



**MAZAGON DOCK SHIPBUILDERS LIMITED**

(Formerly known as Mazagon Dock Ltd.)

CIN : U35100MH1934GOI002079

(A Government of India Undertaking)

Shipbuilders to the Nation

Dockyard Road, Mazagon,

Mumbai 400 010.

INDIA

**Modernization of MDRC Health Club – 1<sup>st</sup> Floor including  
Civil, Electrical, HVAC, including Gymnasium, Furniture  
Works, Lifts and Structural Works at MDL, Mumbai**

**VOLUME-III**

**Scope of Work  
List of Tender Drawings  
Price Bid (Part-II)**

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### **1. SCOPE OF WORK:**

The work consists of Civil & Interior works MS steel structure having column encased in concrete with aluminium roofing with insulation, masonry, plastering, painting, flooring, doors & windows, waterproofing, modular/customized furniture, Capsule Lift, HVAC, Electrical work, dismantling, external façade with GRC cornice, Gym equipment, steam bath system etc. are within the scope of this tender in accordance with the “drawings” and “Bill of Quantities”. It includes providing, fixing, furnishing all materials, labour-, tools and equipment and management of necessary and incidental to the construction and completion of the work. All work, during its progress and upon completion, shall conform to the lines, elevations and grades as shown on the drawings furnished by the Architects. Should any detail essential for efficient completion of the work been omitted from the drawings and specifications, it shall be the responsibility of the Contractor to inform the Employer/Architects and to furnish and incorporate all such details with Employer’s/Architect’s concurrence, so that upon completion of the proposed work, the same will be acceptable and ready for use.

**The detailed scope of work has been indicated in the Bill of Quantities (BOQ) Price Bid Part-II at Enclosure-1.**

**2. LIST OF TENDER DRAWINGS**

<b>SR. NO</b>	<b>DESCRIPTION OF DRAWING</b>	<b>TENDER DRAWING NO</b>
01	JB15-058_MDL-CH-TD-0-1501_CENTRE LINE_R3	MDL/IP/MDRC/Architecture1501
02	JB15-058_MDL-CH-TD-0-1502_GA LAYOUT_R3	MDL/IP/MDRC/Architecture1502
03	JB15-058_MDL-CH-TD-0-1503_ROOF PLAN_R3	MDL/IP/MDRC/Architecture1503
04	JB15-058_MDL-CH-TD-0-1504_MASONRY LAYOUT_R3	MDL/IP/MDRC/Architecture1504
05	JB15-058_MDL-CH-TD-0-1505_FLOORING LAYOUT_R3	MDL/IP/MDRC/Architecture1505
06	JB15-058_MDL-CH-TD-0-1506_SECTIONS_R3	MDL/IP/MDRC/Architecture1506
07	JB15-058_MDL-CH-TD-0-1507_FRONT & BACK ELEVATIONS_R3	MDL/IP/MDRC/Architecture1507
08	JB15-058_MDL-CH-TD-0-1508_SIDE ELEVATIONS_R3	MDL/IP/MDRC/Architecture1508
09	JB15-058_MDL-CH-TD-0-1520_DOOR DETAIL_R3	MDL/IP/MDRC/Architecture1520
10	JB15-058_MDL-CH-TD-0-1521_LIFT LOBBY & WINDOW DETAILS_R3	MDL/IP/MDRC/Architecture1521
11	JB15-058_MDL-CH-TD-0-1522_GLAZING DETAIL_R3	MDL/IP/MDRC/Architecture1522
12	JB15-058_MDL-CH-TD-0-1523_PORCH DETAILS & GROUND FLOOR_R2	MDL/IP/MDRC/Architecture1523
13	JB15-058_MDL-CH-TD-0-1524_INVERTED BEAM & GRC DETAILS_R2	MDL/IP/MDRC/Architecture1524
14	JB15-058_MDL-CH-TD-0-1528_TOILET DETAILS - SHEET 1_R0	MDL/IP/MDRC/Architecture1528
15	JB15-058_MDL-CH-TD-0-1529_TOILET DETAILS - SHEET 2_R0	MDL/IP/MDRC/Architecture1529
16	JB15-058_MDL-CH-TD-0-1552_DIMENSION LAYOUT_R1	MDL/IP/MDRC/Architecture1551
17	JB15-058_MDL-CH-TD-0-1601_REFLECTED CEILING PLAN_R2	MDL/IP/MDRC/Architecture1601
18	JB15-058_MDL-CH-TD-0-1602_FURNITURE DETAILS - SHEET 1_R0	MDL/IP/MDRC/Architecture1602
19	JB15-058_MDL-CH-TD-0-1603_FURNITURE DETAILS - SHEET 2_R0	MDL/IP/MDRC/Architecture1603
20	JB15-058_MDL-CH-TD-0-1611_FINISHES SCHEDULE_R2	MDL/IP/MDRC/Architecture1611
21	AC Layout	MDL/IP/MDRC/Electrical-1
22	Access Control Layout	MDL/IP/MDRC/Electrical-2
23	CCTV Layout	MDL/IP/MDRC/Electrical-3
24	Club House Module	MDL/IP/MDRC/Electrical-4
25	Co-Ordination layout	MDL/IP/MDRC/Electrical-5
26	Fire Alarm	MDL/IP/MDRC/Electrical-6
27	Fire Extinguisher	MDL/IP/MDRC/Electrical-7
28	GMC-Club House-Electrical SLD	MDL/IP/MDRC/Electrical-8
29	Lighting Layout	MDL/IP/MDRC/Electrical-9
30	Plumbing Layout	MDL/IP/MDRC/Electrical-10
31	Power layout	MDL/IP/MDRC/Electrical-11
32	Public Addressable system	MDL/IP/MDRC/Electrical-12
33	HVAC Layout-R7	MDL/IP/MDRC/Mechanical-1855
34	Capsule Lift	Expected Image for Capsule Lift

Enclosure-1

**PRICE BID (PART-II)**  
**BILL OF QUANTITIES**  
**(To be submitted online)**

**Sub: Modernization of MDRC Health Club - 1<sup>st</sup> Floor works including Civil, Electrical, Mechanical, Gym Equipment & Furniture Work at MDL, Mumbai.**

**Ref: MDL Tender No. 180000036**

**INSTRUCTION TO THE BIDDER:**

1. Bidder **SHALL NOT INCLUDE** The Work Contract Tax (WCT) under VAT and Service Tax in the rates for this section. Bidder is required to quote Work Contract Tax (WCT) under VAT and Service Tax including Swachh Bharat Cess and Kisan Kalyan Cess separately in Percentage which will be added to the rate quoted for this section.
2. Bidder to note Clause No. 2 (Defect Liability Period), Clause No 3 (Performance bank Guarantee), Clause No 6 (Prices and Taxes), Clause No 14 (Insurance), Clause No 15 (Water proofing Bank Guarantee) of Volume II before quoting.
3. MDL reserves the right to increase the quantity of any item in the BOQ to any extent provided the increase in the total Estimated Amount due to this change in the quantity over BOQ quantity multiplied by specified rate for all the items put together do not exceed 25% of the Accepted Contract Value. Bidder to note Clause No 12 of Volume II before quoting.
4. Bidder should also note Integrity Pact Bank Guarantee Clause in Vol I before quoting.

Sr. No.	DESCRIPTION	QTY	UNIT	RATE ₹	AMOUNT ₹
<b>I</b>	<b>CIVIL WORK</b>				
<b>A</b>	<b>EARTHWORK</b>				
1	Earth work in excavation by Mechanical means (Hydraulic excavator) / Manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed. a) All kinds of soil	35	m3		
2	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.	14	m3		
3	Filling available excavated earth (excluding rock) in trenches. Plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50m and lift up to 1.5m.	35	m3		
4	Filling in plinth with murrum/ selected earth approved by Engineer-in-charge excavated from nearby borrow areas including all leads up to 2 Km, lifts, loading, unloading, stacking, leveling, spreading, in layers not exceeding 150 mm thick, watering, compaction to give 95% proctor density etc. complete as per specifications, drawings & as directed by the Engineer-in-charge.	10	m3		
5	Carriage of excavated earth by mechanical transport including loading, unloading and staking outside MDL premises to municipal dumping ground etc complete.	14	m3		

<b>B</b>	<b>CONCRETE WORK</b>				
6	Providing and laying in position ready mixed plain cement concrete, using fly ash and cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for plain cement concrete work , including pumping of R.M.C. transit mixer to site of laying and curing, excluding the cost of centering,shuttering and finishing, including cost of curing, admixtures in recommended proportion as per IS :9103 to accelerate /retard setting of concrete improve workability without impairing strength and durability as per direction of the Engineer -in -charge. Note :- (1) Fly ash confirming to grade I of IS 3812 (Part-1) only be used as part replacement of OPC as per IS :456. Uniform blending with cement is to be ensured in accordance with clauses 5.2 and 5.2.1 of IS :456-2000 in the items of BMC and RMC . a) All work upto plinth level M-15 grade plain cement concrete (cement content considered @240 kg/cum)	3	m3		
<b>C</b>	<b>REINFORCED CEMENT CONCRETE</b>				
7-11	Providing and fixing Centering & shuttering including strutting, propping etc. and removal of form for				
7	Foundations, footings, bases of columns,etc. for mass concrete	13	m2		
8	Suspended floors, roofs, landings, balconies and access platform	412	m2		
9	Suspended floors, roofs, landings, balconies and access platform	14	m2		
10	Lintels, beams, plinth beams, girders, bressumers and cantilevers	209	m2		
11	Columns, Pillars, Piers, Abutments, Posts and Struts	114	m2		
12	Providing and fixing Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth/above plinth level.				
12	Thermo- mechanically Treated bars	14,600	kg		
13-14	DESIGN MIX CONCRETE: Providing & laying in position machine batched, machine mixed Design Mix M-25 grade confirming to IS 456 - 2000,cement concrete for reinforced cement concrete work, using cement content as per approved design Mix, including pumping of concrete to site of laying but excluding the cost of centering , shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS :9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in -charge.				
13	All works upto plinth level	11	m3		
14	All works above plinth level upto floor V level a) Extra for providing richer mixes at all floor levels.	88	m3		
15	Providing and laying M-30 grade concrete instead of M-25 grade BMC/RMC.	99	m3		
<b>D</b>	<b>BRICK WORK</b>				

16	Providing and laying Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:4 (1 cement : 4 coarse sand)	71	m3		
17	Providing and laying Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level. A) Cement mortar 1:3 (1 cement :3 coarse sand)	90	m2		
18	Providing and fixing Siporex concrete block masonry 150 mm thick with 1:4 cement sand mortar including curing etc. complete as directed.	5	m2		
19	Providing and fixing Siporex concrete block masonry 100 mm thick with 1:4 cement sand mortar including curing etc. complete as directed.	5	m2		
<b>E</b>	<b>MARBLE &amp; GRANITE WORK</b>				
20-21	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. a) Granite of any colour and shade				
20	Area of slab upto 0.50 sqm (Basic rate of granite 1900/m2 + 32% = 2508/m2)	5	m2		
21	Area of slab over 0.50 sqm (Basic rate of granite 2000/m2 + 32% = 2640/m2)	20	m2		
<b>F</b>	<b>WOOD &amp; PVC WORK</b>				
22	Providing and fixing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length and the back side of the frame shall be painted with two coats of black japan paint and the front side of frame finished with two coats of melamine polish matching with the shutter laminate as approved etc. all complete & as directed by Engineer / Architect :- Second class teak wood	1	m3		
23	Providing and applying french spirit polishing :- Two or more coats on new works including a coat of wood filler	10	m2		
24	Polishing on wood work with ready mixed wax polish of approved brand and manufacture : New/old work	10	m2		
25	Providing and fixing in position 40mm thick solid core water proof marine grade flush door shutters with marine ply as per IS : 710(water proof quality) 40mm thick and T.W. lipping 40mmx12mm with T.W. beading (Architrave) 6mmx40mm to teakwood frames including hinges,stopper,SS handle,mortice lock,door closure, & 4mm thick veneer with melamine polish on one side & 1.5mm thick approved laminate on other side etc. complete as directed. (Type D12) (Location - Store room) --Basic rate of veneer Rs.2000/sq.mt Basic rate of laminate Rs.645/sq.mt	4	m2		

26	<p>Providing &amp; fixing in position 38 mm thk solid core approved brand flush door, finished with 1.5 mm thk. Laminate of approved pattern from bothside,38X12mm T W beading all around the shutter, and with steel plate at bottom inclusive of heavy duty brass hinges of 100 x 25mm along with approved make cylindrical lock, S. S. finish Handles-300mm, S. S. finish Tower bolt-200mm, door stopper, door closure, etc as per approval and complete all as per drg.,details and as directed.all complete &amp; as directed by Engineer / Architect (Type D4, D10 &amp; D11)(Location- Toilet/Pantry/Childrens party area) <b>Please refer Annexure A in Volume IV for product details.</b></p>	16	m2		
27	<p>Providing &amp; fixing in position 38 mm thk solid core approved brand flush door, finished with 1.5 mm thk. Laminate of approved pattern from bothside,38X12mm T W beading all around the shutter, including cutting for vision panel &amp; teakwood frame 12X38mm with melamine polish &amp; 8mm thick toughened glass , and with steel plate at bottom inclusive of heavy duty brass hinges of 100 x 25mm along with approved make cylindrical lock, S. S. finish Handles-300mm, S. S. finish Tower bolt-200mm, door stopper,door closure, etc as per approval and complete all as per drg.,details and as directed.all complete &amp; as directed by Engineer / Architect. (Type D07) (Location- Toilet main entrance) <b>Please refer Annexure A in Volume IV for product details.</b></p>	2	m2		
28	<p>Providing &amp; fixing in position 38 mm thk solid core approved brand flush door, finished with 1.5 mm thk. Laminate of approved pattern from bothside,38X12mm T W beading all around the shutter, and with steel plate at bottom ,cylindrical lock, S. S. finish Handles-300mm, S. S. finish Tower bolt-200mm, door stopper,door closure, panic handle on inside etc as per approval and complete all as per drg.,details and as directed.all complete &amp; as directed by Engineer / Architect. (location - Ground floor entrance) <b>Please refer Annexure A in Volume IV for product details.</b></p>	3	m2		
29	<p>Providing &amp; fixing in position 38 mm thk solid core approved brand flush door, finished with 1.5 mm thk. Laminate of approved pattern from both side,38X12mm T W beading all around the shutter, and with steel plate at bottom inclusive of heavy duty brass hinges of 100 x 25mm along with approved make cylindrical lock, S. S. finish Handles-300mm, S. S. finish Tower bolt-200mm, door stopper,lock,pivot fixture, floor spring, vision panel etc as per approval and complete all as per drg.,details and as directed.all complete &amp; as directed by Engineer / Architect. (Type D09) (Location- Fire escape staircase) <b>Please refer Annexure A in Volume IV for product details.</b></p>	3	m2		



30	<p>Providing and fixing Double/single swing fully Glazed Door Shutters with 12mm thick toughened glass fixed on patch fittings of approved make and as per design and details given by the architect/ including locking arrangement, handles 350mm long, accessories, floor spring make "Dorma" BTS 84/75/approved equivalent as per door weight complete as directed. (Type D1,D2, &amp; D3) (Location - Lift lobby/childrens party area/gym)  <b>Please refer Annexure A in Volume IV for product details.</b></p>	10	m2		
31	<p>Providing and fixing Double/single swing fully Glazed shutter with 12mm thick bronze tinted tempered glass on patch fittings with stainless steel spring hinges &amp; weather seal around the door, wooden handle 200mm long, warpage resistant jambs, &amp; ball catches etc. complete etc. complete as per drawing. (Type 06) (Location - Steam room)  <b>Please refer Annexure A in Volume IV for product details.</b></p>	2	m2		
32	<p>Providing and fixing full height Openable anodized glazed aluminium doors as per details and specifications mentioned in the drawing, size 1200X2400mm, using 160X 25mm anodized aluminium box section finished with PVDF of approved shade &amp; type for subframes, frames, shutter frames mullions, couplers, tubular sections, beadings etc. from approved manufacturers including shutter with clear glass of 12 m thick of approved make, &amp; commercially available fixtures, holdfasts, fixing by drilling in concrete (if required) concealed handles,locks, Neoprene gaskets for fixing glass and anodizing all aluminium sections to a thickness of anodic film not less than 20 microns (or powder coated) and sealing all the joints with approved make silicon sealant etc. complete as directed. (Type DR13) (Ground floor lift lobby entrance)  <b>Please refer Annexure A in Volume IV for product details.</b></p>	4	m2		
33	<p>Providing and fixing openable aluminium grill shutter of size as per drawing of Hunter douglas make, with aluminium - EN-AW-3005, with frontside luxacote finish 3layers, with approved colour, span @ 1000N/m2 wind load 1.8m including aluminium framework,hardware, fixed as per manufacturer specifications etc. complete as directed.( Type DR 15) (Location - Ground floor near MS staircase)</p>	8	m2		
34	<p>Providing and fixing 12/18mm thick compact cubicle door of Merino/Greenlam make including SS 316 - 12mm box, SS 304 latch box &amp; indicator, SS 304 door knob, SS 304 hinges with cover, SS 304 coar hook RG, rubber strip for groove, SS 304 top rail, SS privacy thumbturn, SS 316 adjustable foot, SS 'U' channel etc. complete. As per manufacturer specifications. (Type D5) (For Toilet)  --Make-  1. Merino Titan Standard Series  2. Greenlam Classique Evergreen</p>	10	m2		



35	<p>Providing and fixing 12/18mm thick compact cubicle partition of Merino/Greenlam make including SS 316 - 12mm box, SS 304 latch box &amp; indicator, SS 304 hinges with cover, SS 304 coar hook RG, rubber strip for groove, SS 304 top rail, SS privacy thumbturn, SS 316 adjustable foot, SS 'U' channel etc. complete. As per manufacturer specifications. (For Toilet)</p> <p>--Make-</p> <ol style="list-style-type: none"> <li>1. Merino Titan Standard Series</li> <li>2. Greenlam Classique Evergreen</li> </ol>	30	m2		
36-40	<p>Providing and fixing GRC cornice fixed as per manufacturer specification &amp; as per drawing. Sizes are following etc. complete</p>				
36	<p>350mm wide &amp; 600mm ht. --Contact details of Vendors for reference if required are as under. However, the bidder is free to get the material from any other vendor</p> <p>Sudarshana - ECOEARTH SOLUTIONS OPC PVT LTD Mob : 9167492486</p>	90	rmt		
37	<p>185mm wide &amp; 300mm ht. --Contact details of Vendors for reference if required are as under. However, the bidder is free to get the material from any other vendor</p> <p>GRC INDIA CO SRIHARI NILKAR 9867569395</p>	120	rmt		
38	<p>120mm wide &amp; 150mm ht. --Contact details of Vendors for reference if required are as under. However, the bidder is free to get the material from any other vendor</p> <p>Mr. Suresh Singh - (+91 9820464366) M/s COMPOSITE MOULDINGS.</p>	61	rmt		
39	<p>300mm wide &amp; 600mm ht. --Contact details of Vendors for reference if required are as under. However, the bidder is free to get the material from any other vendor</p> <p>Mr. Suresh Singh - (+91 9820464366) M/s COMPOSITE MOULDINGS.</p>	20	rmt		
40	<p>75mm wide &amp; 150mm ht. --Contact details of Vendors for reference if required are as under. However, the bidder is free to get the material from any other vendor</p> <p>Mr. Suresh Singh - (+91 9820464366) M/s COMPOSITE MOULDINGS.</p>	160	rmt		
41	<p>Providing and fixing approved veneer/mirror panelling with 25X40mm aluminium box section @ 600X600mm C/C @ horizontal &amp; vertically, 8mm thick marine plywood fixed on aluminium framework, mirror panelling consisting 6mm thick mirror of approved make, &amp; veneer panelling consisting of 8mm thick marine plywood with 4mm thick veneer, &amp; aluminium "L"/"T" angle fixed between the veneer &amp; mirror panelling. including two coats of melamine polish to the veneer all hardware etc. complete as per drawing or as directed.</p> <p>--Basic rate for Veneer - Rs.2000 /sq.mt</p>	20	m2		

42	Providing and fixing approved veneer panelling with 25X40mm aluminium box section @ 600X600mm C/C @ horizontal & vertically, veneer panelling consisting of 12mm thick marine plywood with 4mm thick veneer, including two coats of melamine polish to the veneer all hardware etc. complete as per drawing or as directed. -- Basic price for Veneer Rs. 2000 /SQ.MT	30	m2		
43	Providing and fixing approved panelling with 35X35mm Teakwood framework @ 600X600mm C/C @ horizontal & vertically, veneer panelling consisting of 19mm thick marine plywood with 8mm thick Corian on top , including polishing to the teakwood framework & all hardware etc. complete as per drawing or as directed. --Basic price for Corian Rs. 800-850 /SQ.MT -- Basic rate for Veneer Rs.2000 /sq.mt	40	m2		
44	Providing and fixing mirror panelling with 25X40mm aluminium box section @ 600X600mm C/C @ horizontal & vertically, 8mm thick marine plywood fixed on aluminium framework, & 6mm thick mirror of approved make, including all hardware etc. complete as per drawing or as directed.	80	m2		
45	Providing and fixing in position full height solid wooden partitions with vertical and horizontal frame work of 50mm x 50mm X 2mm Aluminium section of approved quality at 450mm centers bothways, well notched and screwed thick on both sides including 12mm thick marine plywood on both sides with 1.5mm thick laminate on both sides including filling glass wool of 48kg/m3 density for sound insulation, making cutout for electrical conduits, support for access control lock complete. partition above false ceiling 50X50X2mm aluminium section with bracing, melamine polish to all wood surface to match the shutter as per detailed drawings and as directed by the Architect. (Payment shall be paid from floor upto ceiling)	40	m2		
46	Providing and installing full height storage unit of 450/600 depth internally, using 25mm marine plywood vertical, top, bottom and shelves with 18mm glass, Sliding shutters with 12mm thick back painted glass with all fixtures, fitting, hinges, handles, ball catches and lock of approved samples with 1mm thk laminate of approved shade & make to internal surfaces & 1.5mm thick laminate on exposed surfaces. top hung shutter for overhead storage with 19mm thick marine plywood finished with 1.5mm thick laminate, including 50mm SS cover top & bottom, melamine polish to all wood surface to match the shutter etc. complete. (payment shall be paid & measured in Sq.mt.)	14	m2		
47	Providing and fixing Teakwood frames of size 25mm x 40mm with Shutters to pantry counters made out of 19mm Marine Plywood finished with 1mm approved laminate on both sides, melamine polish to all wood surface to match the shutter as per drawings and directed etc. complete.	12	m2		

48	Providing and fixing 150mm deep X 300mm wide pelmet and 150mm fascia using 19mm thick marine ply with required frame backing with 8mm thk gypsum with approved paint/finish as directed.	50	rmt		
49	<p>Providing and fixing 5000 X 2320X100 mm thick acoustic movable wall partition system, 52Db Rw, individually movable panels, suspended from a top track only, each panel to have top and bottom operable pressure seals operated by a crank handle through double scissor mechanism with pressure compensation spring of 2000N for an optimal strength. The elements must be inter-connected by means of a positive locking concave/convex aluminium profile integrated with magnetic profile having a linear. attraction of 40 N/m. Elements must be constructed of a non-deflecting steel tube frame and aluminium profiles, bolted together. The frame must be clad either side with 16 mm MDF panels hung in acoustic isolation from the frame and allowed to vibrate independently of the frame. The fascia panels must also be easily removable. The panel must be filled with high density rock wool in accordance with the specified sound insulation requirements. The telescopic element must open and close 120 mm and must be operated by a single mechanism for both the top and bottom seals.</p> <p>a) Including spindle/jack &amp; gear mechanism &amp; acoustic material. Internal mild steel sturdy frame consisting of 45X45X3mm hollow tubing with steel reinforcements. End panel fitted with interlocking aluminium profile duly fitted with 4 polarised magnetic strips.</p> <p>b) Each panel laid on with MDF boards of 16mm thick, width of each panel 974mm with single suspension guide trolleys/per panel, total panel 5nos including 1 telescopic panel.</p> <p>c) Providing and fixing sound baffle above sliding/folding partition to the required profile and shape , including steel work, track suspension hardware, sonic &amp; sound baffle for above the false ceiling area, specifications and as per directions of Engineer-in-charge. Make-DOORS &amp; DOORS,DORMA</p>	30	m2		
50	Providing and fixing 46 mm thickness G.I. flush door shutter out of 1.2mm thick G.I.sheet of size 1200mm x 2400mm with galvanized frame size of 125 x 75 mm, single leaf with, bottom and stile edges for fire rating with vision panel of approved fire rated glass ,metal frame having fire rating of 120 minutes fabricated out of 16 BWG thickness GI sheet with suitable rebate finished with 2 coats of synthetic enamel paint and 2 coats of bitumen paint with proper access control , including cylindrical lock, ss handle, ss tower bolt, floor spring or as per the drawings complete as per drawings & specification and as directed by Engineer-in-charge. ( Type D08 ) (Fire exit)	3	m2		

51	Providing and installing over head storage unit of 400mm deep, height as per drawings including partition and shelves made out of 19mm marine plywood, shutter of width average 400mm and upto 600mm 19mm thick and 6mm marine ply back and pelmet, finished with 1.5mm thick approved laminate on all outer faces or post formed laminated storage shutters and 0.8mm thk laminate of approved shade & make to internal spaces, all fixtures, fittings, with hinges, handles, locks, etc. as per drawing/ directed etc complete.	3	m2		
52	Providing and installing Shoe rack storage unit of size 1900 X 1800 X 400mm depth internally, using 19mm marine plywood vertical, top, bottom. sides and shelves with 3mm SS perforated sheet, back with 6mm thick plywood finished with laminate and T.W. beads to all corner and edges. including all fixtures, fitting of approved samples with 0.8m thk laminate of approved shade & make to internal spaces to all internal surfaces.& 1mm thick laminate to external surfaces.etc. complete. (As per attached drawing)	1	No		
<b>G</b>	<b>STEEL WORK</b>				
53	<p>Supplying, fabricating in accordance with IS:800, delivering at site, hoisting and fixing in position, including all temporary staging and supporting work and making all structural steel work in accordance with the design, drawings prepared by the consultants. The rate of steel work shall include cutting, grinding, machining, assembly, welding, joining, building up new sections, cost of fasteners (nuts, bolts and washers), pre-heating the sections to temperatures up to 250 degree C if thickness of the section is equal to or more than 25 mm. Fabrication will involve connections using plates, channels and angles, gusset plate, foundation bolts, cleats, fasteners etc.</p> <p>a) As per drawing, steel conforming to IS : 226 and IS : 2062 with minimum yield strength of 250 Mpa. Fabricating columns, beams, joists, struts, built up ties and bracings, staircases, platforms, lofts, catwalks, walkways, bridges, ladders, brackets, suspended canopy, grillage foundations etc.and other steel members and items out of the following readily available Sections &amp; Steel plates conforming to Indian Standards. Structural elements may be covered with fireproof coating or anti-corrosion treatment (covered under separate heading) up to which time, the surfaces of all members shall be maintained straight, clean and rust-free and ready to receive fireproofing layer or anti-corrosion layer. Preparing shop drawings, obtaining Structural consultants approval. including two coats of primer of approved steel primer etc. complete.</p> <p>b) The rate shall also include 44(c) type of painting for encasing structural sections. Structural elements may be covered with fireproof coating up to which time the members shall be maintained straight OR anti-corrosive protection as per site requirement (covered under separate heading).</p>	36362.00	kg		

	Painting shall be done in accordance with IS: 1477 (Part 1) and IS: 1477 (Part 2) with suggested primers, coatings, temporary coatings, permanent finishes etc. as the case may be.				
54	Providing and applying Epoxy Zinc Phospate Paint 2 coats 35 microns each PLUS 2 coats of PU paint for aesthetical finish. --Basic rate Rs.15/kg	500	kg		
55	Providing and applying Fire Protection Coat : Single Coat of Epoxy Paint (Primer) 35 microns PLUS Vermiculite Spray for 120 minutes Fire rating. --Basic rate Rs.25/kg	26,590	kg		
56	Providing and applying One coat of zinc rich primer after properly cleaning the steel surface with wire brush and mild acid solution followed by washing with water and drying the surface completely. --Basic rate Rs.15 /kg	9,800	kg		
57	Providing and installing mechanical anchors in concrete M20x260mm long anchor bolts with expansion type wedge sleeve for reliable anchoring for supporting brackets for column steel work, etc including drilling holes, as per manufacturer's specifications, scaffolding, all tools and tackles, etc. (Anchor to be of HILTI make or equivalent)	64	nos		
58	Providing and fixing stainless steel ( Grade 316) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, ( for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	25	kg		
59	Providing and fixing Railing 1000mm high of grade SS316, made out of 20mm X 40mm or equivalent Brush SS flat type blusters fixed on floor with anchor fastener bolt to be covered with brush SS cover plate. Top hand rail of 50mm dia SS pipe fixed to circular vertical pipe with 2nosX25mm brush SS pipe, All complete as per drawings and as directed complete. (As per attached drawing)	60	rmt		
<b>H</b>	<b>FLOORING</b>				
60	Providing and laying 52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacturer's specifications. This includes cost of cement slurry, etc. complete	140	m2		

61	Providing and fixing Anti-skid vitrified tiles for flooring of size 600 X 600mm of approved make, colour and size 10 mm thick, including atleast 50mm and upto 65mm Cement Bedding on flooring , fixed with tile adhesive or neat cement paste including sealing the joints with approved quality white cement mixed with approved colour to match the tiles colour or approved grouting materials including, curing, cleaning etc. complete as directed. (Basic cost of tile: Rs 1200/ Sqm)	60	m2		
62	Providing and laying Crazy ceramic tile flooring, with under layer 12 mm thick cement mortar 1:4 (1 cement: 4 coarse sand), with joints not exceeding 5 mm, including filling the gaps with ordinary cement mixture & mixing with synthetic polyester fibre, triangular in shape having specific gravity of 1.34 to 1.40, cross section size ranging from 10 to 40 micron & length upto 6 mm , mixing fibre @ 125 grams per 50 kg of cement in cement mortar, including providing and mixing water proofing material in mortar @ 1 kg per 50 kg of cement , all complete as per direction of Engineer-in-charge. --Basic price for crazy ceramic tiles Rs. 400 /SQ.MT	40	m2		
63	Providing and fixing wall cladding at all heights homogenous full body vitrified tiles of size 600 X 600mm of approved make, colour and size 10 mm thick, min 15mm thick backing coat plaster in 1:4 cement mortar while on wall dado, fixed with tile adhesive or neat cement paste including sealing the joints with approved quality white cement mixed with approved colour to match the tiles colour or approved grouting materials including curing, cleaning etc. complete as directed : Size of Tile 600x600 mm (Basic cost of tile: Rs 1200/ Sqm)	220	m2		
64	Providing and fixing 600X600mm vitrified tile flooring of approved make, colour and size 10 mm thick, including atleast 50mm and upto 65mm Cement Bedding on flooring ,fixed with tile adhesive or neat cement paste including sealing the joints with approved quality white cement mixed with approved colour to match the tiles colour or approved grouting materials including curing, cleaning etc. complete as directed. (Basic cost of tile: Rs 1200/ Sqm)	10	m2		
65	Providing and laying machine cut, mirror polished, Italian Marble stone laid in required pattern in linear portion of the building for flooring, cladding, door & window frame all complete as per architectural drawings, with 18 mm thick stone slab laid over 20 mm (average) thick base of cement mortar 1:4 (1 cement : 4 coarse sand) laid and jointed with white cement slurry @ 4.4 kg/sqm including pointing with white cement slurry admixed with pigment to match the marble shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-Charge. a. 18 mm thick Italian Marble stone slab,Perlato, Rosso verona, Fire Red or Dark Emperadore etc. (Basic rate of Italian of Rs. 5500/Sqm)	260	m2		



66	Providing and erecting 600mm deep Pantry counter in shape and design as directed. With approved 20mm thk granite top of approved shade, including 18MM cement mortar and LOCAL marble base, with LOCAL marble verticals and shelves as indicated, making cut-outs for sink, plumbing fixtures, gas cylinder pipes, etc, cost to include for all granite vertical patties, facias, splash - back patties, granite skirting etc. Polishing including edge polishing, washing, cleaning, and finishing the wall surface below the counter with 200mm x 200mm ceramic white colour tile including necessary cement mortar backing complete details as directed. running length of counters to be measured along their centre lines and paid for. (Basic cost of granite Rs. 2000/- Sq.mt.)	5	rmt		
67	Providing & laying wash basin counter of 500-550 mm depth(clear) and at 700mm to 800 mm ht(top)above ffl. Of approved 20mm thk granite slab laid on 20mm thk white marble support with required cement mortar base & 100-150 mm thk chamfered and machine polished edge fascia. it shall be supported on side walls & with white marble vertical supports as shown in the drawing. (Basic granite rate=Rs 2000 per sqm)	6	rmt		
68	Providing and laying 18mm thick Rough Granite stone as per sizes and shapes indicated in the drawings in floor areas, doors & windows frames, tread, risers, ramps etc as per drawings and approved mock-up, including 20mm thick 1:4 cement mortar bedding, compacted properly, and cement float as required. Joints should be finished with neat coloured/ white cement and width joint shall not be more than 1.0mm including curing, cleaning etc. complete. (Basic rate of Granite of Rs. 3000/- Sq.mt.)	50	m2		
69	Providing and fixing Composite marble of white shade for flooring & Cladding having thickness upto 18mm in required size, shade ,size as per drawing, laid over 20mm thick cement mortar 1:4 & 15mm thick backing coat plaster of CM 1:4,cleaning all as per specifications and as directed. (Basic cost of composite marble/ Agglomerate Rs. 2500/- per sq.mt.)	5	m2		
70	Providing and fixing Wet cladding of size 1000 X 3000 X 3mm thick Techlam porcelain sheet with matt & slip resistant finish, Techlam tile fixed with adhesive of MapaeiKeraflexi maxi s1, latcrete, kerakol or equivalent make. 2mm joints finished with epoxy grout of Mapaei or latcrete make, etc. complete as per manufacturer specifications. -- Basic rate Rs. 300-350 /SQ.FT	180	m2		
71	Providing and fixing Dry cladding of size 1000 X 3000 X 3mm thick Techlam porcelain sheet with matt & slip resistant finish, framework with aluminium channel of 40X50X2 to 3mm thick @ 500mm C/C with powder coated angle of size 5X25X2mm thick fixed with anchor fastener, & SS self tapping screws. tile should be clean & structural silicon is applied & gaps between the tiles should be sealed with weather silicon etc. complete as per manufacturer specifications.	25	m2		



72	Providing & fixing 100 to 120mm high Burma teak wood skirting of 18mm thick with two coats of melamine polish etc. complete as directed.	150	rmt		
73	Providing and fixing 60mm thick flagstone of approved size, colour, & make characteristic bending strength >4MPa, abrasion resistance- class I as per EN 1339:2003, <18000mm <sup>2</sup> /5000mm <sup>2</sup> including 50mm thick sand bedding and compacting with plate vibrator, filling the gaps etc. complete as per manufacturer specifications. -- Basic rate of flagstone Rs. 500 /SQ.MT Make- Vyara, Basant Batons, Supertiles & Marbles, Hindustan Block Manufacturers.	100	m2		
74	Providing and fixing 15mm thick rubberised flooring of Nora, Sandick make, fixed on concrete with approved adhesive, as per manufacturer specifications etc. complete as per design or as directed. -- Basic rate of rubberised flooring Rs. 2100 /SQ.MT	137	m2		
<b>I</b>	<b>ROOFING</b>				
75	Providing and applying upto 10 mm thick plaster of Paris (gypsum anhydrous) ceiling up to a height of 5m above floor level, over first class kail wood strips 25x6 mm with 10 mm gap in between and reinforced with rabbit wire mesh fixed to wooden frame (frame work to be paid separately) : Flat surfaces	10	m2		
76	Providing and applying plaster of paris putty of upto 10mm thickness over plastered surface to prepare the surface even and smooth complete.	360	m2		
77	Providing and fixing at all height false ceiling of 12.5mm thick tapered edge gypsum board conforming to IS 2095-Part I including providing and fixing of frame work made of special sections power pressed from MS sheet and galvanised in accordance with zinc coating 600 as per IS 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastner 12.5mm dia x 40mm long with 6mm dia bolts to the angle hangers of 25x25x5mm of required length, and other end of angle in standard length of 5m made of double enamelled aluminium alloy AA5050 ( Al.Mg) black with cutouts to holds the panels in module of and at the distance of 1.6m with insulations & 1.8m without insulation. The carrier shall be suspended by means of GI suspended rod 4mm dia. & galvanised suspension clip at a distance of 1.3m C/C. including cornice @ perimeter. hanger being fixed with nut and bolts to GI channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to GI channel with connecting clips made out of 2.64mm dia x 230mm long GI wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm etc. complete as per attached design.	470	m2		

78	Modular False Ceiling : Armstrong Modular ceiling grid(hot dipped galvanized steel section) shall have 595 x 595 mm x 15mm fine fissured tiles(lay-in type) in true horizontal level using a 15mm T bar section suspended from the ceiling slab using 2 mm wire at every 1200mm interval. And shall have fire rating of 60 minutes as per BS 476/23 of 1987, Noise reduction Coefficient (NRC) of 0.50-0.60, to resist temperature and humidity conditions up to 40 degree (104deg. F) and humidity of 99% RH.	10	m2		
79	Providing and Fixing trap Doors for accessing the services and utilities in marine plywood 18mm thick, with necessary sized salwood framework, suspended from true ceiling bolted by anchor fasteners. Doors to be finished with laminate on both sides, edged with PVC transparent seal to prevent smells being sucked into the trap door space. Small sized trap doors to be locked with Ellen Key locks with safety chain stays. Larger sized Doors to be divided into removable panels with notched removable framework as directed complete.	2	m2		
80	<p><b>KALZIP ROOFING:</b></p> <p><b>a) The roofing system manufacturers shall be certified with UnderWriter Laboratories (UL-90) for wind uplift &amp; ISO Certificate (ISO 9001) . Installer to submit the above alongwith the Offer.</b></p> <p><b>B) Installer must submit Certificate from manufacturer as authorised installer of the roofing system.</b></p> <p><b>c) Installer must submit Certificate from manufacturer as authorised installer of the roofing system. And must submit list of such similar Aluminum standing seam roofs for minimum 5 projects in India having roof area more than 3,000 m2 each.</b></p> <p><b>d) Installer should submit necessary documents, like photographs &amp; completion certificates, TDS certificate of the earlier projects as proof for qualification.</b></p> <p><b>e) Installer should offer a 15 years warranty for material and leakage warranty of 10 years.</b></p> <p><b>f) Installer must have carried out aluminium welding for openings in aluminium standing seam roofing systems and should submit photographs &amp; certificate as a proof of expertise.</b></p> <p><b>g) Installer should submit all detailed drawings required for the project.</b></p> <p><b>h) Installer to submit certificates of training from the Manufacturer's training facility for its key personnel in - Project execution, Quality, Design &amp; General management.</b></p> <p>-- Contact details of Vendors for reference if required are as under. However, the bidder is free to get the material from any other vendor.</p> <p>1. VIJAYNATH SHETTY - Mob.: +91 - 9821015336 (KINGSPAN)</p> <p>2. ABHISHEK GUPTA - Mob : 9987681976 (KALZIP )</p>				

80	KingZip SF (KINGSPAN / BEMO / SANKYO) ALUMINIUM DOUBLE SKIN INSULATED ROOFING SYSTEM	460	m2		
	<p><b>Note for 71.1:</b>  Supply and fixing of KingZip SF, 65/400 Self Supported Secret Fix ROOFING SYSTEM in 0.9 mm thick in Marine Grade AA 3004 Aluminium Alloy comprising of the following layers:  1.Top Layer - The topmost profiled sheeting of aluminium KingZip SF 65/400 self supported roof system manufactured from Aluminium alloy AlMnMg1 Quality AA 3004, in accordance with B209M/ BS-EN-485-2:1995 minimum material thickness of 0.90mm with 60µm Durobond finish in accordance with BS-EN-1396: 2007 finish including Accessories. Colour as per Architect`s choice. The profile should have Architectural micro ribs between every 24 mini ribs of 1.5 mm to provide additional strength at the pan. The support halter shall be manufactured from extruded aluminium alloy 6082 T6 in accordance with BSEN 755 part 2. Each aluminium halter shall be coupled with a 6mm thick black polyamide thermal barrier base pad. The material properties shall be as follows: Ultimate tensile strength: minimum 200 N/mm2, 0.2% Proof Stress: min 185 N/mm2, Modulus of elasticity: 70,000 N/mm2. KingZip SF to be laid in Single Length to meet the requirements of the building geometry (straight sheet) and fixed on Aluminium Clip/ Halter and which is fixed to steel top hat through with SS-304 screws. 1) Detail structural load calculation report to be submitted by the manufacturer based on wind load as per IS 875 and screw pull out force. Approved Makes : KINGSPAN / BEMO / SANKYO</p>				
	<p>2. Insulation Layer - Rockwool Insulation of 100 mm thickness x 60kg/m3 density. K-value 0.038 W/mK as per standard ASTM C-518. Fire classification as per BS 476: Part 6&amp;7 / EN-1350-1 / UL-273. MAKE-ROXUL / ROCKWOOL  3. Vapour Control Layer - Double sided aluminium foil with 170 microns thickness.  4. Bottom Sheet - Supply &amp; Fixing of bare Galvalume profile sheet of 1000-1015 mm effective cover width and 28-35 mm height ribs with subtle square fluting in the five pan at 200-250 mm centre-to-centre. The feed material is manufactured out of nominal 0.47 mm Total Coated Thickness (TMT), Hi-strength steel with min. 550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% Aluminium, 45% Zinc) as per AS 1397 - Zinalume/ Galvalume (Make- Tata bluescope / Jindal) AZ150 (Min. 150 gms/sq.mt total on both sides) Fixed to the purlins with steel screws (Make- Buildex / Corroshiled) at 500mm spacing.</p>				
81	ALUMINIUM FLASHING IN 0.90 MM THICK Supply and Fixing of 0.90 mm thick Aluminium Flashing (Specification same as Sr. No. 1.1 above) with powder coated ,maximum girth of 500 mm.as required size shape. Etc. complete as directed.	123	rmt		

82	<p>Providing and fixing in position UV resistant X-structure/multiwall/multicell Polycarbonate sheet (Lexan Thermoclear of GE Plastics or equivalent 1200 mm width and max length upto 12.0 m, including UV resistant coating on both sides, providing specially designed serrated polycarbonate clamping section at all longitudinal joints (parallel to span) on supporting member, fixing to box purlins/runner using specially designed stainless steel clamps and fasteners SS304 grade,(or) specially designed anodised aluminium clamping section with EPDM/Neo prene gaskets to be located on supporting member, the fasteners to be fixed on pre drilled or self drilled hole, all fixing to be completely water tight. The Contractor shall give 20 years</p> <p>guarantee for Polycarbonate sheets against deterioration and discolouration, loss of light transmission, loss of strength due to weathering, and 10 years guarantee for leakage across laps, fasteners, joints etc. Contractor shall submit detail shop drawings showing the layout of sheets, fixing arrangement, joint details for approval prior topurchase. a) 16 mm thk X-structure/multiwall/multicell (X-structure to be LT2UV 16/3 x 2.9 of GE Plastics or equivalent) (Purlin/Runners are paid saperately under structural steel item)</p> <p>-- Polycarbonate sheet to be put at site for existing steel staircase which shall be as per manufacturer's specifications. For better understanding, a site visit is recommended.</p>	25	m2		
83	<p>Providing and fixing gutter section made up of 16 gauge thick aluminium sheet gutter of 0.9mt girth as per required profile including fixing along the length with proper slope to drain water with brackets including making proper cutouts and connections to the rain water pipes.etc. complete as per drawing.</p>	10	rmt		
84	<p>Designing for specified spans as shown in structural drawings as a composite floor ( deck sheet of min. thickness 1 mm ) for the design loads mentioned herein, providing, delivering at site, cutting to required size, laying, installing, securing to floor beams with appropriate shear connectors / studs, laying reinforcement if required, propping if necessary before concreting (concrete and reinforcement item paid separately under Concrete tender) etc. complete. (Material conforming to EN 10147:2000 or AS 1397 with minimum yield strength of <math>F_y = 300</math> N/sqmm. Galvanization to be min. zinc coating mass of 275 gm/sqmm or as per ASTM A653)</p> <p>-- Basic rate Rs.1500 /SQ.MT</p>	42	m2		
<b>J</b>	<b>FINISHING</b>				
85	<p>Providing and applying 12 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand)</p>	470	m2		
86	<p>Providing and applying 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) and a top layer 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge. Including waterproofing compound as per manufacturer specifications.</p>	1,230.00	m2		

87	Providing and applying 6 mm cement plaster of mix : 1:3 (1 cement : 3 fine sand)	10	m2		
88	Providing and applying finishing walls with textured exterior paint of required shade : New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	10	m2		
89	Providing and applying finishing walls with Acrylic Smooth exterior paint of required : New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm) shade :	10	m2		
90	Providing and applying two coat of approved primer of Asian paints / ICI and two coats of Apex Ultima of Asian paints or Weather Shield Max of ICI ( as per manufacturer's specification ) to the entire external surface with groove of the building after scrapping, brushing, cleaning, washing the surface, and including scaffolding, curing, filling the cracks with filler materials, leveling etc., all complete. (Mode of measurement actual surface area painted will be considered i.e. length x height less all opening and windows)	25	m2		
91	Providing and applying two coat of approved primer of Asian paints / ICI and two coats of Apex Ultima Protek of Asian paints or Weather Shield Max of ICI ( as per manufacturer's specification ) to the entire external surface with groove of the building after scrapping, brushing, cleaning, washing the surface, and including scaffolding, curing, filling the cracks with filler materials, leveling etc., all complete. (Mode of measurement actual surface area painted will be considered i.e. length x height less all opening and windows)	1,120.00	m2		
92	Providing and applying wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade : Two or more coats on new work	10	m2		
93	Providing and applying Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade : Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	75	m2		
94	Providing and Applying 3 coats of Acrylic emulsion paint Asian paints/ equivalent on false ceiling as per design and approved shade by the Architect. Cost to include preparing the surface, applying primer, putty, etc. complete. All jambs, trims, edges, grooves to be included in SQ.M rate. No seperate measurement on R.M.	520	m2		
95	Providing and Applying 3 coats of luster paint Asian paints/ equivalent on wall and partitions as per design and approved shade by the Architect. Cost to include preparing the surface, applying primer, putty, etc. complete. including all jambs, trims, edges, grooves to be included in SQ.M rate. No separate measurement on R.M.	470	m2		
96	Providing sand face plaster externally with groove in two coats using approved screened sand in all positions, including providing base coat of 15mm thick in cement mortar 1:4 mixing approved water proofing compound at the rate of 1 kilogramme / 50	800	m2		

	kg of cement and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment 8mm thick in cement mortar 1:4 and finishing the surface by taking out grains and curing for 14 days including preparing the surface, watering including providing & fixing 20 guage GI chicken mesh @ 150mm wide to junction of concrete & masonry, including preparing jambs,sills, grooves-30mm high, 15mm deep & 250mm C/C etc. , pattas, wattas, rounding corners etc. complete.				
97	Providing and filling styrofill geofoam of approved size etc. complete as per manufacturer specifications. -- Contact details of Vendors for reference if required are as under. However, the bidder is free to get geofoam item from any other vendor True Pack Thermo Products -9920764666 2mtr x 1mt x 250mm - RS.2000	30	m3		
98-99	Providing & applying 'Duco' paint with 'Duco' lambi base				
98	Metallic shade	5	m2		
99	Non-metallic shade	5	m2		
100	Providing and applying Oikos or equivalent make internal textured paint of approved shade and colour etc. complete. -- Basic rate Rs. 2000 /SQ.MT	5	m2		
101	Providing and applying idea paint (Dry erase marker board finish) as per manufacture specification complete (Basic cost of paint Rs. 3500/- Sqmt.)	5	m2		
102	Providing and applying two or more coats of 100 micron thick epoxy paint of approved shade and colour.	5	m2		
103	Providing and carrying out Pest-Control for termites, pests, white ants with final application of the chemical after completion of carpentry work. As per IS Code 6313 Part II or revisions thereof. including drilling holes at skirting level to allow the chemical to seep into walls, mixing chemical with the flooring mortar, contractor to give a certificate of Pest Treatment at the end of the job.(Measurement as per carpet area)	370	m2		
<b>K</b>	<b>REPAIRS TO BUILDING</b>				
104	Providing and fixing double scaffolding system (cup lock type) on the exterior side, up to seven story height made with 40 mm dia M.S. tube 1.5 m centre to centre, horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding.	50	m2		



105	Providing and erecting bamboo's double scaffolding of required height and width and strength by sides of building for platform to enable workmen to carry out repairs to building at any level from ground to any floor height as directed including removing the same and clearing the site. -1. The rate for this item shall be applicable for work beyond 10 m height for building / shed / workshop. -2. All the items of work are inclusive of scaffolding upto 10 M height. -3. Hence the scaffolding shall be paid only for the elevational area of scaffolding above 10m height)	1,160.00	m2		
<b>L</b>	<b>DISMANTLING &amp; DEMOLISHING</b>				
106	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in- charge	10	m3		
107	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge. In cement mortar	70	m3		
108	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead : Of area 3 sq. metres and below	12	each		
109	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead. For thickness of tiles 10 mm to 25 mm	90	m2		
110	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of : G.S./polycarbonate/AC sheet	100	m2		
111	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead	1,350.00	m2		
112	Dismantling carefully existing G.I pipeline of any dia along with all its fittings viz. bib cock, collars, elbow etc and stacking at site.-Items of work to be used	500	rmt		
113	Dismantling existing C.I or AC or PVC pipeline along with fittings & clamps including carting away debris etc. complete as directed. -Up to 150mm dia pipe line Note: Items of work to be used	500	rmt		
114	Covering the window with 6mm thick commercial plywood and removing after completion of work etc. complete as directed.	100	m2		
115	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, for all leads including all lifts involved.	200	m3		
116	Providing & fixing the Safety Net with 12mm Border rope, 4mm knotted, 1mm fishnet size -15mm X 15mm mesh to prevent the debris falling on ground /walkway etc. as per the direction of Engineer in	510	m2		



	charge.				
117	Covering the scaffolding with Bardan (Agro Knitted Fabric) by sewing, knotting as required at any height of the building /structure while carrying out external work of the building/structure etc. as per the direction of Engineer Incharge. (Contractor shall keep the mesh for the entire period of the execution)	1,160.00	m2		
<b>M</b>	<b>ALUMINIUM WORK</b>				
118-119	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, panelling and dash fasteners to be paid for separately) :				
118	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	10	kg		
119	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately) Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	10	kg		
120	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item): With float glass panes of 5.50 mm thickness	5	m2		
121	Providing and fixing in position extruded modular aluminium section two track sliding window made up of two track drain bottom section of size 61mm x 45mm x 1.3mm thick (1.055 kg/Rmt) and top and sides section of size 61mm x 31mm x 1.30mm thick (0.659 kg/Rmt). The shutter comprising of bottom of size 40mm x 18mm x 1.2mm thick (0.417 kg/Rmt) and top member of size 40mm x 18mm x 1.20mm thick(0.475 kg/Rmt) interlocking section size of 43mm x 27mm x 1.30mm thick (0.558 kg/ Rmt) and handle section of size 43mm x 18mm x 1.30mm thick (0.424 kg/ Rmt) selected quality 5.5mm thick tinted glass fixed in shutter with approved quality neoprene, gasket with approved quality PVC rollers, necessary locks handles, PVC llining and wooden encasement wherever necessary etc,completed as directed by	2	m2		

	engineer in charge -With Powder Coating.				
122	Providing and fixing aluminium louvered windows consisting of vertical arm (40 x 12mm) with holders, lever and locking arrangement weighing at 0.91 kg/m with 3mm thick sheet glass louvers etc complete as directed	4	m2		
123	Providing and pasting 3M or equivalent approved make frosted film on glazed portion of doors and partitions at locations as per detailed architectural drawing and as directed by engineer in charge	260	m2		
<b>N</b>	<b>STRUCTURAL GLAZING &amp; ALUMINIUM COMPOSITE PANEL</b>				
124	Providing, assembling and supplying vision glass panels (IGUs) comprising of hermetically-sealed 6-12-6 mm insulated glass (double glazed) vision panel units of size and shape as required and specified, comprising of an outer heat strengthened float glass 6mm thick, of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade, an inner Heat strengthned clear float glass 6mm thick, spacer tube 12mm wide, dessicants, including primary seal and secondary seal (structural silicone sealant) & making leak proof joints between wall & glazing. etc. all complete for the required performances, as per the Architectural drawings, as per the approved shop drawings, as specified and as directed by the Engineer-in-Charge. The IGUs shall be assembled in the factory/ workshop of the glass processor. (Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.26.2) For payment, only the actual area of glass on face # 1 of the glass panels (excluding the areas of the grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm				
124	(i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, + 12mm Airgap + 6mm Heat Strengthened clear Glass of approved make having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.250.28) and U value of 3.0 to 3.3 W/m2 degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.	220	m2		
<b>O</b>	<b>WATERPROOFING</b>				

125	Providing & laying water proofing treatment to the toilet flooring by giving injections with cement solution with waterproofing compound into the floor slab so as to make it consistent, homogenous and impervious against leakage, seepage etc. The sunk portion shall then be covered with necessary brick bat waterproof coba in C.M.(1:5) of 100mm average thickness in required slope mixed with approved waterproofing compound as per manufacturer's specifications finished rough with jointless waterproof cement plaster in C.M.(1:3) 12mm to 15mm thk in all positions extending the water proofing upto 300 mm height, curing, leakage test after impounding the water for 7 days, etc. complete with 5 years guarantee etc.(Measurement in plan area ). Note: Items of work to be used	50	m2		
126	Extra for providing additional thickness of brick bats over average thickness of 100mm in 1:5 cement mortar mixed with waterproofing compound of approved make as per manufacturers specification as directed. Note:Items of work to be used	10	m3		
127	Providing and applying POLYMER MODIFIED MORTAR(PMM) in proportion of 1(Polymer) : 5(Cement) : 15 (Quartz sand) by weight with water cement ratio of 0.35 including application of bond coat of Krishna Conchem or equivalent using brush in ratio of 1 (Polymer) :1 (Cement) : 0.35 (water) by weight including cleaning of surface with air mixed with water under pressure, and subsequent layer upto 10mm after hardening curing; all complete.(Polymer manufactured by sunanda, pidilite, fosroc, acrochem, build core or equivalent) all complete as approved & as directed by Engineer	525	kg		
128	Providing Chemical Water-proofing on slab top in line, level and plumb. Providing,making, supplying, mixing and applying two coats of ready-to-use two-component acrylic polymer, modified cement base, flexible water-proofing slurry or approved equivalent to a thickness of 2 mm over the bottom and sides including preparation of surface, finishing, curing etc. all complete at all levels as per manufacturer's specifications and as directed. Chemical Liquid (Sunanda or equivalent make) to be used to be checked and approved by Architect. Ponding test to be done for 24 hours. etc. complete.	190	m2		
129	Providing and applying 20 mm thick waterproof cement plaster (1:4) in two coats for external surface mixed with approved waterproofing material as per manufacturer specification, curing etc; at any height etc. all complete as directed.	181	m2		
<b>P</b>	<b>GENERAL ITEMS</b>				
130	Providing and fixing LOGO of size approx. 1.5mt. dia. made up of 2mm thick aluminium base plate for round circle with colour PU coat as per the creative with backlite glow. Letters L& D English and Marathi will be in 3D letters with inside LED with front colour coat as per the colour, rest logo design in will be colour coat Electronic material detail: Samsung LED with 3 year warranty, water proof power supply with 2 year warranty & timer with 1 year warranty.	2	m2		

131	Providing & fixing approved type of Roller Blinds with imported mechanism, Sunscreen Fire Retardant Fabric of ferari make on windows.(Basic cost of Rs. 1200/- Sqmt)	230	m2		
132	Providing & fixing wallpaper of Arte make, shade & type etc. complete. (Basic rate of wallpaper rs. 2000/- Sq.mt.)	30	m2		
133	Providing & fixing 8mm Doormat of Nomad / 3M / LG Synthetic Matting system in toilet area and entrance, of approved colour and size. Etc. complete.	10	m2		
134	Providing & fixing SS signages of approved design (Neki Kitch or equivalent) & type with necessary hardware for fitting. Etc. complete.	15	m2		
135	Providing & installing self watering planter boxes of size (upto 500 X 500mm and upto 470mm high) of high density fibre & LECHUZA make etc. complete as directed. -- Contact details of Vendors for reference if required are as under. However, the bidder is free to get self watering planter box from any other vendor Gaia Pottery - 9920144085                      Ratanshi's plant nursery - 022-2372 329	5	nos		
<b>Q</b>	<b>FALSE CEILING</b>				
136	Providing and fixing wooden ceiling made up of 50mm x 50mm CP teak wood suspended frame as per the fixing details given in the drawing work with 9mm Marine plywood fixed to the frame work finished with Imported veneer & melamine polish as per design and as directed etc complete.	20	m2		
137	Providing and fixing LUXALON Aluminium perforated (2mm),84C Ceiling system. Providing & fixing Luxalon 84C aluminium panel, ceiling manufactured by M/S. Hunter Douglas India Pvt. Ltd. approved colour consisting of panel 84mm wide X 15.5mm deep X0.5mm with square edges & recess flange of 24mm , panel length upto 6m, coil coated on continous paint line, double backed and roll formed from enamelled corrosion resistance aluminium alloy AA5050 (Al.Mg) for higher strength and good roll forming characteristics. Panel shall be clipped to baked enamelled aluminium panel carrier 62mm wideX29mmdeepX0.9mm thick etc. complete as per manufacturer specifications. -- Basic rate Rs 4500 /sq.mt	30	m2		
<b>R</b>	<b>STEAM BATH</b>				
138	Providing and fixing steam generator of Apple, Maverick, or Maitreyee make & model, Steam room dimension-2050mmX3650mmX2000mm Size of machine - 12' X 6'8"HT Power outut - 18Kw Power supply - 3phase 380-415v Steam room temperature range - 25-68 degree celcius Water tank volume - 12litre Steam outlet - 6nos	1	no		
	<b>Note for 127:</b> Machine - Highly durable enclosure with argon gas				

	welded stainless steel boiler with sloped bottom, tested at 5 Kg/ sq. cm, Steam Boiler Insulation in 50mm thick LRB mineral wool Boiler Enclosure made in 16 SWG MS in exclusively chosen powder coated shades with proper lowers for free air circulation, Long life Low Watt Density stainless steel 316 Industrial immersion heaters with faster & more efficient heating systems., Electronically Micro based controlled automatic water feed with “LOW “or “NO WATER” cut-off systems. ,Pressure relief valve set at 3 kg /cm2, Built in water filter, Failsafe Imported thermostatic with high limit control inside the boiler. All SS / Brass / Chrome fittings. ,Exclusive control panel with a higher safety factor, greater reliability and lesser maintenance using colored conductors and silver tipped Siemens contactors for years of trouble free “ ON-OFF” operations, Automatically pressure flushes tank every time unit is shut off (Auto Servicing)				
	Control panel - Personalized Control Panel, Digital Control Steam Function With Temperature and time setting, Reliable Anti-Interference Circuit Design, Feather Touch membrane switch Control, Illuminated Timer easy to use, Digital Timer display preset 0 to 99 mint, Highly Processed Circuit Design, Digital Steam Room Thermostatic Controller range 25° deg to 68° deg, High Limit Controller systems, Illumated System Function Indication, Auto Flush Facility Powered Drain, Auto Service, Abs Body				
	Plumbing & Electrical - Supply and fixing of G.I. „C“ Class pipes and fittings for Main water supply to the boiler, steam boiler to steam room and from steam boiler to nearest nhani trap or galli trap. Supply and fixing of Main Switch (Through ELCB + MCB) and armored cable. Installation of above equipment, testing and commissioning.				
<b>II</b>	<b>PLUMBING WORK</b>				
	<b>Sanitarywares, Fixtures, Fittings and Accessories</b>				
139	Providing, Fixing, Testing and Commissioning of Wall mounted Water closet with seat cover and accessories .Works includes cutting & making good the walls, holes, floors, slab wherever required. All consumable items such as brass screws, CP extension nipple of approved make, dia and length, wooden plugs, Teflon tape ,sealant, gasket, cement solvent should be provided by vendor and it should be complete in full respect. Constellation with concealed ' S ' trap of CI chair brackets, fischer bolts with CP bolts / nuts as per technical specification. Model selection as per Architect. Make : Hindware 92524	3	Nos		
140	Providing, Fixing, Testing and Commissioning of Flush Valve dual flow type with 32mm size. complete and as directed by Engineer Incharge. <b>Make : Jaquar FLV-1089</b>	4	Nos		
141	Providing, Fixing, Testing and Commissioning of Wall mounted Water closet with seat cover and accessories for Handicap toilet. complete and as directed by Engineer Incharge. <b>Make : Hindware 92036</b>	1	Nos		

142	Poviding, Fixing, Testing and Commissioning of Counter top Hand wash Basin.Works includes cutting & making good the walls, holes, floors, slab wherever required. All consumable items such as Teflon tape ,sealant, gasket, cement solvent, Heavy CI brackets, nut bolts, washers etc. should be provided by vendor and it should be complete in full respect as per technial specification. Including uPVC drain pipe & specials, from bottle trap to floor trap including 32 to 50 mm pipe, reducers (75/50 or 40 mm), elbows, cleanouts, tees etc including making holes in RCC/Civil works, connecting to sleeves (where left) in floor etc complete. Make : Hindware 91094	5	Nos		
143	Poviding, Fixing, Testing and Commissioning of wall mounted wash basin. <b>Make Hindware-Windsor 10036</b>	1	Nos		
144	Poviding, Fixing, Testing and Commissioning of white vitreous Urinals with push-type provision. <b>Make : Jaquar URS-WHT-0702</b>	2	Nos.		
145	Poviding, Fixing, Testing and Commissioning of Urinal angle cock. <b>Make : Hindware F310003CP</b>	2	Nos.		
146	Poviding, Fixing, Testing and Commissioning of Sensor for Urinals for automatic flow of water: complete and as directed by Engineer Incharge. <b>Make : Euronics EU02P</b>	1	Nos.		
147	Poviding, Fixing, Testing and Commissioning of Bottle trap single piece complete and as directed by Engineer Incharge.. <b>Make : Jaquar ALD :769b</b>	6	Nos.		
148	Poviding, Fixing, Testing and Commissioning of 15 mm dia. two way bib cock with wall flange and ceramic disc cartridge complete , including cutting and making good the walls wherever required, making all necessary connections etc. All complete as per directions of the Engineer-in-charge. Make : Jaquar LYR-38041	4	Nos.		
149	Poviding, Fixing, Testing and Commissioning of 15 mm dia. bib cock with wall flange and ceramic disc cartridge complete , including cutting and making good the walls wherever required, making all necessary connections etc. All complete as per directions of the Engineer-in-charge. Make : Hindware F360004CP	4	Nos.		
150	Poviding, Fixing, Testing and Commissioning of Health Faucet with 1200 mm Long CP Braided Hoses including connectors, adapters, GI nuts, bolts, washers, check nuts,C.P. brass two in one bib tap including necessary sleeve flanges, cock , angle valves and all other fittings/ accessories required for satisfactory installation complete. Make : Jaquar ALD 565	4	Nos.		
151	Poviding, Fixing, Testing and Commissioning of C.P. brass angle valve with 15 mm nominal bore for basin mixer and geyser points of approved quality. complete and as directed by Engineer Incharge. <b>Make : Hindware F100043</b>	2	Nos.		
152	Poviding, Fixing, Testing and Commissioning of Kitchen Sink with Single bowl type with necessary fittings,couplings,complete in full respect with gaskets,making it leak proof & cutting and making good the walls wherever required: complete and as directed by Engineer Incharge. (Make : Nirali)	1	Nos		



153	Poviding, Fixing, Testing and Commissioning of Pantry Tap. <b>Make : Jaguar 5357 N</b>	1	Nos		
154	Poviding, Fixing, Testing and Commissioning of CP single lever Basin mixer tall complete with necessary wall flanges, etc., complete and as directed by Engineer Incharge. <b>Make : Jaquar F360012CP</b>	5	Nos		
155	Poviding, Fixing, Testing and Commissioning of shower rose with 15 or 20 mm inlet: <b>Make : Jaquar OHS-CHR-1619</b>	2	Nos		
156	Poviding, Fixing, Testing and Commissioning of bath shower mixer with 15 or 20 mm inlet: <b>Make : Jaquar FLR-CHR-5657/ KUB-CHR-35143F</b>	1	Nos		
157	Poviding, Fixing, Testing and Commissioning of bathroom spout with 15 or 20 mm inlet: <b>Make : Jaquar kub-35037f</b>	2	Nos		
158	Poviding & Fixing of Swing handicap Grab Bar complete and as directed by Engineer Incharge.. <b>Make : Euronics EGRS 02 - Swing</b>	1	Nos		
159	Poviding & Fixing of Disabled Grab Bar complete and as directed by Engineer Incharge.. <b>Make : Euronics EGR 1</b>	1	Nos		
160	Poviding & Fixing of L shaped disabledp Grab Bar complete and as directed by Engineer Incharge.. <b>Make : Euronics EGR 4</b>	1	Nos		
161	Poviding & Fixing of Towel Holder Ring <b>Make : Jaquar AKB-35721</b>	1	Nos		
162	Poviding & Fixing of Toilet Roll Holder <b>Make : Jaquar AKB - 35753</b>	4	Nos		
163	Poviding & Fixing of Soap Holder <b>Make : Jaquar AKB - 35731</b>	5	Nos		
164	Poviding & Fixing of Soap dispenser <b>Make : Jaquar ACN-CHR-1135N</b>	4	Nos		
165	Poviding & Fixing of Hand dryer <b>Make : Jaquar KITSCH TM</b>	3	Nos		
166	Poviding & Fixing of Towel rail <b>Make : Jaquar ACN-CHR-1101N</b>	6	Nos		
	<b>Soil, Waste, Vent and Rain Water Pipes (Building Internal Drainage System)</b>				
167-169	Supplying, Fixing and Testing uPVC soil, waste and vent pipes (SWR) confirming to IS: 13592 - 2013, and IS: 14735 Type B with rubber ring (confirming to IS: 5382) joint inclusive of all necessary specials like bends, tees, offsets, doorbends, junctions, cowls, etc., laid under floor/ fixed on walls, hung under the ceiling, and in pipe shafts, etc., complete. The quoted rate should include lead and lifting charges to all levels, necessary scaffolding and supports like hanger supports, grip bolts and clamps and making good the openings, etc. The rate should include supplying and fixing GI slotted angle iron brackets, hangers, supports with necessary drilling holes to suit the insertion of pipe clamps, deburring etc., as per detailed drawing for supporting soil, waste and rain water pipes and water supply pipes in shafts with suitable fabricated GI clamps, GI bolts, GI anchor bolts, GI nuts and GI washers fixed on shaft walls outer walls, brick work/ concrete supports, etc. The quoted rate shall include the cost of brackets galvanised with zinc alloy of 0.08 mm thick conforming to IS: 1239, etc. complete. The Rate shall also be inclusive of 2 coats of painting synthetic				



	enamel paint of approved colour over one coat of primer and pipe identification labels and technical specification.				
167	40mm dia. (Wash Basin/Sink/Urinal)	10	RM		
168	75 mm dia.	35	RM		
169	110 mm dia.	28	RM		
170	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes 110 mm diameter	90	RM		
171	Supplying, fixing and testing PVC 'P' trap with stainless steel / nickel bronze floor grating 125 x 125 mm size, inlet and outlet of 110 mm dia, bronze chrome plated ring and grating with two SS screw. Quoted rate shall include necessary Boss Connector for waste Pipe connections from wash and Kitchen Areas etc., Complete	9	Nos		
172-173	Supplying, Installing, testing & Commissioning UPVC Vent cowl as per IS 14735.				
172	75 mm Diameter	7	Nos		
173	100 mm Diameter	4	Nos		
174	Supplying, Fixing and Testing of Shower Drain channel made of SS 304 of width of 40mm	1	RM		
	<b>BUILDING INTERNAL WATER SUPPLY SYSTEM</b>				
175-176	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings, with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer-in-Charge. Concealed work, including cutting chases and making good the wall etc				
175	15 mm nominal outer dia pipes	20	RM		
176	20 mm nominal outer dia pipes	40	RM		
177	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) : 25 mm nominal bore	4	Nos		

178	Providing and fixing brass stop cock of approved quality 20 mm nominal bore	8	Nos		
179	Supplying, Installing and Testing approved make forged brass ball valves full bore, thread conforming to IS: 1703 with all necessary fittings & accessories i.e, unions, connectors, adapters, PTFE tape etc., complete as directed & specified. 20 mm diameter	4	No.		
180-182	Providing and fixing of GI Pipes as IS:1239 of following sizes				
180	50mm diameter	60	RM		
181	65mm diameter	40	RM		
182	80mm diameter	20	RM		
	<b>CIVIL WORK</b>				
183	Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) : 19.7.2.2 With Sewer bricks conforming to IS : 4885	6	Nos		
184	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete : 19.21.1. For pipes 100 to 250 mm diameter	6	Nos		
185	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design: 100x100 mm size P type With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	6	Nos		
<b>III.</b>	<b>FURNITURE WORK (MODULAR FURNITURE)</b>				
	<b>MODULAR FURNITURE</b>				

186	<p>Providing and installing reception table as shown in drawing of 825 and 2350mm high in 25mm thick marine plywood/35mm water proof faced flush board for top with 8mm thick corian,19mm marine plywood , key board trays, finished with 1.5mm thick laminate to all exposed outer faces,including 8mm thick Corian fixed on top of size 1740X300 &amp; 750X500mm, wire manager, including pedestal with 19mm thick marine plywood finished with 1.5mm thick laminate on external surface &amp; 1mm thick for internal surface etc. complete or as directed. Reception table of size 2350 mm x 825 mm -- Basic rate RS 7500/8000 sq.mt</p>	1	no		
187	<p>Providing &amp; installing Coffee/side table of size 500x500X428mm with teakwood base of size 50X50mm, at bottom 12mm thick marine plywood finished with veneer with melamine polish &amp; teakwood lipping, 10mm thick approved glass on top with 50X25mm teakwood frame around the glass, Rubber bushes at the legs bottom etc. as per design and details and as directed. (Make Godrej)</p>	2	nos		
188	<p>Providing &amp; installing Coffee/side table of size 1000x600X428mm with teakwood base of size 50X50mm, at bottom 12mm thick marine plywood finished with veneer with melamine polish &amp; teakwood lipping, 10mm thick approved glass on top with 50X25mm teakwood frame around the glass, Rubber bushes at the legs bottom etc. as per design and details and as directed. (Make Godrej) -- Basic rate Rs. 20,323 per unit</p>	2	nos		
189	<p>Providing and installing Zella 4 seater Dining table set 1) Dining table 1050mm X 1050mm X 750mm Ht., Teakwood legs support of size 100X100mm with 25mm thick marine plywood finished with 4mm thick veneer with melamine polish with teakwood edge banding etc. complete as per drawing. Make - URBAN LADDER. 2) Supplying and fixing dining chairs - 4nos of size 475X450X450/990mm high with 12mm thick marine plywood on base, leg support with teakwood of size 50X40mm, Back with 50X12mm teakwood frame &amp; 12X12mm X 5nos. Slates, 50mm thick cushion on seat etc. complete as per drawing. Make - URBAN LADDER -- Basic rate Rs. 31000 /set.</p>	10	nos		
190	<p>Supplying chairs with proper ergonomic design,synchrotilt mechanism,multi position tilt lock,pneumatic gas mechanism for height adjustment, m.s. metal base with powder coating,fixed type polypropelene arm rests,the metal connector joining the back and the seat to be of m.s.strip of size not less than 5mm X 52mm, m.s. tubular powder coated pipe back upholstered with high quality net fabric, seat made of 10mm hot pressed ply or PU with moulded foam, nylon base and nylon castors, all welding should be continuous fillet weld (spot welding should be avoided) to avoid unstable seat etc. (Durian/BP Ergo/Godrej make) -- Basic rate Rs.5000 per unit</p>	2	nos		

191	Supplying and fixing Parsons wooden sofa set of size 1790X770X490/740mm high with teakwood framework & 75mm thick cushion for back & 100mm thick cushion on seat etc. complete as per drawing. (Make - Urban Ladder) (i) Two seater sofa -- Basic rate Rs. 50000 /set.	4	nos		
<b>IV</b>	<b>GYM WORK (GYM EQUIPMENT)</b>				
192-210	Supplying and fixing Gym equipment as below:- -- Contact details of Vendors for reference if required are as under. However, the bidder is free to get Gym Equipments from any other vendor Preeti Pandey Marwah- General Manager-Sales- Gympac Fitness Systems P Ltd - 9967662246				
192	Providing and fixing INTEGRITY SERIES TREADMILL ABOUT THIS PRODUCT •Min Speed: 0.5 mph (0.8 kph) •Max Speed: 14 mph (23 kph) •Dimensions (L x W x H): 83 in x 37 in x 63.5 in (211 cm x 94 cm x 162 cm) •Weight: 425 lb (193 kg) •Max User Weight: 400 lb (182 kg) •Running Surface Length: 60 in (153 cm) •Running Surface Width: 20 in (51 cm) •Step Up Height :11 in (28 cm) •Motor System: 4.0 HP (8.0 HP peak) with AC motor with MagnaDrive™ motor controller •Power Requirements:Dedicated 120 volts/20 amp circuit (voltage may vary outside U.S.) as per manufacturer specifications	5.00	nos		
193	Providing and fixing CTIVATE SERIES ELLIPTIACL CROSS TRAINER ABOUT THIS PRODUCT •Cup Holders: 1 •Resistance Levels: 25 •Dimensions (L x W X H):82 in x 28 in x 60 in (209 cm x 72 cm x 153 cm) •Weight:240 lb (109 kg) •Max User Weight: 350 lb (159 kg) •Power Requirements:Self-powered** etc. complete as per manufacturer specifications.	3.00	nos		
194	Providing and fixing ACTIVATE SERIES RECUMBENT LIFECYCLE BIKE ABOUT THIS PRODUCT •Resistance Levels: 25 •Handlebars: Side Handlebars with Contact Heart Rate •Dimensions (L x W X H):64 in x 27 in x 45 in (163 cm x 69 cm x 115 cm) •Weight:200 lb (91 kg) •Max User Weight: 400 lb (182 kg) •Power Requirements:Self-powered** etc. complete as per manufacturer specifications.	2.00	nos		

195	<p>Providing and fixing ACTIAVTE SERIES UPRIGHT BIKE</p> <ul style="list-style-type: none"> <li>•Cup Holders: 1</li> <li>•Resistance Levels: 25</li> <li>•Handlebars: Racing Handlebars</li> <li>•Dimensions (L x W X H):44 in x 23 in x 54 in (112 cm x 59 cm x 138 cm)</li> <li>•Weight:130 lb (59 kg)</li> <li>•Max User Weight: 400 lb (182 kg)</li> <li>•Power Requirements:Self-powered** etc. complete as per manufacturer specifications.</li> </ul>	2.00	nos		
196	<p>Providing and fixing FIT 3 MULTI GYM</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H):102 in x 102 in x 85 in (260 cm x 260 cm x 216 cm)</li> <li>•Weight :1,255 lb (570 kg)</li> <li>•Weight Stack Weight in kgs: 95</li> <li>•Weight Stack Weight in lbs: 210 etc. complete as per manufacturer specifications.</li> </ul>	1.00	nos		
197	<p>Providing and fixing OPTIMA SERIES SMITH RACK</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H):51 in x 73 in x 88 in (130 cm x 186 cm x 224 cm)</li> <li>•Weight:398 lb (181 kg) etc. complete as per manufacturer specifications.</li> </ul>	1.00	nos		
198	<p>Providing and fixing SIGNATURE SERIES AB CRUNCH BENCH</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H):62 in x 32 in x 38 in (158 cm x 82 cm x 97 cm)</li> <li>•Weight:141 lb (64 kg) etc. complete as per manufacturer specifications.</li> </ul>	1.00	nos		
199	<p>Providing and fixing OPTIMA SERIES ADJUSTABLE BENCH</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H):55 in x 25 in x 45 in (140 cm x 64 cm x 115 cm)</li> <li>•Weight:72 lb (33 kg) etc. complete as per manufacturer specifications.</li> </ul>	2.00	nos		
200	<p>Providing and fixing OPTIMA SERIES 3 TIER DUMBBELL RACK</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H): 54 in x 29 in x 38 in (138 cm x 74 cm x 97 cm)</li> <li>•Weight: 167 lb (76 kg) etc. complete as per manufacturer specifications.</li> </ul>	2.00	nos		
201	<p>Providing and fixing SIGNATURE SERIES UTILITY BENCH</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H):28 in x 36 in x 36 in (72 cm x 92 cm x 92 cm)</li> <li>•Weight:50 lb (23 kg) etc. complete as per manufacturer specifications.</li> </ul>	1.00	nos		
202	<p>Providing and fixing SIGNATURE SERIES ARM CURL BENCH</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H):33 in x 47 in x 46 in (84 cm x 120 cm x 117 cm)</li> <li>•Weight:210 lb (96 kg) etc. complete as per manufacturer specifications.</li> </ul>	1.00	nos		
203	<p>Providing and fixing SIGNATURE SERIES OLYMPIC WEIGHT TREE</p> <ul style="list-style-type: none"> <li>•Dimensions (L x W x H):23 in x 27 in x 37 in (59 cm x 69 cm x 94 cm)</li> <li>•Weight:95 lb (44 kg) etc. complete as per manufacturer specifications.</li> </ul>	1.00	nos		

204	Providing and fixing Rubberised Dumbbells 2.5(4nos),5(4nos),7.5(4nos),10(4nos),12.5(4nos),15(4nos),17.5(4nos),20(4nos),22.5,25,30,35,40,45,50 Total : 855kgs etc. complete as per manufacturer specifications.	855.00	kg		
205	Providing and fixing Rubberised Plates 2.5x8,5x8,10x8,15x8,20x4,30x4 Total : 460kgs etc. complete as per manufacturer specifications.	460.00	kg		
206	Providing and fixing Olympic 5Ft Bar with Locks etc. complete as per manufacturer specifications.	2.00	nos		
207	Providing and fixing Olympic 4Ft curl Bar with Locks etc. complete as per manufacturer specifications.	2.00	nos		
208	Providing and fixing Pull Up stands etc. complete as per manufacturer specifications.	2.00	nos		
209	Providing and fixing Yoga Mat etc. complete as per manufacturer specifications.	4.00	nos		
210	Providing and fixing Skipping Rope etc. complete as per manufacturer specifications.	3.00	nos		
<b>V</b>	<b>CAPSULE LIFT</b>				
211	Capsule lift- Design, manufacturing, testing at works, supply and delivery (Including custom and other duty clearance, shipment charges Etc) , receiving, unloading, storing, inspection, handling, assembling, installing in correct assigned position, effecting proper connections, testing and commissioning of following capacity, machine room less type Passenger-lifts, having speed of 1.0 MPS with maximum 2 stops and 2 openings and maximum travel of 7.7 meters approx., Clear inside shaft 2000 X2000mm, capacity 10 passenger, rated load 680kg, drive system-Alternating current voltage frequency, down collective control, rated output motor complete in accordance with specifications and drawings as required with Stainless steel brushed satin finish Car. as per manufacturer specifications.	1	Nos		
<b>VI</b>	<b>HVAC (HS)</b>				
<b>212</b>	<b>AIR COOLED' VRV/VRF' OUTDOOR UNITS (Preferred Makes : Daikin/Toshiba/Hitachi)</b>				
212	Supply & Delivery of Inverter Based VRV/VRF Outdoor Units at MDL site, having each of following listed capacities complete with Compressors, Motors, Star-Delta Starters, Condensers, Evaporator Coils, Power supply cable along with connecting accessories, MCB/MCCB , Microprocessor Panel for Internal Controls, First Charge of Refrigerant R410A only and Oil etc. all complete as per specification. Capacity : 6 HP	4	Nos.		
213-215	Supply & Delivery of Indoor Units at MDL site complete with Drainage arrangements ,fan and fresh air port etc. complete in all respects and as per specifications. All Motors shall work on 1-phase AC Input Supply. The cassette units to have inbuilt drain pump arrangements. 4-Way Cassette type				
213	2.6TR/9Kw - Gym	4	Nos.		
214	2.0TR/7.1Kw - Childrens Party Area	3	Nos.		

215	2.0TR/7.1Kw - Library	1	Nos.		
216	<b>Supply &amp; Delivery of Indoor Units at MDL site complete with Drainage arrangements ,fan and fresh air port etc. complete in all respects and as per specifications. All Motors shall work on 1-phase AC Input Supply. The cassette units to have inbuilt drain pump arrangements. 1-Way Cassette type</b>				
216	1.6TR/5.6Kw - Reception	2	Nos.		
217-220	<b>REMOTE CONTROLLER Supply of Cordless remotes along with batteries for the indoor units for operational purpose having thermostat sensors alongwith a signal receiver as applicable along with holder located in the room at convenient place.</b>				
217	Gym - 4 way Casette	2	Nos		
218	Reception - 1 way Casette	2	Nos		
219	Childrens Party area - 4 way Casette	1	Nos		
220	Library - 4 way Casette	1	No		
<b>VII</b>	<b>HVAC (LS)</b>				
221	AIR COOLED' VRV/VRF' OUTDOOR UNITS (Preferred Makes : Daikin/Toshiba/Hitachi)				
221	Installation of Inverter Based VRV/VRF Outdoor Units, each of following listed capacities complete with Compressors, Motors, Star-Delta Starters, Condensers, Evaporator Coils, vibration Isolators, Power supply cable along with connecting accessories, MCB/MCCB, First charging of refrigerant R410A only and Oil and Testing & Commissioning of Inverter based VRV/VRF outdoor Units system alongwith cordless remote controllers, accessories, copper refrigerant piping, necessary electrical installation with wiring, drain piping & adequate charging of refrigerant gas for complete length of copper piping from each Indoor to respective outdoor units etc all complete as directed by MDL engineer. Capacity : 6 HP	4	Nos.		
222-225	<b>INDOOR UNITS :</b> Installation of Indoor Units having each of following listed capacities complete with Drainage arrangements ,fan , filters, fresh air port etc. complete in all respects and as per specifications. and Testing & Commissioning of Indoor Units System along with cordless remote controllers, accessories, copper refrigerant piping, necessary electrical installation with wiring, drain piping, adequate charging of refrigerant gas for complete length of copper piping from each indoor to respective outdoor units etc all complete as directed by MDL engineer.				
222	<b>4-Way Cassette type:</b> 2.6TR/9Kw - Gym	4	Nos.		
223	<b>4-Way Cassette type:</b> 2.0TR/7.1Kw - Childrens Party Area	3	Nos.		
224	<b>4-Way Cassette type:</b> 2.0TR/7.1Kw - Library	1	Nos.		
225	<b>1-Way Cassette type :</b> 1.6TR/5.6Kw - Reception	2	Nos.		



226	REFRIGERENT PIPING(Gas & Liquid) Supply, Installation, Testing and Commissioning of suitable size Copper GAS and Liquid Piping, including bends, tees, supports, hangers, saddles, anchor fasteners, angles, insulated with 13 mm thick Elastometric Nitrile Rubber and other accessories, making holes in walls with core cutting and proper finishing of holes as required to avoid seepage of water inside the room through them & testing including purging with suitable gas for flushing before leak test, leak testing of copper piping and to complete the work as per the specifications and as directed by MDL engineer. (Scaffolding work required if any for the above work to be quoted separately which is considered in Civil BOQ.)	450	RMT		
227-228	<b>DRAIN PIPING WORK :</b> <b>Drain Piping (Make : Prince/Supreme/Astral) Supplying, laying / fixing, testing and commissioning of following sizes of UPVC pipe confirming to IS standards insulated with nitrile rubber tubes as directed by MDL engineer. (Scaffolding work required if any for the above work to be quoted separately which is considered in Civil BOQ.)</b>				
227	25 mm diameter pipes	40	RMT		
228	40 mm diameter pipes	15	RMT		
229-231	<b>CABLING &amp; EARTHING (Makes : KEI/RR Kabel/Polycab/Havells)</b>				
229	Supply & Installtion of Copper Flexible Cables 2C X 1 Sqmm suitable for the above units connecting the indoor and outdoor units	226	RMT		
230	Supply & Installtion of Copper Flexible Cables 3C X 2.5 Sqmm suitable for the above units connecting the indoor unit to MCB/Panel	10	RMT		
231	Supply & Installtion of Power Cabling with Copper Flexible cables with 4C x 10sqmm , Control Cabling & Earthing between the main incomer & outdoor units suitable for 3 Phase electrical supply	20	RMT		
232	<b>Refnets:</b> Supply, Installtion, Testing & Commissioning of refnets for VRF/VRV System	9	Nos		
233	Supply and Installation of Structural Steel work bolted &/or welded in built up sections, truss and framed work for safety railing, platform etc. as per drawing including necessary Anchor fasteners for fixing of Brackets, Including cutting, hoisting, fixing in position and applying a priming one coat of approved steel primer and two coats of approved enamel paint all etc. complete. (Scaffolding work required if any for the above work to be quoted separately which is considered in Civil BOQ.)	500	Kgs		
234	Supply and Installation of G.I perforated Cable Trays with cover of 300x50mm for electrical cables & copper tubes at outdoor locations.	40	RMT		

235-236	Factory Cut fold sheets & boxing on site, Supply, Installation, Testing, Air Flow Balancing and Commissioning of GI Ducts, Plenum's, Elbows, , Reducers, Flanges, Collars etc. complete with MS Supports, Rods, Angles, Flanges, Bracing, Neoprene Gaskets, Canvas connections, complete in all respects as per drawing & specifications. Fabrication as per IS 277 Standards Galvanizing shall be light coating of zinc, nominal 120 gm / sqm surface area, along with test certificate. Quoted price to be inclusive of scaffolding, if required.				
235	24 Gauge Insulated G.S.S. Ducts	30	sqmt		
236	Supplying and fixing of 9mm thick Nitrile Rubber to be stuck around duct with adhesive and self adhesive tapes to be applied at joints to complete. The duct joints & gaps would be sealed with silicon sealant.	35	sqmt		
237-238	<b>PROPELLER FANS (Makes : Flakwood/Kruger/Crompton)</b> <b>Supply, Installation, Testing and Commissioning of propeller fans of 9" dia. for exhaust and fresh air shall be complete with cabling. Fans to be ring mounted on suitable frame provided by AC Contractor. Power Socket to be provided including cabling length considering maximum 5 ft away from fan Installation and other necessary arrangements directed by MDL engineer to complete etc.</b>				
237	200 cfm Exhaust Air fan for Steam room	1	Nos		
238	400 cfm Fresh Air fan for Gym & Childrens play area	2	Nos		
<b>VIII</b>	<b>Access Control</b>				
<b>239-243</b>	<b>Access Control System(Make: Essl)</b>				
239	Access Control Software	1	Set		
240	Door Controller for controlling 2 Card Readers	1	Sets		
241	Proximity type Card Reader for Children Party area & Gym area, providing of logging of data; helps monitor movement, attendance monitoring, security and added other features.	4	Nos.		
242	Electromagnetic Door strikes with built-in magnetic contact	4	Nos.		
243	Proximity type card with, unique identification number for person etc.	500	Nos.		
<b>244-246</b>	<b>Cabling</b>				
244	Supply, Installation, laying & terminating 8C x 0.8sqmm stranded armored tinned copper FRLS cable for connecting Door controllers to Card Readers, Door Strikes & Magnetic door contacts	40	Mtrs.		
245	Supply, Installation, laying & terminating Cat5 armored cable for communication as per manufacturer standard	10	Mtrs.		
246	Supply, Installation, laying & terminating 4C x 1.5 sq.mm Stranded, armored tinned copper FRLS cable for power	40	Mtrs.		
<b>VIII</b>	<b>CCTV</b>				
<b>247-250</b>	<b>CCTV SYSTEM (Honeywell/Bosch/Siemens), ((Non DSR Type)</b>				

247	Supply, installation, testing and commissioning of Dome Camera(indoor), 0.5 Lux,3D axis positioning with minimum 180° of pan, ,720p resolution,, Day/night Colour, 1/4" or 1/3" interlaced / progressive (CCD /CMOS), 752x582 (PAL) active pixels, white balance mode, H.264 video compression standards, 25 fps, 12V / 24V AC/DC as per the specifications complete with mounting and all other accessories including Junction Box and Protection Devices complete in all respect. The cost include the cost of power supply as required.(Makes:Bosch/Honeywell/Samsung/Sony)	10	Nos.		
248	Supplying, installation, testing and commissioning of Digital Video Recorder combining the function of a recorder and a multiplexer into a one unit with 16 Channel Digital Multiplexer built-in Hard disk of minimum capacity of 1TB HDD for video storage, built in motion detection , records 1-30 frames/sec. LAN/WAN compatibility.(Make: Honeywell)	1	Nos.		
249	Supplying, installation, testing and commissioning of 36" CCTV colour LCD Monitor LED ,4Gb Ram,CD drive, McAfee(R) Security Center(TM) (Multi-Language),2U rackmount type with CCTV software, keyboard.	1	Nos.		
250	Supply and installation testing and commissioning of 16 port POE Ethernet Switch for interconnecting the other switches from various locations of the cameras on LAN networks.	1	Nos.		
<b>251-252</b>	<b>Cabling (Non DSR Type)</b>				
251	Supplying & installation of Cat 6 cable	140	Mtrs.		
252	Supply & Installation of 25mm PVC Conduit	140	Mtrs.		
<b>IX</b>	<b>PUBLIC ADDRESS SYSTEM</b>				
<b>253-256</b>	<b>Public Address System:</b> Supply, installation, Testing, & commissioning of Public Address. Audio amplifier including all necessary control desk, microprocessor based control unit with microphone, BGM, call station and PC inputs including providing necessary rack for mounting the amplifier having Battery backup provisions shall be implemented; the battery voltage shall be 24Vdc, +20% / -10%. and all complete with cable terminations, wiring & conduiting with necessary accessories as per Technical Specifications & approval of Client /PMC/ Consultant as below				
253	<b>4 Zone</b> Selector console with controller & Music Player	1	Nos.		
254	6 Watt Recessed Type Ceiling Mount speakers.	8	Nos.		
255	Booster Amplifier - 120 W for Single Channel Operation	1	Nos.		
256	Call Station	1	Nos.		
257	<b>Supply &amp; Installation of wiring &amp; conduiting for above system with all necessary accessories such as bends, sockets, junction boxes etc. as below:</b>				
257	Supply, laying, testing & commissioning of 2c x 1.5Sq.mm Cu. FRLS Armoured cable	110	Mtr.		
<b>X</b>	<b>FIRE DETECTION SYSTEM</b>				

258	<p><b>Fire detection system Panel</b> S/I/T/C of UL approved 32 bit microprocessor based TCP/IP networkable, Intelligent Addressable Fire Alarm Control panel with 1 Loop with battery back up for minimum 48 hours. The panel shall be networkable &amp; expandable without changing the cabinet. The panel should be modular, decentralized. The panel shall consist with minimum 240 character LCD display. Panel Should have onboard 16 relay output for integration with othersystem like PA, Access control etc. Panel should be able to record events history. Each loop should be capable to have atleast 99 elements / devices.(One loop is spare) (Location:- Basement 1 LV room). The FACP shall also be provided with a dedicated standby power supply system (battery and charger .The FACP shall have network driver cards to integrate with repeater panel . The FACP shall consists of following other components. Auto dialing system shall be provided to indicating fire.</p> <p>(i) 1 Loop Panel (ii) Bacnet card to integrate with third party systems.</p>	1	Nos		
	<b>Detectors</b>				
259	Supply, Installation, Testing and commissioning of Vds approved Soft Addressable type intelligent multicriteria detector with base for use as smoke detector combined both with automatic electronic addressing, microprocessor type and must have integrated short circuit isolator (in case short circuit isolator is not inbuilt, the price of this item shall be inclusive of an independent short-circuit isolator along with each detector). The detector shall have IP 44 protection category & ambient temperature -25°C to + 60°C. The quoted item shall completely comply to the technical specification and required accessories including JB & glands	12	Nos		
260	Supply, Installation, Testing and commissioning of Vds approved Soft Addressable type intelligent multicriteria detector with base for use as heat detector with automatic electronic addressing, microprocessor type and must have integrated short circuit isolator (in case short circuit isolator is not inbuilt, the price of this item shall be inclusive of an independent short-circuit isolator along with each detector). The detector shall have IP 44 protection category & ambient temperature -25°C to + 60°C. The quoted item shall completely comply to the technical specification and required accessories including JB & glands.	1	Nos		
261	Supply, Installation, Testing and commissioning of multi tone sounder cum flasher with 32 selectable tone shall have 99 db output @ 1m , with necessary interfacing module having inbuilt fault isolator with IP 66 Box and required accessories including JB & glands	1	Nos		
262	Supply, Installation testing & commissioning of Addressable <b>Manual call points</b> . The same shall be of ABS plastic, square in shape and 4 "x 4" in size. It shall have a "Break glass" message embedded on the glass.	1	Nos		

	<b>Cabling</b>				
263	Supply, laying, testing & commissioning of 2c x 1.5Sq.mm Cu. FRLS Armoured cable	110	Mtr.		
<b>XI</b>	<b>ELECTRICAL WORKS</b>				
	<b>POINT WIRING</b>				
264	Supplying & erecting mains with 2x1.5 sq.mm F.R.L.S copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places as per specification No: WG-MA/BW	300.0	Metre		
265	Supplying & erecting mains with 2x2.5 sq.mm F.R.L.S copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places. as per specification No: WG-MA/BW	250.0	Metre		
266	Supplying & erecting mains with 2x4 sq.mm F.R.L.S copper PVC insulated wire laid in provided conduit/trunking/inside pole/Bus bars or any other places. as per specification No: WG-MA/BW	250.0	Metre		
267	Supplying and erecting rigid PVC conduit 20 mm dia. with PVC accessories on wall / ceiling as per specification No: WG-MA/CON, para no. 1.1.1	450.0	Metre		
	<b>LIGHT FIXTURES &amp; FAN FITTINGS(PHILIPS/BAJAJ)</b>				
268	Numbering of ceiling fan/ exhaust fan/ fluorescent fittings as required.	85.0	Nos		
269	Supplying and erecting fresh air cum Exhaust fan of light duty 250 V A.C. 50 cycles 300mm. 1400 RPM rust proof body & blades, wire mesh, duly erected in an approved manner and marking Sr. No. an date of erection.	6.0	Nos		
270	Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	6.0	Nos		
271	Supplying,Installation, testing and commissioning LED Mirror Light 8 W, 230V Intergral type	4.0	Nos		
272	Supplying & erecting 5W-8W, 230V integral type LED Lamp suitable for B-22/E-27 base.	6.0	Nos		
273	Supplying and erecting LED square / circular 16 to 20W downlighter having pressure die-cast aluminium housing, opal translucent cover, mounting arrangement with board for surface type or spring loaded mounting clips for flush type complete.	63.0	Nos		
274	Supplying,Installation, testing and commissioning 40 W Chandelier Bulb with dimmer	3.0	Nos		
275	Supplying,Installation, testing and commissioning 20 W Porch Light	3.0	Nos		
	<b>SWITCHGEAR : DISTRIBUTION BOARDS</b>				
276	<b>LT - MCB's (SW-MCB)( LEGRAND):</b> Supplying, erecting & marking TPMCB 40A to 63A in provided distribution board as per specification No. SW-SWR/MCB	6.0	Nos		
277	<b>LT - MCBDB's (SW-MCBDB):</b> Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted suitable for 3 Pole MCCB as Incommer & outgoing SP MCB (24 Poles) or TP MCB of 8 ways (24 Poles) , on iron frame. (Vertical Busbar type) as per specification No. SW-SWR/MCBDB1(Childrens Party Area)	1.0	Nos		

278	<b>LT - MCBDB's (SW-MCBDB):</b> Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted suitable for 3 Pole MCCB as Incommer & outgoing SP MCB (36 Poles) or TP MCB of 12 ways (36 Poles) on iron frame. (Vertical Busbar type) as per specification No. SW-SWR/MCBDB1(Gym+Reception Area)	1.0	Nos		
279	Supplying, erecting & marking SPMCB 6A to 32A, B-series (for lighting) in provided distribution board as per specification No. SW-SWR/MCB	14.0	Nos		
280	Supplying, erecting & marking SPN MCB 6A to 32A, C- series (for motor/power) in provided distribution board as per specification No. SW-SWR/MCB	30.0	Nos		
281	<b>RCCB (SW-RCCB):</b> Providing, erecting & commissioning RCCB only of electro magnetic type with 30/100/300 mA sensitivity and having capacity of 63 A. 2 pole complete as per specification No. SWRCCB/RCCB	3.0	Nos		
	<b>Modular switches and Accessories</b>				
282	Supplying and erecting modular type telephone socket one gang with safety shutter ISI mark approved make duly erected on provided plate and box with wiring connections complete.	1.0	Nos		
283	Supplying and erecting modular type electronic dimmer 400 / 450W one module ISI mark approved make duly erected on provided plate and box with wiring connections complete.	4.0	Nos		
284	Supplying and erecting modular type blanking plate one module ISI mark approved make duly erected on provided plate & box	20.0	Nos		
285	Supplying and erecting PVC Surface modular switch box with double mounting plate for 1 module complete duly erected in an approved	4.0	Nos		
286	Supplying and erecting PVC Surface modular switch box with double mounting plate for 2 module duly erected in an approved manner.	22.0	Nos		
287	Supplying and erecting PVC Surface modular switch box with double mounting plate for 3 module duly erected in an approved manner.	17.0	Nos		
288	Supplying and erecting PVC Surface modular switch box with double mounting plate for 4 module duly erected in an approved manner.	2.0	Nos		
289	Supplying and erecting PVC Surface modular switch box with double mounting plate for 6 module duly erected in an approved manner.	5.0	Nos		
290	Supplying and erecting PVC Surface modular switch box with double mounting plate for 12 module duly erected in an approved manner	4.0	Nos		
291	Supplying and erecting PVC Surface modular switch box with double mounting plate for 16 / 18 module duly erected in an approved manner.	2.0	Nos		
292	Supplying and erecting PVC Surface modular double mounting plate 1 module complete duly erected in an approved manner.	4.0	Nos		
293	Supplying and erecting PVC Surface modular double mounting plate 2 module complete duly erected in an approved manner.	22.0	Nos		
294	Supplying and erecting PVC Surface modular double mounting plate 3 module complete duly erected in an approved manner.	17.0	Nos		



295	Supplying and erecting PVC Surface modular double mounting plate 4 module complete duly erected in an approved manner.	2.0	Nos		
296	Supplying and erecting PVC Surface modular double mounting plate 6 module complete duly erected in an approved manner.	5.0	Nos		
297	Supplying and erecting PVC Surface modular double mounting plate 12 module complete duly erected in an approved manner.	4.0	Nos		
298	Supplying and erecting PVC Surface modular double mounting plate 16/18 module complete duly erected in an approved manner	2.0	Nos		
299	Supplying and erecting modular type switch 6A / 10A ISI mark approved make duly erected on provided plate and box with wiring connections complete.	76.0	Nos		
300	Supplying and erecting modular type switch 16A ISI mark approved make duly erected on provided plate and box with wiring connections complete.	16.0	Nos		
301	Supplying and erecting ISI mark shockproof 3 pin plug socket 6A with porcelain base / flush type erected on Filled polypropylene ISI marked (IS:14772-2000) board or polished thick varnished double wooden block / folded or screwed board with top of either wooden / 3 mm thick hylam sheet/ 4mm thick plywood pasted with 1.5 mm thick Laminate with S M screws and duly connected.	26.0	Nos		
302	Supplying and erecting ISI mark shockproof 3 pin plug socket 16A with porcelain base/ flush type erected on Filled polypropylene ISI marked (IS:14772-2000) board or polished thick varnished double wooden block / folded or screwed board with top of either wooden/3 mm thick hylam sheet/ 4mm thick plywood pasted with 1.5 mm thick Laminate with S M screws and duly connected	26.0	Nos		
303-308	<b>HT/LT CABLES SITC of following sizes of 1.1 KV grade PVC insulated Armored Copper/ Aluminum conductor cables laid over MS supports cable racks/trays or fixing on walls including clamping the cable to supports cable racks or fixing on walls including clamping the cable to supports in an approved manner as re &amp; quired. For more details read technical spec no. 8 &amp; refer PWD 2013-2014</b>				
303	Supplying, erecting & terminating PVC armoured cable 3½ core 50 sq mm aluminium conductor with continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL( <b>HVAC Panel</b> ) <b>As per location</b>	50.0	Metre		
304	Supplying, erecting & terminating PVC armoured cable 3½ core 50 sq mm aluminium conductor with continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL( <b>HVAC Panel</b> ) <b>As per location</b>	50.0	Metre		
305	Supplying, erecting & terminating PVC armoured cable 4 core 10 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in	50.0	Metre		

	provided trench/ pipe as per specification no. CB-LT/CU(Lift)				
306	Supplying, erecting & terminating PVC armoured cable 4 core 10 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU(Steam Room)	50.0	Metre		
307	Supplying, erecting & terminating PVC armoured cable 4 core 10 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU(Outdoor Unit)	200.0	Metre		
308	Supplying, erecting & terminating PVC armoured cable 4 core 6 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU(Childrens Party Area)	50.0	Metre		
309	<b>LT PANELS (legrand TPN MCCB with Encloser) SITC of following Indoor type panels with double door, as per specifications and SLD complete with all necessary accessories. For more details read technical for panels spec no. 6</b>				
309	<b>Main HVAC panel(LEGRAND)</b> a. Incomer : 100A,TPN MCCB,25kA,Adjustable thermo magnetic 1 Set - Ammeter/ Voltmeter selector switch b. Busbar : 100A, TPN, Copper, 25kA c. Indicator : LED type RYB phase indicators, MCB type c. Outgoings : 63A,TPN, MCB - 4 Nos. (For outdoor Unit 1,2,3 & 4) 63A,TPN, MCB - 2 Nos. (For Spare)	1.0	Nos		
310-311	<b>EARTHING Earthing Accessories</b>				
310	Supplying and erecting G.I. strip of required size used for earthing on wall and/or any other purpose with necessary GI clamps fixed on wall painted with bituminous paint in an approved manner with joint required. as per specification No (EA-EP).	9.1	Kg		
311	Supplying and erecting G. I. Earth Wire of high purity of different sizes used for earthing or any other purposes on wall with necessary G. I. Clamps fixed on wall/cable/ conduit with screws in an approved manner.	9.1	Kg		
	<b>TELEPHONE for details refer clause no. 15 in tender (FINOLEX / KRONE)</b>				
312	Supplying & erecting telephone cable 10 pair with 0.5 mm dia. laid in provided PVC casing / conduit as per specification No. WG-TW	20.00	Metre		
313	Supplying & installing UTP networking Cat-6 cable suitable for LAN / WAN Computer net-working as per specification No. WG-COC/NC	15.00	Metre		
314	Supplying, erecting & commissioning Junction box suitable for 10 pairs as per specification No. WG-TW	1.00	Nos.		

315	<b>OCCUPANCY SENSOR((PHILIPS )</b> Supplying & Fixing Ceiling mounted dual (passive infrared & ultrasonic) technology occupancy sensor,360 degree view,Adjustable time delay,LED Motion indicator(Red -PIR/Green-Ultrasonic), 1A at 24Vdc NO & NC Isolated relay.	5.00	Nos.		
	<b>REMOVING &amp; TAKING IT AWAY OF ELECTRICAL ACCESSORIES</b>				
316	Dismantling the existing light, fan, bell, clock, independent plug point, wiring including circuit mains of all types along with accessories etc.complete as per specification No: WG-DM/PW	2.00	Nos.		
317	Dismantling the existing light, fan, bell, clock, independent plug point, wiring including circuit mains of all types along with accessories etc.complete as per specification No: WG-DM/PW	2.00	Nos.		
318	Dismantling the existing Aluminium/copper mains,sub-mains wiring upto 10 sq.mm. along with accessories etc.Complete as per specification No: WG-DM/PW	30.00	Meter		
319	Dismantling of existing fluorescent fittings of any type & size.	3.00	Nos.		
320	Dismantling the existing W.T.fluorescent fitting / S.V./ M.V/MH. lamp fitting from wall with brackets and making the site as original complete.	2.00	Nos.		
321	Dismantling the existing W.T. fluorescent fitting/ S.V./ M.V/MH lamp fitting from pole with brackets complete.	2.00	Nos.		
322	Dismantling the existing ceiling fan/exhaust fan/cabin fan/bracket fan complete with accessories, G.I. down rod, frame etc. and making the site clear.	3.00	Nos.		
323	Dismantling the existing switchgears, DB, and Bus bar of any size complete with/ without board or angle iron frame Each	2.00	Nos.		
324	Making the site clear of dismantled DB and switch gears by refilling the holes with cement mortar & finishing in an approved manner.	3.00	Nos.		
325	Dismantling the existing cables of all types & size upto 10 sq mm.	50.00	Meter		
326	Dismantling the existing cables of all types & size above 10 sq mm upto 50 sq.mm.	20.00	Meter		
327	Dismantling the existing cables of all types & size above 50 sq mm.	30.00	Meter		
328	Refilling the holes for dismantled cables with cement mortar & finishing in an aproved manner etc. complete	20.00	Meter		
329	Dismantling the existing underground cable without damaging it with glands, cable end box including refilling the trench up to ground level and making coils	30.00	Meter		
	<b>TOTAL</b>				
	<b>WCT under VAT (in Percentage)</b>				
	<b>Service Tax including Swachh Bharat Cess and Kisan Kalyan Cess ( in Percentage)</b>				
	<b>GRAND TOTAL</b>				