Bill of Qty Civil

N/W Construction of Cafeteria at Visitor Hostel - 1 , IIT KANPUR.
NIT No. 47/Composite/D1/2025-26

SLNo	Description	Qty	Unit	Rate	Amount
1	EARTH WORK				
1.1	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and for all lift, as directed by Engineer-in-charge.				
1.1.1	All kinds of soil	55	cum	177.50	9763.00
1.2	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
1.2.1	All kinds of soil.	35	cum	260.30	9111.00
1.3	Excavating trenches by mechinical / manual means of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.3.1	All kinds of soil				
1.3.1.1	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	25	metre	352.15	8804.00
1.4	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 50 and for all lif.	50	cum	196.00	9800.00
1.5	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	20	cum	2123.75	42475.00
1.6	Supplying chemical emulsion in sealed containers including delivery as specified.				
1.6.1	Chlorpyriphos/ Lindane emulsifiable concentrate of 20%	75	litre	234.75	17606.00
1.7	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :				

1.7.1	Along external wall where the apron is not provided using chemical emulsion @75litres/ sqm of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:				
1.7.1.1	With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration	41	metre	38.90	1595.00
1.7.2	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc.:				
1.7.2.1	With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration	41	metre	53.45	2191.00
1.7.3	Treatment of soil under existing floors using chemical emulsion © one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement: 2 Coarse sand) to match the existing floor:				
1.7.3.1	With Chlorpyriphos/Lindane E.C. 20% with 1% concentration	105	sqm	310.05	32555.00
2	CEMENT CONCRETE (CAST IN SITU)				
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
2.1.1	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	1	cum	7878.50	7879.00
2.1.2	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources: 8 graded stone aggregate 40 mm nominal size derived from natural sources)	22	cum	6812.00	149864.00
2.2	Providing and laying damp-proof course 50 mm thick with cement concrete 1:2:4 (1 cement: 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources).	12	sqm	495.75	5949.00
2.3	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	10	per bag of 50kg cement used	18.15	182.00
2.4	Providing & applying a coat of residual petroleum bitumen of grade of VG-10 of approved quality using 1.7 kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	12	sqm	146.15	1754.00

3	REINFORCED CEMENT CONCRETE				
3.1	Centering and shuttering including strutting, propping etc. and removal of form for				
3.1.1	Foundations, footings, bases of columns, etc. for mass concrete	25	sqm	392.15	9804.00
3.1.2	Lintels, beams, plinth beams, girders, bressumers and cantilevers	55	sqm	736.40	40502.00
3.1.3	Columns, Pillars, Piers, Abutments, Posts and Struts	40	sqm	961.30	38452.00
3.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
3.2.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	4390	kg	107.85	473462.00
3.3	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge, for the following grades of concrete.: Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.				
3.3.1	All works upto plinth level				
3.3.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	19	cum	9504.75	180590.00
4	MASONRY WORK				
4.1	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:				
4.1.1	Cement mortar 1:6(1 cement :6 coarse sand)	10	cum	7132.25	71323.00

4.2	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 :				
4.2.1	Cement mortar 1:6(1 cement : 6 coarse sand)	4	cum	9105.95	36424.00
4.3	Half brick masonry with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundations and plinth in :				
4.3.1	cement mortar 1:4(1 cement :4 coarse sand)	60	sqm	905.05	54303.00
4.4	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.				
4.4.1	Cement mortar 1:4(1 cement :4 coarse sand)	25	sqm	1123.80	28095.00
4.5	Extra for providing and placing in position 2 Nos 6 mm dia. M.S. bars at every third course of half brick masonry.	25	sqm	104.80	2620.00
4.6	Brick work with common burnt clay selected F.P.S. (non modular) bricks of class designation 7.5 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12 mm deep complete in cement mortar 1:6 (1 cement: 6 coarse sand)				
4.6.1	Above plinth level upto floor V level	0.5	cum	9439.75	4720.00
4.7	Brick edging 7cm wide 11.4 cm deep to plinth protection with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	50	metre	60.85	3043.00
5	CLADDING WORK				

5.1	Extra for providing edge moulding to Kota stone/Red sand stone (up to 40 mm thick) counters, vanities, coping, window sill, parapet tops and such other locations including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-charge. Extra for providing edge moulding to Kota stone/Red sand stone (up to 40 mm thick) counters, vanities, coping, window sill, parapet tops and such other locations including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-charge. Extra for providing edge moulding to Kota stone/Red sand stone (up to 40 mm thick) counters, vanities, coping, window sill, parapet tops and such other locations including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-charge. Extra for providing edge moulding to Kota stone/Red sand stone (up to 40 mm thick) counters, vanities, coping, window sill, parapet tops and such other locations including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-charge.				
5.1.1	Kota Stone	80	metre	298.60	23888.00
5.2	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	50	sqm	506.70	25335.00

5.3	Providing and fixing 15 mm (+/- 1 mm) thick polished full body homogeneous terrazzo vitrified tiles Venito Morning of Simpolo or approved equivalent make in uniform colour and of sizes 120 x 180 cm as shown in GFC drawings or as directed by the Engineer-in-charge in plateform top / counter top / kitchen platforms / vanity counters etc with water absorption's less than 0.08%, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness, including grouting of joints, keeping the joints 3 mm wide & minimum 4 mm deep alround & filled with approved quality epoxy grout (Payment for grouting of joints with epoxy grout to be made separately). all complete as per GFC drawings or as directed. Skirting shall be with same tiles, laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS: 15477, in average 6 mm thickness, including grouting of joints. (Basic rate of vitrified tile shall be Rs 3050 /- per sq mtr (F.O.R at site including GST))	7	Sqm	4770.97	33397.00
6	WOOD AND P. V. C. WORK				
6.1	Providing and fixing satin stainless steel grade 304 Offset Pull Handle of approved quality including the cost of necessary stainless steel screws and other incidental charges complete as per detailed Architectural Drawings and as directed by Engineer-in-charge : Manufacturer's warranty/guarantee card needs to be submitted. (a) 25 mm dia x 600 mm long (DormaKaba : TGDI D 600 or approved equivalent).	1	Pair	6825.82	6826.00
6.2	Providing and fixing Satin stainless steel floor stopper half dome with 45mm dia of approved quality with necessary SS screws etc. all complete as per detailed Architectural Drawings and as directed by Engineer-in-charge : Manufacturer's warranty/guarantee card needs to be submitted. (DormaKaba : 3108 or approved equivalent)	1	Each	406.97	407.00

6.3	Providing & fixing Dormakaba rack and pinion door closer TS 89 with adjustable power size EN 3 – 6. Hold Open arm closing speed adjustable in two independent ranges and adjustable latch action.Non-handed. All adjustment screws face fixed with slide plate. According to EN 1154 and CE marked. Durability - 500,000 Cycles, Corrosive resistance - High,Finish:Silver Max Door Weight upto : 120 Kgs Max Door Width upto : 1400mme or approved equivalent)"	1	Each	14082.59	14083.00
6.4	Providing and fixing Satin Stainless Steel grade 304 5 Knuckle, 2 Ball bearing butt hinges size 4" x 3" x 3mm with stainless steel screws all complete as per detailed Architectural Drawings and as directed by Engineer-in-charge, Suitable for wooden door weighs upto 120kgs. Template Drilled Approved to EN 1935. Make - dormakaba 3043FWD , Kich PRBHT2B34S & Hafele or approved equivalent)	4	Each	370.74	1483.00
6.5	Providing & fixing Narrow stile dead bolt lock (NDL 100 Narrow stile Dead Lock of Dorma or approved equivalent) with 35 mm backset, 20 mm sq. forend , prepared for euro profile cylinder including strike plate in satin stainless steel. As per DIN 18521-2 class 3 including 6 pin Euro profile cylinder (Dormakaba 3026 or equivalent make)) with both side key operation standard length 60mm in satin nickel plated finish with 3 keys. Optional master keying and grand master keying can be done on request. -NMK.Durability: 100,000 Cycles and narrow Profile Escutcheons in SSS finish (FT Escutcheons of Dormakaba or approved equivalent make)	1	Each	4239.11	4239.00
7	STEEL WORK				
7.1	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	6505	kg	133.70	869719.00
7.2	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	50	kg	97.20	4860.00
7.3	Providing and fixing bolts including nuts and washers complete.	50	kg	159.35	7968.00

7.4	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
7.4.1	Providing, fabricating and fixing in position MS inserts such as nosing, corner angles of columns, plates, flats, tees, provision for pipe hangers, supports, brackets and monorails, hooks, frame around cut-out,MS pipe sleeves etc. as per drawings and specifications, in true line and level including embedding the same into the permanent works at the time of casting of RCC works or fixing the same into the existing work by using anchor / desh fastener of size as mentioned in drawing or as directed by Engineering in charge, with necessary welding, grinding,bolting and painting with two coat of first quality synthetic enamel paint of approved make over a coat of primer etc. complete as directed. Providing, fabricating and fixing in position MS inserts such as nosing, corner angles of columns, plates, flats, tees, provision for pipe hangers, supports, brackets and monorails, hooks, frame around cut-out,MS pipe sleeves etc. as per drawings and specifications, in true line and level including embedding the same into the permanent works at the time of casting of RCC works or fixing the same into the existing work by using anchor / desh fastener of size as mentioned in drawing or as directed by Engineering in charge, with necessary welding, grinding,bolting and painting with two coat of first quality synthetic enamel paint of approved make over a coat of primer etc. complete as directed. Providing, fabricating and fixing in position MS inserts such as nosing, corner angles of columns, plates, flats, tees, provision for pipe hangers, supports, brackets and monorails, hooks, frame around cut-out,MS pipe sleeves etc. as per drawings and specifications, in true line and level including embedding the same into the permanent works at the time of casting of RCC works or fixing the same into the existing work by using anchor / desh fastener of size as mentioned in drawing or as directed by Engineering in charge, with necessary welding, grinding,bolting and painting with two coat of first quality synthetic enamel paint of approved make over a coat of primer etc. complete as directed.	100	kg	172.60	17260.00
8	FLOORING				
8.1	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
8.1.1	25 mm thick	35	sqm	1948.25	68189.00
8.2	Providing & Grouting of Stone Joints (4 mm width & 6 mm deep) in flooring with Polymer based Cement Grout of desired shade, including filling / grouting and finishing complete as per direction of Engineer-in-charge. Size of stone 450 mm x 450 mm	10	Sqm	325.12	3251.00

8.3	Providing & fixing prepolished kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) to the pattern called for , keeping the joints 4 mm wide & 6 mm deep alround for epoxy grouting. The joint should be filled with approved quality anti-fungal epoxy grout of M/s Laticrete or epoxy grout of Ardex Endura or approved equivalent, as per manufacturer specifications or as directed by Engineer-in-Charge (cost of epoxy grout filled in joints are paid under their respective item) This item include cutting of stone slabs, all wastage and rubbing and polishing complete . Allow for protection of stone using approved method. (a)Prepolished kota stone 25 mm thick.	95	Sqm	2407.51	228713.00
8.4	Providing & fixing prepolished kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	30	Sqm	2813.96	84419.00
8.5	Providing & fixing machine-cut & machined polished Stone in treads of steps, sill, copings,parapet top, window sill, planter top and such other locations, laid on 20 mm (average) thick cement mortar 1:4 (1cement:4coarse sand) including a base coat of neat cement slurry @ 4.4 kg/sqm and jointed with grey cement slurry mixed with pigment to match the shades of the slabs, including rubbing and polishing complete.The Stone used should be in one single long piece up to 2000 mm as per drawing,or as directed by Engineer-in-charge.The exposed projected edges shall be of uniform thickness and of uniform projection. Kota Stone 25mm thick	15	Sqm	2433.07	36496.00

8.6	Providing & Grouting of Stone Joints (4 mm width & 6 mm deep) in flooring with Epoxy based grout, mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete as per direction of Engineer-in-charge. (a)Size of stone 600 mm x 600mm.	120	Sqm	286.32	34358.00
8.7	Rough dressed Kota stone paving and other finishing work to the pattern called for using 30 mm (nominal) thick Kota stone slabs with machine cut edges (straight or raked as called for) of sizes 600x600mm laid over a 20mm thick bed of cement mortar 1:4 (1cement :4 coarse sand) including a base coat of neat cement slurry @ 4.4 kg/sqm with fine joints filled with cement mortar 1:2 (1cement :2 coarse sand) pigmented to match the stone and finished neat as directed and cured complete.	50	Sqm	1437.00	71850.00
9	ROOFING				
9.1	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.				
9.1.1	110 mm diameter	20	metre	377.40	7548.00
9.2	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for 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.				
9.2.1	Coupler				
9.2.1.1	110 mm	4	each	136.15	545.00
9.2.2	Single tee with door				
9.2.2.1	110x110x110 mm	4	each	234.15	937.00
9.2.3	Bend 87.5°				
9.2.3.1	110 mm bend	4	each	150.35	601.00
9.3	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.				
9.3.1	110 mm	10	each	371.30	3713.00

9.4	Providing and fixing false ceiling at all heights including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5 mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing perimeter channels 0.5 mm thick 27 mm high having flanges of 20 mm and 30 mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450 mm centre, with 25 mm long dry wall screws @ 230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and				
9.4.1	12.5 mm thick tapered edge gypsum plain board conforming to IS: 2095- (Part I) :2011 (Board with BIS certification marks)	12	sqm	1355.80	16270.00

9.5	Supply of 50 mm thick double skin insulated roof / wall cladding system comprising of Hi-Rib profiled sheeting 1005-1020 mm cover width, 28-30 mm high crests @ 250-255 mm c/c manufactured out of 0.50 mm thick hi-tensile pre-painted Galvalume steel (AZ-150 GSM Aluminium – Zinc alloy metallic coating of total both sides 550 Mpa yield stress as per AS-1397/IS:15961). Exterior coat of SDP (Super Durable Polyester) paint system, 20 micron top coat applied over 5-7 micron epoxy primer and a 5 micron polyster back coat applied over 5-7 micron epoxy primer. The sheet shall have wide pans with 3 small stiffening ribs for effective water shedding and special male/female ends with full return legs on side laps for purlin support. The male end of the sheet shall have anti-capillary flute at side laps to prevent leakages. The Inner Sheet shall be same as external sheet. The Sub Girts of Size 50mmX50mmX50mm Manufactured Out of 16 (G) G.I.'Z' Shape would be fixed to Inner Sheeting on face Side at Purlin Locations by means of Galvanised Self Drilling self tapping fasteners thru the crest. The outer sheeting shall be fixed with similar screws as of Inner sheeting on to the Sub- Girts with EPDM seal, An Insulation 50mm thick CFC & HCFC free Puf of density 40 to 45 Kg/m3 made on a continuous line using N pentane as blowing agent shall be laid over the internal sheeting and G.I.subgirts and held between the external and internal sheets. The sheets shall be supplied in lengths maximum upto 6-12 metres to suit site dimensions. Contractor need to submit shop drawing for the approval before the exrcution of work.	125	Sqm	3236.50	404563.00
9.6	Providing and fixing precoated galvanised steel sheet roofing accessories of total coated thickness 0.50 mm using self drilling/ self tapping screws complete as per detail given in item S. No 9.3 above : (A) Ridges plain / Vally gutter (300 - 600mm)	25	Mtr	711.32	17783.00
9.7	(b) Flashings/ Aprons / end caps.(Upto 600 mm).	25	Mtr.	462.36	11559.00
9.8	Providing valleys / Gutter of 90 cm wide overall in plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia G.I. limpet and bitumen washers complete : (b)2 mm thick with zinc coating not less than 350 gm/m.	70	Mtr	2588.75	181213.00
9.9	Providing valleys / Gutter of 90 cm wide overall in plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia G.I. limpet and bitumen washers complete : (c)3 mm thick with zinc coating not less than 350 gm/m.	80	Mtr	3883.13	310650.00

9.1	"Supply and Installation of Anutone Strand 1 fila Melange, Kerfed long edges ,concealed + H-Spline system, magnesite-bonded 0.6-0.8 mm wide pinewood fibre core, GreenPro certified, prepainted ceiling panels of size 600 x 1200 x 25mm, volume density 400 Kgs/m3, weight 10 kg/m2 installed by using Anutone Strut ceiling framework without visible fasteners using Anutone Strut H-Spline. ""The Anutone Strut ceiling framework system shall include Anutone Strut WC25, fully knurled, sectional thickness 0.50mm, length 3600mm, unequal flanges of 20 & 30mm and web of 25mm, fixed along the perimeters of the wall with nylon sleeves and suitable fasteners at every 300 mm centers. Then suspend Anutone Strut MC45, fully knurled, sectional thickness 0.8mm, length 3600mm, equal flanges of 15mm and web 45mm from the soffit at 1200mm centers with Anutone Strut SA25, fully knurled,Suspender angle with sectional thickness 0.45mm, unequal flanges of 25 & 10mm such that free end of Strut MC45 rests on Strut WC25 along perimeter of wall. Extra support to be added near jointing of two MC45 so that end cantilever should not be more than 150mm. Anutone Strut CC25, fully knurled, sectional thickness 0.55mm, length 3600mm, knurled web 50mm,depth 25mm and equal flanges 15mm is fastened to the Anutone Strut MC45 perpendicularly at 600 mm centers and inserted inside the Strut WC25 at the perimeter. " "PVC core UV treated Anutone H-Spline having sectional thickness 2mm, depth 10mm and length 2400mm to be fixed perpendicular to the Strut CC25 at 600mm centers. The Anutone Strand flia Melange, Kerfed edges panels shall be then inserted into the H-spline along their long edges against Strut H-Spline to perfect fit with staggered short edges back line with Synth PF (poly fibre) 10x25 of density 40 Kg/m3. Technical Parameters ""• Fire (Class) – 1 & P • Acoustics – NRC 0.95 (For E*900 mounting) • Thermal (W/mk)– 0.07 • Climate (°C, RH) – 50, 95 • Light (%) – Colour Dependant • Green (VoC, RC %) – Low, 30"" Makes : Strand 1 fila Melange of Anutone , Heradesign Superfine Panels of Knauf or approved equivalent"	100	Sqm	4979.23	497923.00
10	FINISHING				
10.1	12 mm cement plaster of mix:				
10.1.1	1:6 (1 cement: 6 coarse sand)	50	sqm	343.65	17183.00
10.2	15 mm cement plaster on rough side of single or half brick wall of mix:				
10.2.1	1:6(1 cement: 6 coarse sand)	50	sqm	395.35	19768.00
10.3	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.	50	sqm	537.45	26873.00
10.4	6 mm cement plaster of mix:				
10.4.1	1:3(1 cement :3 fine sand)	50	sqm	300.45	15023.00
10.5	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:				
10.5.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)	50	sqm	171.10	8555.00
10.6	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:				

10.6.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	195	sqm	226.25	44119.00
10.7	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	50	sqm	156.05	7803.00
10.8	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.				
10.8.1	Two coats	50	sqm	142.80	7140.00
11	Dismantling and Demolishing				
11.1	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.				
11.1.1	Nominal concrete 1:3:6 or richer mix (including equivalent design mix)	0.5	cum	2434.25	1217.00
11.1.2	Nominal concrete 1:4:8 or leaner mix (including equivalent design mix)	3	cum	1503.60	4511.00
11.2	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.	0.5	cum	3551.25	1776.00
11.3	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.				
11.3.1	In cement mortar	5	cum	2060.20	10301.00
11.4	Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :				
11.4.1	15 mm to 40 mm nominal bore	20	metre	149.80	2996.00
11.5	Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metre lead as per direction of Engineer-in-charge:				
11.5.1	Up to 150 mm diameter	10	metre	332.40	3324.00

11.6	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, beyond 50 m initial lead, for all leads including all lifts involved.	10	cum	263.95	2640.00
12	ROAD WORK				
12.1	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.	40	sqm	131.75	5270.00
13	DRAINAGE				
13.1	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :				
13.1.1	150 mm dia. R.C.C. pipe	35	metre	556.45	19476.00
13.2	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 :				
13.2.1	For pipes 100 to 250 mm diameter	1	each	810.45	810.00
13.3	Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Raising depth of manhole to be paid separately) :				
13.3.1	Rectangular manhole 90x80 cm with rectangular cover 600 x 450 mm of grade LD - 2.5	2	each	2625.50	5251.00
13.4	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :				
13.4.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	3	each	6889.80	20669.00
14	ALUMINIUM WORK				

14.1	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, paneling and dash fasteners to be paid for separately) :				
14.1.1	For fixed portion				
14.1.1	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	1200	kg	539.85	647820.00
14.1.2	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)				
14.1.2	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	50	kg	643.45	32173.00

14.2	Providing assembling supplying and fixing Double glazed dual sealed insulating glass of size & shape as required & specified to aluminium door, window & structural glazing with norton tape, silicon structural sealant and weather proofing using weather proofing sealant (Dow-corning/Wacker or equivalent) silicon joint visible from outside.The insulated glass comprising of an outer toughened (Heat strengthened) float glass 6 mm thick of approved colour & shade with reflective soft coating on face 2 of approved colour & shade, an inner 6 mm thick clear float glass toughened (Heat strengthened) separated by spacers to create 12 mm dehydrated air space and thermatically sealed by using double sealed organic sealant (priming sealant of thermoplastic), solvent free polyisobutylene which is applied on both sides of spacer, secondary sealant comprising of two component polysulphide in the right proportion for final outer seal including perforated channel for air spaces and complete processed with expertise of manufacturing insulated glass (Gurind/ Art N glass /Gold Plus), all complete for the minimum required performances given below, 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. Luminous Factors : (1)Light Transmission - 75% (2) outdoor Reflection (RLe %) - 12% (3) Indore (RLi %) - 12% (4) Solar Factor -0.57 (4) Thermal Transmission / U value -1.8 W/Sqm K. (The aluminium frame shall be paid separately in relevant item). The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement. Make : 6mm PLTT toughened+12mm airgap+6 mm clear toughened of saint Gobain / AIS / Sisecam flat glass india or approved equivalent	100	Sqm	4483.71	448371.00

14.3	"Providing and fixing fixed glazing into skylights etc., with Laminated glass of approved quality of 13.52mm overall thickness with 1.52mm thick polyvinyl butyl sandwiched between heat strengthened glass of thickness 6 mm on both sides (one glass shall be 6 mm clear HS glass & one glass shall be 6 mm high performance HS glass) shall be within the scope of work. Colour of the PVB Interlayer shall be as per sample approved by the Engineer-in-charge. The glass shall be fixed with necessary EPDM rubber//neoprene gasket of approved colour, make, size and shape, with Norton tape, silicone structural / weather sealants of neutral grade. The Laminated glass shall be assembled in the factory/ workshop of the glass processor. 13.52 mm thick laminated glass shall be fixed over the MS frame work with the help of aluminium sections, profiles, trim section, caps etc. of size as mentioned in architectural GFC drawing or as directed by the Engineer-in-charge. Junctions of laminated glass shall be covered with aluminium capping profile / section as shown & of size mentioned in GFC drawing including backer rod & weather sealant to seal the junctions complete as directed by Engineer-in-Charge. Shop drawings shall be submitted by contractor for obtaining approval from the Engineer-in-charge before the execution of work. Item rate shall include the laminated glass, EPDM, PVC beading, silicone sealant and all necessary except the MS	20	Sqm	6603.62	132072.00
14.4	Frameless Glass Door with 13.32mm Laminated Glass & Top and Bottom Rail Providing and fixing double leaf doors with TPTA Door Top Rail, TPTA Door Bottom Rail with Lock, 13.52mm Laminated Glass, pull Handle TGDI-H 600 back to back with 500mm CTC, floor stop half dome with 45mm dia and floor spring dormakaba BTS 75V conforming to DIN EN1154 with adjustable spring strength EN 1-4, Floor Spring tested for durability of 500,000 cycles. Suitable for door leaf weight upto 100 kg & Max door leaf width upto1100mm. Approved make : Dormakaba , hafele or approved equivalent (Glassshall be paid for separately)	2	Each	87765.29	175531.00
15	MINOR CIVIL MAINTENANCE ITEM				

15.1	"Providing and Fixing stainless steel sink with drain board with C.I. brackets duly painted white, 40mm C.P. waste, C.P. brass chain and rubber plug, 40mm C.P cast bottle trap with connection pipe to wall and C.P. wall flange, rubber adapter for waste connection complete including cutting and making good the walls wherever required " (a)Single bowl single drain board 1065x510x200mm Size	1	Each	8500.00	8500.00
15.2	"Providing and Fixing 15mm C.P brass bib tap with C.P brass threaded flange complete, including cutting and making good the walls wherever required " (a)Short body .	2	Each	2000.00	4000.00
15.3	Providing and fixing Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905 deep seal 'P' or 'S' trap of self cleansing design with or without vent arm with provision for connecting G.I.inlet fitting,outlet side cuppling joint complete including cost of cutting and making good the walls and floors wherever required. (a)For 100mm inlet and100mm outlet.	1	Each	1700.00	1700.00

15.4	Providing and fixing Stainless Steel pipes confirming to corrosion resistant ausenitic steel, chrome-nickel-molybdenum X2CrNiMO17-12-2, no.14401 acordance to DIN-EN10088, according to AISI 316L with press type fitings with V profile for Hot and cold-water supply, capable to withstand temperature upto 135C and 16 bar pressure with length of 6 meters in accordance with dvgw regulation GW 41 such as tees, coupling, elbow, male adapter, connectors etc with Black grooved O-rings of EPDM material can withstand temperature upto 135C including suitable connection as per site requirement. Direct contact of stainless steel pipes and fittings to galvanized iron should be vaoided by inserting approved typeof filler material as per project managers/consultant requirement. Flanges, clamps with hanger as a spacing of 2 m centre to centre min or as required, necessary adapters for GI/copper and CP fittings, jointing, sundries, cutting holes in walls/floors/slabs & making good complete.(for hot and cold water supply exposed) (a) 20 mm dia	10	Metre	2700.00	27000.00
15.5	Providing and fixing 25mm thickness thermaflex thermal insulation on pipe," a flexible elastometric foam of closed cells (Class 'O')structure having thermal conductivity 0.038w/m.k at 20 degree centigrade, water vapour permeability μ > 7000 and class 0 fire propagation including all required accessories e.g. adhesive and tape on all joints complete." Applying single layer of 6mm thick cement plaster in the ratio of 1:4 (1cement: 4 fine sand) for pipes exposed in shaft and terrace as per instruction of project incharge. The insulation to be applied on following outer dia pipe, (Make: Thermaflex) (a)22.2 mm [OD] [9 mm thick insulation]	10	Metre	150.00	1500.00
15.6	Providing, laying and jointing HDPE Double Wall Coil (DWC) SN-8 Grade pipes confirming to IS: 16098 including all fittings wherever required e.g., tees, bends of any degree, couplings, adapters, plugs, unions etc. and jointing as manufacturer recommondation etc. including testing of joints etc. complete. (a)100 mm dia	20	Mtr	1000.00	20000.00

15.7	Providing and fixing square mouth 'P' type S.W gully trap grade 'A' of size 300x300mm complete with C.I. grating, brick masonry chamber and water tight C.I. cover and frame of 300x300mm size (inside) with weight of cover to be not less than 10 Kg and frame to be not less than 4 Kg as per standard design.	1	Each	3500.00	3500.00
15.8	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 90x80 cm and 90 cm deep including D.I. cover with frame (Heavy duty), ::With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	1	Each	18000.00	18000.00
15.9	Extra for additional depth of manholes of size 90x80cms beyond 90cms depth.	1	Metre	11000.00	11000.00
					5988784.000
	Modified Estimated Cost after using correction factor on DSR 2023 on account of GST @ 0.973 * 3194397 = 3108148				5902535.00