facing with deep orange synthetic enamel paint diluted with turpentine oil in the proportion 1:8 to give an even shade including cleaning the tiling with soft brushes to remove the stains / fungi formation including scaffolding, etc; complete as directed by the engineer-in-charge.	Sqm	350.00		
14	Water proof cement plastering of thickness as specified below in cement mortar 1:3 (cement : coarse river sand) mixed with approved water proofing compound such as CICO or ACCOPROOF or equivalent as per manufacturers specifications including scaffolding, curing, etc; complete for EXTERNAL SURFACES/toilet floor area all as per specifications for heights up to 10m above GL.	sqm	50.00		
15	Providing second class seasoned TEAK WOOD in frames of doors, windows, ventilators, railings, architraves, beadings and other frames etc; wrought, FRAMED & fixed in position with standard MS hold fasts and concrete blocks of 1:3:6 mix or with MS Bolts / T.W Plugs and G.I. Screws as required including tarring back of the frames, etc; complete all as per specifications.	Cum	4.00		

Sl. No	Description	Unit	Qty	Rate	Amount
16	Providing and laying cement concrete using 20mm nominal size graded hard granite stone aggregate obtained from approved quarry including compaction, finishing top surface to level, curing, cost of formwork, etc; complete all as per specifications. Mix ratio specified is for cement : coarse river sand : graded stone aggregate.IN FOUNDATION AND PLINTH/SUB-BASE TO FLOORS.				
	PCC 1:2:4	Cum	9.00		
17	Extra for mixing water proofing compound of approved quality and brand in RCC items with ROFFE HYPROOF manufactured by M/s. ROFFE Construction Chemicals Pvt. Ltd. at 140ml per 50kg of cement or CONPLAST X 421 IC of Fosroc Chemicals ltd. at 130ml per 50kg of cement or equivalent approved make mixed with cement as per manufacturer's specifications etc., complete all as per specifications. (Rate to include the cost of water proofing compound).				
	PCC 1:2:4	Cum	9.00		
18	Providing and applying PLASTER OF PARIS PUTTY (BIRLA PUTTY) of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	1,200.00		
<b>II</b>	<b>PH Works:</b>				
19	Dismantling the vitreous chinawarre EWC, wash basin and fixtures with fittings of rest room.as per the instruction of EIC.	Nos	9.00		
20	Dismantling the existing GI pipe line of 20 mm carefully with out damaging including removal of GI specials and stacking in position as directed by Engineer In Charge etc., complete.	Mtr	40.00		
21	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes (SDR 13.5) conforming to IS:15778, having thermal stability for hot and cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and cost of cutting chases and making good the same with CM 1:3, including testing of joints complete as per direction ofengineer-in-chargeetc., for CONCEALED WORKS with:20mm dia	Rmt	65.00		
22	Supply, Laying and Fixing in position under floor, against wall in chases PVC SWR Drainage pipes and specials, rubber rings conforming to Type 'B' of IS:13592 'Supreme' or equivalent approved make as per manufacturers specification including cutting the pipes to required lengths, necessary excavation, chasing and restoring to original conditions, testing etc. complete. (Specials at junction of lateral pipe and vertical stack must have access door for inspection)				
22.1	110mm dia (min wall thickness 3.2mm)	Rmt	20.00		
22.2	75mm dia (min wall thickness 3.2mm)	Rmt	40.00		

Sl. No	Description	Unit	Qty	Rate	Amount
23	Providing and Fixing European Water Closet Suite (with polymer cistern) comprising of:	Nos	9.00		
	A) Best Indian make white glazed vitreous Chinaware European water closet, with wash down pattern of approved make with trap as mentioned below conforming IS 2556 Part-II bearing ISI mark fixed to floor with necessary teak wood plugs, CP brass screws No. 8x37 etc.				
	B) 10 litre capacity approved quality and make polymer low level flushing cistern with all internal fittings conforming to IS 7231 fixed to wall with necessary brackets, screws and plugs with matching chromium plated flush bend.				
	C) 15mm heavy quality flexible PVC inlet connection with CP brass hexagonal check nuts and washers at both ends.				
	D) white plastic seat and cover of approved make with CP pillar hinges conforming to IS:2548				
	E) 15mm NB CP brass angle-cock/stop cock conforming to IS:781 of approved make with a minimum weight of 400gm on the inlet to the cistern.				
	F) 15mm GI over flow pipe with CP brass mosquito proof jali and ckecknuts.				
	Complete all as specified above with approved fittings. (Refer fig. No. CED:PH:1.1 of specifications for PH Engineering works).				
24	Providing and Fixing in position best approved quality 15mm CP brass shower of approved make conforming to IS:781				
24.1	Swivel type with shower arm and Wall flange	Nos	9.00		
25	Providing and Fixing Indian make wash hand basin (with CP bottle trap) comprising of: A) Best Indian make white glazed vitreous chinaware wash hand basin of approved make of size mentioned below conforming to IS:2556 Part-IV with single tap hole and bearing ISI mark supported on a pair of painted CI brackets conforming to IS:775 B) One 15mm CP brass pillar cock of approved make with hot or cold water indication as required conforming to IS:1795 with minimum weight of 577gm. C) One 15mm heavy quality flexible PVC inlet pipe connection with CP brass hexagonal check nuts with washer at both ends. D) One 15mm CP brass angle-cock/stop cock of approved make conforming to IS:781 of approved make with a minimum weight of 400gm on the inlet to the basin.	Nos	10.00		
	E) One 32mm heavy quality CP brass waste coupling with rubber plug and CP chain. F) One 32mm heavy quality CP brass bottle trap with extension piece and wall flange. G) One 32mm medium quality GI waste pipe with specials from extension piece of the bottle trap to the floor trap, length not exceeding 1 m concealed in wall. H) One no. 40mm GI bend and 40mm dia 250mm long GI pipe connection waste pipe to floor trap. All as per specifications and as directed with approved fittings. of SIZE 450x300mm				



Sl. No	Description	Unit	Qty	Rate	Amount
26	Providing and fixing in position cast Iron sand cast traps of self cleansing design with outlet size and minimum approximate weight as follows conforming to IS:1729 including connection with CI soil/waste, necessary 150mm thick CC 1:2:4 for embedding the trap, fixing CP brass hinged grating on top, inner annular surfaces between floor finish and top of trap shall be finished smooth with neat cement etc., complete as specified and directed.	Nos	18.00		
27	Providing and Fixing in position approved make 15mm NB CP brass screw down bib tap conforming to IS:781 with a minimum weight of 400gm	Nos	9.00		
28	Providing and Fixing in position approved make 15mm NB CP brass stop cock conforming to IS:781 with CP wall flange with a minimum weight of 400gm.	Nos	27.00		
29	Providing and Fixing in position best approved quality and type towel rail of length mentioned below 25mm dia with a pair of brackets or flanges fixed to wall with necessary screws, plugs, etc. all as specified and directed.	Nos	9.00		
30	Providing and fixing Approved make of double coat hook of jaquar make CAN-1161N for toilet including necessary charges for materials, labour etc., complete and as directed by E In C	Nos	18.00		
31	Providing and Fixing in position Jaquar make type soap tray AQN-7723 of approved make with necessary CP screws and washers fixed into the wall including cutting the wall, fixing and making good the surface etc, Complete all as specified and directed.	Nos	9.00		
32	Providing and Fixing in position jaquar make AHS-1553 toilet paper roll holder of approved make with necessary CP screws and washers fixed to wall including cutting wall, fixing and making good the surface etc, Complete all as specified and directed.	Nos	9.00		
33	Providing and fixing the mirror of required shape and size 600x750mm with MS bracket of approved make including necessary charges for bowled edge and polish,materials, labour etc., complete and as directed by E In C	Nos	9.00		
34	Providing and fixing Jaquar make Connection hose pipes of ALD-801B 600mm long including necessary charges for materials, labour etc., complete and as directed by E In C	Nos	27.00		
35	Supply and installation of Jaquar make -ALD-573 health foucet flex tube all as per specifications, site condition and directions of Engineer - In - Charge etc complete.	Nos	4.00		

Sl. No	Description	Unit	Qty	Rate	Amount
36	Providing and fixing wall mixer unit of Jaquar make-FLR-5273UPR including , flexible hose shower clamp etc., complete .	Nos	4.00		
<b>(B) Dormitory - Total Amount (Civil and PH Works) Rs.</b>					
<b>Note:-</b> The contractor shall quote his rates in this schedule of quantity. Submission of tender in ant other format is liable for rejection.					

**Total amount in words:-**

**Name of the work - Renovation of NCBS Field station at Pachmarhi, Madhya Pradesh.**

**PART-C (Flats/Residential Apartments)**

**Schedule of Quantities**

<b>Sl. No</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
<b>I</b>	<b>Civil Works:</b>				
1	Demolishing brick work in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50m lead.	cum	3.00		
2	Dismantling tile work in floors and roofs laid in cement including stacking material within 50m lead				
2.1	For Flooring	Sqm	40.00		
2.2	For Dadoing	Sqm	170.00		
3	Providing and constructing HALF BRICK MASONRY walls/partitions in following mixes using approved well burnt bricks of class designation (Classification as per IS 1077-1986) as specified below, including scaffolding, raking out joints, curing, etc; all as directed by the engineer-in-charge in SUPERSTRUCTURE UPTO FLOOR FIVE LEVEL. (The mix ratio specified is for cement : coarse river sand)				
3.1	Using bricks of class designation '3.5' (minimum average compressive Strength not less than 3.5N/sqmm) in cement mortar 1:4	Sqm	16.00		
4	Plastering 20mm thick with cement mortar specified below finished smooth with lime neeru, including scaffolding, curing, etc; complete for INTERNAL SURFACES of stone masonry/brick masonry walls, sills, jambs, etc; complete all as per specifications at all heights Mix specified is for cement : fine sand. NOTE: CM 1:3 OR CM 1:4 is generally applicable for ceilings and RCC surfaces unless otherwise specified: with CM 1:6. EXCLUDING LIME NEERU	Sqm	190.00		
5	Providing and laying Ceramic tile flooring / dadoing of approved quality, size, colour and thickness according to the dimensions of tiles and having scratch hardness and other parameter conforming to IS 15622, (Bell or Naveen or Spartek or Jhonson or Kajaria or Somany or equivalent make) laid over a bed / backing as specified below, with cement slurry at 3.30kg /sqm, close jointed and pointed with matching white cement slurry mixed with approved pigment and finishing to required level, curing etc., complete all as per specification and as directed by engineer-in-charge at all floors.				
5.1	in flooring with approved colour floor tiles (Regular / plain or dark colour / glossy or mat series) size 300mm X 300mm as per IS 15622, over bed / backing of 20mm thick in CM 1:4.	Sqm	40.00		
5.2	in dado with approved colour wall tiles (Regular / plain or dark colour / glossy or mat series) size 300mm X 200mm as per IS 15622, over a bed / backing of 12mm thick in CM 1:3.	Sqm	170.00		

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Sl. No	Description	Unit	Qty	Rate	Amount
6	Supplying & fixing of factory made composite door shutter with frame and single shutter manufactured by M/s. Fimen Fibre Products Pvt. Ltd., or equivalent with door frame of size 70 x 50mm.The door shutter shall be of rigid GRP sandwich composite structure of 30mm thick (minimum) laminated on all sides with GRP skin fabricated using U.V. stabilized Isophthalic gel coat and one layer of 450 GSM E glass chopped strand mat (CSM) impregnated with polyester resin.The thickness of skins shall not be less than 1.5mm. Expanded polystyrene structural foam panel of density 20kg/cum shall be used as core material for the whole areas of door except the wooden frame structure.The wooden reinforcements made of seasoned salwood block of minimum cross section of 70 x 26 for lock side 40 x 26 all round forming the framework for shutter and minimum of 75mm wide intermediate strip for the width of the door for fixing locks and fixture and shall confirm to IS-4020-1998.The finish of the shutter be without grains and of approved colour etc., complete all as per manufacturers specifications at all heights.				
6.1	Supplying & fixing of factory made composite door shutter with frame and single shutter manufactured by M/s. Fimen Fibre Products Pvt. Ltd., or equivalent with door frame of size 70 x 50mm.The door shutter shall be of rigid GRP sandwich composite structure of 26mm thick (minimum) laminated on all sides with GRP skin fabricated using U.V. stabilized Isophthalic gel coat and one layer of 450 GSM E glass chopped strand mat (CSM) impregnated with polyester resin.The thickness of skins shall not be less than 1.5mm. Expanded polystyrene structural foam panel of density 20kg/cum shall be used as core material for the whole areas of door except the wooden frame structure.The wooden reinforcements made of seasoned salwood block of minimum cross section of 70 x 26 for lock side 40 x 26 all round forming the framework for shutter and minimum of 75mm wide intermediate strip for the width of the door for fixing locks and fixture and shall confirm to IS-4020-1998.The finish of the shutter be without grains and of approved colour etc., complete all as per manufacturers specifications at all heights.	Sqm	16.00		
7	Providing and laying 20 thick polished Granite stone slab for wash basin counter anchored/fixied into the wall with necessary groove cutting in the wall including cutting to required size, filling the gaps with cement mortar 1:4 with matching pigment, laid to required level, curing etc., complete all as per specifications and directions ofengineer-in-chargein all floors at all heights.				
	Machine polished on one side and other side finished to even surface and with machine cut edges	sqm	11.00		
8	Extra for providing opening of required size & shape for wash basins / kitchen sink in kitchen platform, vanity counters and similar location in marble / stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete, per opening.	Nos	8.00		
9	Extra for nosing in marble / granite stone for treads.	Rmt	12.00		

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Sl. No	Description	Unit	Qty	Rate	Amount
10	Painting internal plastered surfaces with two or more coats of super acrylic emulsion paint of approved brand and colour (Berger or Asian or equivalent) to give an even shade with required finish over a coat of water thinnable cement primer including cleaning the surfaces, filling the crevices with approved filler, scaffolding, etc., complete all as per specifications.	Sqm	1,300.00		
11	Painting external plastered surfaces with two or more coats of 100% acrylic exterior emulsion paint of approved make and colour (weather coat of Berger or apcolite apex of Asian or equivalent) having protection against fungal growth, flaking, fading, alkali and UV degradation and to give an even shade with required finish including cleaning the surfaces, applying one coat of primer, filling the crevices with approved filler, scaffolding, etc., complete all as per specifications.	Sqm	450.00		
12	Painting wood work/steel work with TWO or more coats of SYNTHETIC ENAMEL PAINT of first quality and approved colour to give an even shade over a coat of red oxide zinc chromate primer including cleaning the surfaces, applying a coat of approved putty on whole surface and rubbing the surface to achieve desired smooth surface, scaffolding, etc; complete all as per specifications (Rate to include cost of zinc chromate primer, putty also).	sqm	70.00		
13	Painting clay tile facing with deep orange synthetic enamel paint diluted with turpentine oil in the proportion 1:8 to give an even shade including cleaning the tiling with soft brushes to remove the stains / fungi formation including scaffolding, etc; complete as directed by the engineer-in-charge.	Sqm	420.00		
14	Water proof cement plastering of 15mm thickness in cement mortar 1:3 (cement : coarse river sand) mixed with approved water proofing compound such as CICO or ACCOPROOF or equivalent as per manufacturers specifications including scaffolding, curing, etc; complete for EXTERNAL SURFACES/toilet floor area all as per specifications for heights up to 10m above GL.	sqm	50.00		
15	Providing second class seasoned TEAK WOOD in frames of doors, windows, ventilators, railings, architraves, beadings and other frames etc; wrought, FRAMED & fixed in position with standard MS hold fasts and concrete blocks of 1:3:6 mix or with MS Bolts / T.W Plugs and G.I. Screws as required including tarring back of the frames, etc; complete all as per specifications.	Cum	1.50		
16	Providing and laying cement concrete using 20mm nominal size graded hard granite stone aggregate obtained from approved quarry including compaction, finishing top surface to level, curing, cost of formwork, etc; complete all as per specifications. Mix ratio specified is for cement : coarse river sand : graded stone aggregate.IN FOUNDATION AND PLINTH/SUB-BASE TO FLOORS.				
	PCC 1:2:4	Cum	5.00		

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Sl. No	Description	Unit	Qty	Rate	Amount
17	Extra for mixing water proofing compound of approved quality and brand in RCC items with ROFFE HYPROOF manufactured by M/s. ROFFE Construction Chemicals Pvt. Ltd. at 140ml per 50kg of cement or CONPLAST X 421 IC of Fosroc Chemicals ltd. at 130ml per 50kg of cement or equivalent approved make mixed with cement as per manufacturer's specifications etc., complete all as per specifications. (Rate to include the cost of water proofing compound).				
	PCC 1:2:4	Cum	5.00		
18	Providing and applying PLASTER OF PARIS PUTTY (BIRLA PUTTY) of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	1,100.00		
<b>II</b>	<b><u>PH Works:</u></b>				
19	Dismantling the vitreous chinawarre EWC, wash basin and fixtures with fittings of rest room.as per the instruction of EIC.	Nos	4.00		
20	Dismantling the existing GI pipe line of 20 mm carefully with out damaging including removal of GI specials and stacking in position as directed by Engineer In Charge etc., complete.	Mtr	20.00		
21	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes (SDR 13.5) conforming to IS:15778, having thermal stability for hot and cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00m spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and cost of cutting chases and making good the same with CM 1:3, including testing of joints complete as per direction ofengineer-in-chargeetc., for CONCEALED WORKS with:20mm dia	Rmt	20.00		
22	Supply, Laying and Fixing in position under floor, against wall in chases PVC SWR Drainage pipes and specials, rubber rings conforming to Type 'B' of IS:13592 'Supreme' or equivalent approved make as per manufacturers specification including cutting the pipes to required lengths, necessary excavation, chasing and restoring to original conditions, testing etc. complete. (Specials at junction of lateral pipe and vertical stack must have access door for inspection)				
22.1	110mm dia (min wall thickness 3.2mm)	Rmt	8.00		
22.2	75mm dia (min wall thickness 3.2mm)	Rmt	16.00		
23	Providing and Fixing <b>European Water Closet Suite (with polymer cistern)</b> comprising of:	Nos	4.00		
	A) Best Indian make white glazed vitreous Chinaware European water closet, with wash down pattern of approved make with trap as mentioned below conforming IS 2556 Part-II bearing ISI mark fixed to floor with necessary teak wood plugs, CP brass screws No. 8x37 etc.				

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Sl. No	Description	Unit	Qty	Rate	Amount
	B) 10 litre capacity approved quality and make polymer low level flushing cistern with all internal fittings <b>conforming to IS 7231</b> fixed to wall with necessary brackets, screws and plugs with matching chromium plated flush bend.				
	C) 15mm heavy quality flexible PVC inlet connection with CP brass hexagonal check nuts and washers at both ends.				
	D) white plastic seat and cover of approved make with CP pillar hinges conforming to IS:2548				
	E) 15mm NB CP brass angle-cock/stop cock conforming to IS:781 of approved make with a minimum weight of 400gm on the inlet to the cistern.				
	F) 15mm GI over flow pipe with CP brass mosquito proof jali and ckecknuts.				
	Complete all as specified above with approved fittings. (Refer fig. No. CED:PH:1.1 of specifications for PH Engineering works).				
24	Providing and Fixing in position best approved quality 15mm CP brass shower of approved make conforming to IS:781				
24.1	Swivel type with shower arm and Wall flange	Nos	4.00		
25	Providing and Fixing Indian make wash hand basin (with CP bottle trap) comprising of: A) Best Indian make white glazed vitreous chinaware wash hand basin of approved make of size mentioned below conforming to IS:2556 Part-IV with single tap hole and bearing ISI mark supported on a pair of painted CI brackets conforming to IS:775 B) One 15mm CP brass pillar cock of approved make with hot or cold water indication as required conforming to IS:1795 with minimum weight of 577gm. C) One 15mm heavy quality flexible PVC inlet pipe connection with CP brass hexagonal check nuts with washer at both ends. D) One 15mm CP brass angle-cock/stop cock of approved make conforming to IS:781 of approved make with a minimum weight of 400gm on the inlet to the basin.	Nos	4.00		
	E) One 32mm heavy quality CP brass waste coupling with rubber plug and CP chain. F) One 32mm heavy quality CP brass bottle trap with extension piece and wall flange. G) One 32mm medium quality GI waste pipe with specials from extension piece of the bottle trap to the floor trap, length not exceeding 1 m concealed in wall. H) One no. 40mm GI bend and 40mm dia 250mm long GI pipe connection waste pipe to floor trap. All as per specifications and as directed with approved fittings. of SIZE 450x300mm				
26	Providing and fixing in position cast Iron sand cast traps of self cleansing design with outlet size and minimum approximate weight as follows conforming to IS:1729 including connection with CI soil/waste, necessary 150mm thick CC 1:2:4 for embedding the trap, fixing CP brass hinged grating on top, inner annular surfaces between floor finish and top of trap shall be finished smooth with neat cement etc., complete as specified and directed.	Nos	8.00		

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Sl. No	Description	Unit	Qty	Rate	Amount
27	Providing and Fixing in position approved make 15mm NB CP brass screw down bib tap conforming to IS:781 with a minimum weight of 400gm	Nos	10.00		
28	Providing and Fixing in position approved make 15mm NB CP brass stop cock conforming to IS:781 with CP wall flange with a minimum weight of 400gm.	Nos	16.00		
29	Providing and Fixing in position best approved quality and type towel rail of length mentioned below 25mm dia with a pair of brackets or flanges fixed to wall with necessary screws, plugs, etc. all as specified and directed.	Nos	4.00		
30	Providing and fixing Approved make of double coat hook of jaquar make CAN-1161N for toilet including necessary charges for materials, labour etc., complete and as directed by E In C	Nos	8.00		
31	Providing and Fixing in position Jaquar make type soap tray AQN-7723 of approved make with necessary CP screws and washers fixed into the wall including cutting the wall, fixing and making good the surface etc, Complete all as specified and directed.	Nos	4.00		
32	Providing and Fixing in position jaquar make AHS-1553 toilet paper roll holder of approved make with necessary CP screws and washers fixed to wall including cutting wall, fixing and making good the surface etc, Complete all as specified and directed.	Nos	4.00		
33	Providing and fixing the mirror of required shape and size 600x750mm with MS bracket of approved make including necessary charges for bowled edge and polish, materials, labour etc., complete and as directed by E In C	Nos	4.00		
34	Providing and fixing Jaquar make Connection hose pipes of ALD-801B 600mm long including necessary charges for materials, labour etc., complete and as directed by E In C	Nos	12.00		
35	Supply and installation of Jaquar make -ALD-573 health focuet flex tube all as per specifications, site condition and directions of Engineer - In - Charge etc complete.	Nos	4.00		
36	Providing and fixing wall mixer unit of Jaquar make-FLR-5273UPR including , flexible hose shower clamp etc., complete .	Nos	4.00		
<b>(C) Flats/Residential Apartments - Total Amount (Civil and PH Works) Rs.</b>					
<b>Note:-</b> The contractor shall quote his rates in this schedule of quantity. Submission of tender in ant other format is liable for rejection.					

**Total amount in words:-**

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**Name of the work - Renovation of NCBS Field station at Pachmarhi, Madhya Pradesh.**

**PART-D (External PH WORKS)**

**Schedule of Quantities**

<b>SL. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
1	Boring/drilling bore well				
1.1	Boring/drilling bore well of required dia for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.				
	All types of soil. 300 mm dia	Mtr	90.00		
1.2	Boring/drilling bore well of required dia for casing/strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.				
	All types of soil. 300 mm dia	Mtr	60.00		
2	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge.				
	200 mm nominal size dia	Mtr	30.00		
3	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed / plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make , including wilding the joints , painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.				
	150 mm nominal size dia having minimum wall thickness 5.00 mm	Mtr	30.00		

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SL. No.	Description	Unit	Qty	Rate	Amount
4	Development of tube well in accordance with IS : 2800 (part I) and IS:11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	Hrs	1.00		
5	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.				
	150 mm clamp	Each	1.00		
6	Supplying and erecting of submersible pump of TEXMO make with accessories including cost of maerial, labour, transportation ets., with specified and approved fittings as detailed below, complete all as per specification and as directed by E-In-C etc., complte.				
6.1	Submersible pump set of TEXMO make, 5HP, 3phase, 36 stage.	set	1.00		
6.2	Supplyinf of 40mm , 12.5kgcm2 , high density polyethylene pipes (HDPE) of approved make.	mtr	150.00		
6.3	Finolux 4sq.mm, 3 core flat cable (Bore well cable)	mtr	180.00		
6.4	Calmp set and fittings	set	1.00		
6.5	End fittings to HDPE pipe	set	1.00		
6.6	Aluminium cable of 10sq.mm universal make.	mtr	50.00		
6.7	40mm GM Non return valve	no	2.00		
6.8	Labour charges for Erectting the pump and accessories.	no	1.00		

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SL. No.	Description	Unit	Qty	Rate	Amount
7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes (SDR 13.5) conforming to IS:15778, having thermal stability for hot and cold water supply including all CPVC plain & brass threaded fittings including jointing of pipes and fittings with one step CPVC solvent cement, trenching, refilling and testing of joints complete as per direction of engineer-in-charge etc. for EXTERNAL WORKS with:				
7.1	50 mm dia	Rmt	200.00		
7.2	40 mm dia	Rmt	50.00		
8	Supplying and fixing of ASTM D 2467 PVC pipe Control valves 50 mm dia as directed by EIC.	Nos	4.00		
9	Supplying and fixing of ASTM D 2467 PVC pipe Control valves 40 mm dia as directed by EIC.	Nos	4.00		
10	Supplying of HDPE over head tank-Double wall-polycon/sintex/kaveri or equivalent	Ltr	5000.00		
11	Supplying and fixing of 5HP submersible monoblock pump of model no:KOS-550+ as per specification and as directed by EIC.	No	1.00		
<b>(D) External PH Works - Total Amount Rs.</b>					
<b>Note:-</b> The contractor shall quote his rates in this schedule of quantity. Submission of tender in any other format is liable for rejection.					

**Total amount in words:-**

signature of Tenderer.