

Project : EXPANSION OF THE SOM BUILDING PHASE 2  
Reference No. : SO-G-17-040  
Site Location :  
Phase: Masterplan  
Area: Expansion (Ph.2)

Date: 23-Feb-21  
Prepared By: CGM  
Checked & Approved By:  
Revision No. : 013

**NOTES**

- >The Plans, Detailed Drawings, Specifications, Detailed Bill of Quantities, Terms of Reference, Contract Agreement and other BId Documents shall be considered as complementing each other, so that what is mentioned or shown in one, although not mentioned in the other, shall be considered as appearing in both. In case of conflict between the two, the same should be referred to the Designing Architect/Engineer for resolution with the approval of the Head of Procuring Entity.
- >The construction shall be finished with first class workmanship to the satisfaction of the Head of Procuring Entity.
- >The items, description and quantities given on the first three columns of the Bill of Quantities /Bid Form, guides only to the owner/bidder interpreting the plans and technical specifications. The owner is not responsible for any mistakes, inaccuracies, duplications, or omissions in these list of the Bill of Quantities/Bid Form which shall never be a basis for additions nor deletions to the scope (Door)
- >The unit and total bid prices must include all direct and indirect cost/expenses such as overhead, contingencies and miscellaneous (OCM); profit; value added tax and other obligations of any kind under which the contract must be borne by the Bidder since they are necessary to install, construct and complete the whole of the contract in accordance with the bid documents.
- >The Grand Total Cost shall include the supply, delivery, installation of materials, labor, construction supervision and equipment including testing and commissioning of equipment by the contractor.

BILL OF QUANTITIES															
Item No.	Description	Qty	Unit	Material Cost	Equipment Cost	Labor Cost	Estimated Direct Cost	Mark-ups in Percent		Total Mark Up		VAT	Total Indirect Cost	Total Cost	Unit Cost
								OCM	Profit	%age	Value				
		1	2	3	4	5	6	7	8	9	7+8	11 x (5 + 10)	12 10+ 11	13 6 + 12	14 (13) / (1)
<b>1.0</b>	<b>GENERAL REQUIREMENTS</b>														
1.1	Mobilization and Demobilization	1.00	lot												
1.2	Temporary Facilities / Utilities	1.00	lot												
1.3	Safety Occupational Hazards	1.00	lot												
1.4	As- Built Plans	1.00	lot												
1.6	Clearing, cleaning, and Hauling of Debris	1.00	lot												
1.7	Handling of Materials	1.00	lot												
1.8	Demolition of Existing Structures	1.00	lot												
<b>3.0</b>	<b>STRUCTURAL WORKS</b>														
<b>3.A</b>	<b>CONCRETE WORKS/REINFORCEMENT/SCAFFOLDING/FORMS</b>														
3.1	Concrete Forms and Accessories	882.41	sq.m												
3.1.1	Footing	32.60	sq.m												
3.1.2	Wall Footing	28.54	sq.m												
3.1.3	Slab on Grade	8.56	sq.m												
3.1.4	Retaining Wall	392.70	sq.m												
3.1.5	Concrete Ramp	3.96	sq.m												
3.1.6	Columns	65.82	sq.m												
3.1.7	Beams	78.75	sq.m												
3.1.8	Lintel Beam	21.15	sq.m												
3.1.8a	Concrete Canopy	60.36	sq.m												
3.1.9	Stiffener Column	67.27	sq.m												
3.1.10	Septic Tank and Rainwater Tank	101.11	sq.m												
3.1.11	Stairs	21.60	sq.m												
3.2	Steel Scaffolding	2,400.00	Lin.m												
3.2.1	Steel Pipes and Clamps	2,400.00	Lin.m												
3.3	Concrete Reinforcement	13,257.89	kgs												
3.3.1	Footing	1,047.16	kgs												
3.3.2	Wall Footing	268.97	kgs												
3.3.3	Slab on Grade	1,469.04	kgs												
3.3.4	Retaining Wall	3,452.50	kgs												
3.3.5	Concrete Ramp	52.80	kgs												
3.3.6	Columns	2,039.40	kgs												
3.3.7	Beams	2,539.55	kgs												
3.3.8	Lintel Beam	224.36	kgs												
3.3.8a	Concrete Canopy	241.00	kgs												

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								OCM	Profit	%age	Value				
								7	8	9	10	11	12	13	14
		1	2	3	4	5	6	7	8	9	7+8	x(5 + 10)	10+ 11	6 + 12	(13) / (1)
3.3.9	Stiffener Column	581.78	kgs												
3.3.10	Septic Tank and Rainwater Tank	1,288.12	kgs												
3.3.11	Stairs	53.21	kgs												
3.4	Cast-in-Place Concrete	126.66	cu.m												
3.4.1	Footing, 3000 psi	11.14	cu.m												
3.4.2	Wall Footing, 3000 psi	5.51	cu.m												
3.4.3	Slab on Grade, 3000 psi	40.07	cu.m												
3.4.4	Retaining Wall, 3000 psi	27.62	cu.m												
3.4.5	Concrere Ramp	1.32	cu.m												
3.4.6	Columns, 4000 psi	9.27	cu.m												
3.4.7	Beams, 4000 psi	7.50	cu.m												
3.4.8	Lintel Beam, 3000 psi	1.11	cu.m												
3.4.8a	Concrete Canopy	6.04	cu.m												
3.4.9	Stiffener Column, 3000 psi	3.91	cu.m												
3.4.10	Septic Tank and Rainwater Tank, 3000 psi	11.44	cu.m												
3.4.11	Stairs, 3000 psi	1.73	cu.m												
3.4.12	Other work items not mentioned in item 3.4 but necessary to complete (Please identify)														
<b>3.B</b>	<b>STRUCTURAL STEEL TRUSS</b>														
3.5	Fabrication/Installation of Truss Framing	2,359.66	kgs												
3.5.1	LC 150x65x20x2.0Purlins	2,146.86	kgs												
3.5.2	LC 100X50X20X2mm Box Strut	206.73	kgs												
3.5.3	12mm dia. Cross bracing	40.00	pcs												
3.5.4	12mm dia. std. turnbuckles	20.00	lgths												
3.5.5	10 mm dia Sag Rods	20.00	lgths												
3.5.6	Cutting desk	10.00	pcs												
3.5.7	Grinding desk	10.00	pcs												
3.6	Structural Base plate and Anchor Bolt	1.00	lot												
3.6.1	12mm thk. Base plate	123.65	kgs												
3.6.2	12mm dia. A325 headed anchor bolt w/ std. nuts and washers	16.00	pcs												
3.6.3	16mm HIT V-rod w/ Hilti hit Re 500 V2	12.00	pcs												
3.6.4	20mm HIT V-rod w/ Hilti hit Re 500 V3	30.00	pcs												
3.6.5	Miscellaneous & Consumables	1.00	lot												
3.7	Erection of Steel WF Beam	1,266.10	kgs												
3.7.1	W12x22	739.72	kgs												
3.7.2	W12x40	2,020.19	kgs												
3.7.3	W8x18	1,060.70	kgs												
3.7.4	Other work items not mentioned in item 5.3 but necessary to complete (Please identify)														
<b>3.C</b>	<b>EARTHWORKS</b>														
3.7.5	Structural Excavation	145.19	cu.m.												
3.7.6	Gravel Bedding	55.31	cu.m.												
3.7.7	Backfilling and Compaction	406.25	cu.m.												
3.7.8	Soil Poisoning	350.00	sq.m.												
3.7.9	Other work items not mentioned in item 3.C but necessary to complete (Please identify)														
	Other work items not mentioned in item 3.0 but necessary to complete (Please identify)														
<b>4.0</b>	<b>ARCHITECTURAL WORKS</b>														
<b>4.A</b>	<b>MASONRYL WORKS</b>														
4.1	Installation of 6" thk CHB Wall	399.84	SQ.M												
4.1.1	CHB 6"	4,998.00	pcs												
4.1.2	Cement	442.00	bags												
4.1.3	Sand Coarse	34.00	cu.m												
4.1.4	Reinforcement (10mm dia)	228.00	lgths												
4.1.5	Tie Wires	6.00	kls												
4.2	20mm thk Cement Plaster for CHB walls, Canopy and Parapet wall	1,041.00	SQ.M												
4.2.1	Cement	217.00	bags												
4.2.2	Sand Fine	17.00	cu.m												

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								OCM	Profit	%age	Value				
								7	8	9	10	11	12	13	14
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
												x(5 + 10)	10+ 11	6 + 12	(13) / (1)
<b>4.B</b>	<b>METALS</b>														
4.3	50mm dia stainless steel Stairs Handrails	36.12	Lin.m												
4.3.1	50mm dia., Grade 304, Schedule 40, Stainless Steel Handrail in Hairline Finish fully Welded to 50mm diameter, Grade 304, Schedule 40 Stainless Steel Vertical Support	16.12	lm					This item is included in Phase 2 Expansion				This item is included in Phase 2 Expansion			
4.3.2	Aluminum Nosing plate w/ anti-slip strip	20.00	lm					This item is included in Phase 2 Expansion				This item is included in Phase 2 Expansion			
<b>4.C</b>	<b>THERMAL AND MOISTURE PROTECTION</b>														
4.4	0.60mm thk Roofings installation and Gutter Fabrication	325.00	sq.m												
4.4.1	Corrugated type Long span colorbonded roofing 0.60mm thk w/ roofing reflective insulation	340.00	Lin.m												
4.4.2	Stainless Steel Gutter Gauge 26	25.00	lm												
4.4.3	Consumables & Miscellaneous	27.14	sq.m												
4.4.4	WP-2 UV Resistant liquid applied membrane waterproofing	1.00	lot												
<b>4.D</b>	<b>OPENINGS (Doors and Wndoes)</b>														
4.5	Fabrication and Installation of Doors including Jamb & Finish Hardw	13.00	sets												
4.5.1	D-1 (1.8m x 2.1m) 12mm thk. clear double swing glass door.. Provide 1.2mm thk. C 25mm dia. SS vertical pull handle in satin finish, complete w/ required hardware and accessories.	1.00	set/s												
4.5.2	D3,D7 & D8 (0.90m x 2.1m) 12mm thk. clear double swing glass door. Provide 1.2mm thk. C 25mm dia. SS Vertical pull handle in satin finish, complete w/ required hardware and accessories.	3.00	set/s												
4.5.3	D10 (0.8m x 2.1m) Shall be 44mm thk. Swing type solid wooden pivot door panel, kiln-dried (TKD) tanguile pivot solid wood framing & alternating solid wood core covered w/ 6mm thk. Marine plywood (class A) through a high compact machine press process in stain/varnish finish, door jamb framing shall be 45mm x 140mm TKD tanguile single rabbeted stop wooden jamb complete w/ locksets, hardware and accessories.	1.00	set/s												
4.5.4	D-12 (0.7m x 2.1m) Shall be 44mm thk. Swing type solid wooden door panel, kiln-dried Lauan solid wood framing & alternating solid wood core covered w/ 6mm thk. Marine plywood (class A) through a high compact machine press process in stain/varnish finish, door jamb framing shall be 45mm x 140mm Lauan single rabbeted stop wooden jamb complete w/ locksets, hardware and accessories. Provide 10mm thk. x 100mm Lauan solid wood louver blades. Provide SS kickplate satin finish.	4.00	set/s												
4.5.5	D-13 (1.0m x 2.1m) Shall be 44mm thk. Swing type solid wooden door panel, kiln-dried Lauan solid wood framing & alternating solid wood core covered w/ 6mm thk. Marine plywood (class A) through a high compact machine press process in stain/varnish finish, door jamb framing shall be 45mm x 140mm TKD tanguile single rabbeted stop wooden jamb complete w/ locksets, hardware and accessories. Provide 10mm thk. x 100mm TKD tanguile solid wood louver blades.	1.00	set/s												
4.5.6	D4, D6 (0.90 m x 2.1m)	2.00	set/s	-	-	-	included in Phase 2	-	-	-	-	-	-	included in Phase 2 Expansion	
4.5.7	D-5 (0.80m x 2.1m)	1.00	set/s	-	-	-	included in Phase 2	-	-	-	-	-	-	included in Phase 2 Expansion	
4.5.8	D-14 (0.75m x 2.1m)	1.00	set/s	-	-	-	included in Phase 2	-	-	-	-	-	-	included in Phase 2 Expansion	
4.6	Windows including Frames and Accessories	18.00	sets												
4.6.1	W-6 (3.0m x 1.5m) Shall be 6.28mm clear glass blade on powder coated aluminum frame complete w/ awning window system and fixed panels on top.	2.00	set/s												
4.6.2	W-7 (4.2m x 1.5m) Shall be 6.28mm clear glass blade on powder coated aluminum frame complete w/ awning window system and fixed panels on top	4.00	set/s												

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								OCM	Profit	%age	Value					11	12	13	14
											7+8								
		1	2	3	4	5	6	7	8	9	10		12	13	14				
4.6.3	W-8 (0.6m x 1.5m) Shall be 6.28mm clear glass blade on powder coated aluminum frame complete w/ awning window system and fixed panels on top	6.00	set/s																
4.6.4	W-10 (2.0m x 0.6m) Shall be 6.28mm clear glass blade on powder coated aluminum frame complete w/ awning window system and fixed panels on top	2.00	set/s																
4.6.5	W-11 (0.6m x 0.6m) Shall be 6.28mm clear glass blade on aluminum frame complete w/ awning window system and control	3.00	set/s																
4.6.6	W-12 (3.305m x 1.3m) Shall be 12mm clear glass on aluminum frame with 100mm dia. speak-thru hole, roll up window aluminum slats mechanism and top box cover	1.00	set/s																
<b>4.E</b>	<b>FINISHES</b>																		
4.7	Floor Finish	289.04	sq.m																
4.7.1	(FF-1) 600 x 600mm Polished Ceramic Tiles	247.64	sq.m					This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion						
4.7.2a	(FF-3) 300 x 300mm UnGlazed Ceramic Tiles	17.00	sq.m																
4.7.2	(FF-3) 300 x 300mm Glazed Ceramic Tiles	22.00	sq.m																
4.7.3	(FF-5) Straight to finish concrete w/ floor hardener	2.40	sq.m																
4.7.4	Wood edge	50.00	lm					This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion						
4.8	Wall Finishes	291.26	sq.m																
4.8.1	(WF-2) Semi-gloss acrylic water-based interior paint	172.94	sq.m																
4.8.2	(WF-3) 300mm x 300mm glazed ceramic tile	118.32	sq.m																
4.9	Ceiling Finishes	37.80	sq.m																
4.9.1	Gypsum board with framing	37.80	sq.m					This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion						
4.10	Glass Wall	43.05	sq.m																
4.10.1	FULL GLASS PARTITION (Interior) 6mm thk tempered glass Frameless frame with U-Shaped frame support with sealant (D3-D8)	43.05	sq.m					This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion						
4.11	Others: Paint and Coatings	1.00	lot																
4.11.1	Painting including Steel Trusses, and other Metals	1.00	lot																
<b>4.F</b>	<b>SPECIALTIES</b>																		
4.12	Toilet and Bath	1.00	lot																
4.12.1	PWD Grab Bar	1.00	set/s																
4.12.2	Mirror	4.50	sq.m																
4.12.3	Toilet Partition	5.00	set/s																
4.13	Pantry	1.00	lot																
4.13.1	Pantry	1.00	lot																
	Other work items not mentioned in item 4.0 but necessary to complete (Please identify)																		
<b>21.0</b>	<b>FIRE PROTECTION SYSTEM</b>																		
21.1	FIRE PROTECTION DISTRIBUTION MATERIALS	10.00	units																
21.1.1	Fire Extinguisher 4.5 Kg - Class ABC Dry Chemical	9.00	pc/s																
21.1.2	Fire Extinguisher 4.5 Kg - Carbon Dioxide (CO2)	1.00	pc/s																
21.1.3	Miscellaneous and Consumable Materials	1.00	lot																
21.1.4	Other work items not mentioned in item 21.1 but necessary to complete (Please identify)																		
<b>22.0</b>	<b>PLUMBING WORKS</b>																		
<b>22.A</b>	<b>Storm &amp; Drainage PVC Pipe</b>																		
22.1	Storm Drainage Lines / Weepholes / Gutter Drain	618.00	Lin.m																
22.1.1	200 mm ØRCP Pipes, 1m Length	48.00	length																
22.1.2	150 mm Ø PVC Pipes, Series 1000	12.00	length																
22.1.3	100 mm Ø PVC Pipes, Series 1000	43.00	length																
22.2	Catch Basin with Grating Cover	4.00	nos.																
22.2.1	600 x 600 mm Catch Basin with Grating																		
22.3	Condensate Drains	192.00	lin.m																
22.3.1	50 mm Ø PVC Blue Pipes	3.00	length																
22.3.2	32 mm Ø PVC Blue Pipes	6.00	length																
22.3.3	25 mm Ø PVC Blue Pipes	23.00	length																

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								OCM	Profit	%age	Value				
								7	8	9	10	11	12	13	14
		1	2	3	4	5	6				7+8	x (5 + 10)	10+ 11	6 + 12	(13) / (1)
22.4	Rubber Insulation	98.00	lin.m												
22.4.1	50 mm Ø x 2m Length x 25 mm Thick	5.00	pc/s												
22.4.2	32 mm Ø x 2m Length x 25 mm Thick	9.00	pc/s												
22.4.3	25 mm Ø x 2m Length x 20 mm Thick	35.00	pc/s												
22.5	Floor Clean-out ( Brass)	24.00	pcs												
22.5.1	150 mm Ø	2.00	pc/s												
22.5.1	100 mm Ø	13.00	pc/s												
22.5.1	75 mm Ø	3.00	pc/s												
22.5.2	50 mm Ø	3.00	pc/s												
22.5.3	25 mm Ø	3.00	pc/s												
22.6	Floor Drain (SS with insect proof)	13.00	pcs												
22.6.1	50 mm Ø	13.00	pc/s												
22.7	Ceiling Clean-out	4.00	pc/s												
22.7.1	100 mm Ø	2.00	pc/s												
22.7.2	25 mm Ø	2.00	pc/s												
22.8	Hanger / Brackets / Supports / Concrete Saddle	210.00	pcs												
22.8.1	200 mm Ø	36.00	pc/s												
22.8.2	150 mm Ø	39.00	pc/s												
22.8.3	100 mm Ø	63.00	pc/s												
22.8.4	75 mm Ø	2.00	pc/s												
22.8.5	50 mm Ø	34.00	pc/s												
22.8.6	32 mm Ø	6.00	pc/s												
22.8.7	25 mm Ø	30.00	pc/s												
22.9	Sewer and Vent Lines	456.00	Lin.m												
22.9.1	150 mm Ø PVC Pipes Series 1000	12.00	length												
22.9.2	100 mm Ø PVC Pipes Series 1000	14.00	length												
22.9.3	75 mm Ø PVC Pipes Series 1000	5.00	length												
22.9.4	50 mm Ø PVC Pipes Series 1000	45.00	length												
22.10	Miscellaneous / Consumables	1.00	lot												
22.10.1	Solvent Cement	2.00	gal												
22.10.2	Epoxy A&B	2.00	gal												
22.10.3	Cutting Saw Blade	2.00	pcs												
22.10.4	G.I Wire #16	2.00	kgs												
22.10.5	Welding Rod	2.00	box												
22.10.6	Gravel / Sand bedding works	2.00	cu.m												
<b>22.B</b>	<b>Water Supply System</b>														
22.11	Potable Waterline, PPR Pipe (PN-20), Cold Waterline	498.00	Lin.m												
22.11.1	65 mm Ø	6.00	lgth												
22.11.2	50 mm Ø	6.00	lgth												
22.11.3	40 mm Ø	3.00	lgth												
22.11.4	32 mm Ø	25.00	lgth												
22.11.5	25 mm Ø	18.00	lgth												
22.11.6	20 mm Ø	15.00	lgth												
22.11.7	15 mm Ø	10.00	lgth												
22.12	Potable Waterline, PPR Pipe (PN-20), Hot Waterline	24.00	Lin.m												
22.12.1	15 mm Ø	4.00	lgth												
22.13	G.I. Pipe, Sch. 40	18.00	Lin.m												
22.13.1	65 mm Ø x 6 m Length	3.00	lgth												
22.14	Hanger / Brackets / Supports / Concrete Saddle	204.00	pcs												
22.14.1	65 mm Ø	18.00	pc/s												
22.14.2	50 mm Ø	12.00	pc/s												
22.14.3	40 mm Ø	6.00	pc/s												
22.14.4	32 mm Ø	44.00	pc/s												
22.14.5	25 mm Ø	36.00	pc/s												
22.14.6	20 mm Ø	30.00	pc/s												
22.14.7	15 mm Ø	28.00	pc/s												
22.14.8	Teplon Tape	1.00	box												

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		1	2	3	4	5	6	7	8	9	7+8	x(5 + 10)	10+ 11	6 + 12	(13) / (1)
<b>22.C</b>	<b>Valves and Water Control</b>														
22.15	Valves and Water Control	24.00	pcs												
22.15.1	65 mm Ø ( flanged type) Gate Valves	1.00	pc/s												
22.15.2	50 mm Ø ( Threaded type) Gate Valves	1.00	pc/s												
22.15.3	40 mm Ø ( threaded type) Gate Valves	1.00	pc/s												
22.15.4	32 mm Ø ( threaded type) Gate Valves	3.00	pc/s												
22.15.5	25 mm Ø ( threaded type) Gate Valves	1.00	pc/s												
22.15.6	20 mm Ø ( threaded type) Gate Valves	7.00	pc/s												
22.15.7	15 mm Ø ( threaded type) Gate Valves	1.00	pc/s												
22.15.8	65 mm Ø Check Valves	1.00	pc/s												
22.15.9	65 mm Ø Water Meter	1.00	pc/s												
22.15.10	Water Hammer Arrester	7.00	pc/s												
<b>22.D</b>	<b>Plumbing Fixtures &amp; Other Accessories</b>														
22.16	Water Closet & Bidet	7.00	sets												
22.16.1	Water Closet Flash type w/ complete accessories and bidet- Type 1	4.00	sets												
22.16.2	Water Closet Flash type w/ complete accessories and bidet - Type 2	1.00	sets												
22.16.3	Water Closet Tank type w/ complete accessories and bidet	2.00	sets												
22.17	Lavatory w/ Faucet & P-Trap w/ complete accessories	1.00	lot												
22.17.1	Countertop - Mounted (Double Basin)	2.00	sets												
22.17.2	Wall - Mounted (Single Basin)	3.00	sets												
22.17.3	Faucet for Wash Basins	7.00	pc/s												
22.17.4	Urinal with complete accessories	3.00	sets												
22.17.5	Kitchen Sink with complete accessories	1.00	pc/s												
22.17.6	Grease Trap, 5 GPM	1.00	pc/s												
22.17.7	Slop Sink with complete accessories	1.00	unit												
22.17.8	Hose Bibb	2.00	pc/s												
22.17.9	Shower Head w/ complete accessories	2.00	sets												
22.17.10	Electric Water Heater, EWH/1, EWH/2 Instantaneous Singlepoint Type 3.5 kW, 230V, 1-Phase (1Ø), 60Hz	2.00	units												
<b>22.E</b>	<b>Pump and Tank Schedule</b>														
22.18.1	Rainwater Harvesting Tank, RWT/1 749 Gallon Capacity	1.00	unit												
	Reinforced Concrete														
22.18.2	Submersible Pump, SP/1	1.00	units												
	Electric Motor (Close Coupled) Drive														
	15 GPM x 85 ft. TDH; 0.5 Hp, 1500 RPM														
	230V, 1-Phase (1-Ø), 60Hz														
22.18.3	Submersible Pump, SP/2	1.00	unit												
	Electric Motor (Close Coupled) Drive														
	15 GPM x 85 ft. TDH; 0.5 Hp, 1500 RPM														
	230V, 1-Phase (1-Ø), 60Hz														
22.18.4	Valves and Water Control														
22.18.5	Check Valve, 32 mm Ø (for SP/1)	1.00	pc/s												
22.18.6	Check Valve, 32 mm Ø (for SP/2)	1.00	pc/s												
22.18.7	Gate Valve, 32 mm Ø (for SP/1)	1.00	pc/s												
22.18.8	Gate Valve, 32 mm Ø (for SP/2)	1.00	pc/s												
22.18.9	Miscellaneous / Consumables	1.00	lot												
22.19	Pipe Connectors, Fittings and Accessories	1.00	lot												
22.20	Testing Works (Leak and Gravity Test)	1.00	lot												
	<b>Other work items not mentioned in item 22.0 but necessary to complete (Please identify)</b>														

Item No.	Description	Qty	Unit	Material Cost	Equipment Cost	Labor Cost	Estimated Direct Cost	Mark-ups in Percent		Total Mark Up		VAT	Total Indirect Cost	Total Cost	Unit Cost
								OCM	Profit	%age	Value				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
											7+8	x(5 + 10)	10+ 11	6 + 12	(13) / (1)
<b>23.0</b>	<b>HEATING, VENTILATING AND AIRCONDITIONING SYSTEM</b>														
<b>23.A</b>	<b>AIR CONDITIONING EQUIPMENTS</b>														
23.1	Split Type Airconditioning Units ( Inverter type)														
23.1.1	ACCU 1 / FCU 1	1.00	unit/s						This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.2	Type : Wall Mounted														
23.2.1	Cooling Capacity : 5.3 Kw (1.5 TR )								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.2.2	Electrical Capacity : 2.2 kw, 230V, 1Ph, 60Hz								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.3	ACCU 2 / FCU 2	3.00	unit/s		For Phase 2										
23.3.1	Type: Ceiling Cassette								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.3.2	Cooling Capacity : 10.6 Kw (3.0 TR )								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.3.3	Electrical Capacity : 2.8 kw, 230V, 1Ph, 60Hz								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.4	ACCU 3 / FCU 3	1.00	unit/s		For Phase 2										
23.4.1	Type : Wall Mounted								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.4.2	Cooling Capacity : 3.5 Kw (1 TR )								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.4.3	Electrical Capacity : 2.2 kw, 230V, 1Ph, 60Hz								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.5	ACCU 4 / FCU 4	1.00	unit/s		For Phase 2										
23.5.1	Type : Wall Mounted								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.5.2	Cooling Capacity : 3.5 Kw (1 TR )								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.5.3	Electrical Capacity : 2.2 kw, 230V, 1Ph, 60Hz								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.6	ACCU 5 / FCU 5	1.00	unit/s		For Phase 2										
23.6.1	Type : Wall Mounted								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.6.2	Cooling Capacity : 3.5 Kw (1 TR )								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.6.3	Electrical Capacity : 2.2 kw, 230V, 1Ph, 60Hz								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.7	ACCU 6 / FCU 6	1.00	unit/s		For Phase 2										
23.7.1	Type : Ceiling Cassette								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.7.2	Cooling Capacity : 7.0 Kw ( 2.0 TR )								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.7.3	Electrical Capacity : 2.0 kw, 230V, 1Ph, 60Hz								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
23.7.4	( Support, Pad, Electrical Connections Etc.)								This item is included in Phase 2 Expansion					This item is included in Phase 2 Expansion	
<b>23.B</b>	<b>VENTILATION EQUIPMENTS (EXHAUST FAN)</b>														
23.8	Toilet Exhaust Fan TEF 1 - Ceiling Casette 90 CMH	4.00	unit/s												
23.8.1	Type: Ceiling Casette														
23.8.2	Air Flow Rate : 90 CMH x 0.5 in of Water														
23.8.3	Electrical Capacity : 0.011 kw, 220V, 1Ph, 60hz														
23.9	TEF 2 Ceiling Casette 180 CMH	1.00	unit/s												
23.9.1	Type: Ceiling Casette														
23.9.2	Air Flow Rate : 180 CMH x 0.5 in of Water														
23.9.3	Electrical Capacity : 0.024 kw, 220V, 1Ph, 60hz														
23.10	TEF 3 Ceiling Casette 270 CMH	1.00	unit/s												
23.10.1	Type: Ceiling Casette														
23.10.2	Air Flow Rate : 270 CMH x 0.5 in of Water														
23.10.3	Electrical Capacity : 0.033 kw, 220V, 1Ph, 60hz														
23.11	EF 1 Wall Mounted 3200 CMH	1.00	unit/s												
23.11.1	Type: Wall Mounted														
23.11.2	Air Flow Rate : 3200 CMH														
23.11.3	Electrical Capacity : 0.13 kw, 220V, 1Ph, 60hz														
<b>23.C</b>	<b>AIR CONDITIONING PIPING WORKS</b>														
23.13	Multi Split Refrigerant Piping system Copper Pipes - Hard Drawn Ty	264.00	Lin.m												
23.13.1	15.9 mm (5/8") diameter x 6 m Length	22.00	lght												
23.13.2	9.5 mm (3/8") diameter x 6 m Length	22.00	lght												
23.13.3	Copper pipe fittings	1.00	lot												
23.14	Closed Cell Elastomeric (CCE) Rubber Insulation - Class 1 x 25 mm thick	264.00	Lin.m												
23.14.1	15.9 mm (5/8") diameter x 2 m Length	66.00	lght												
23.14.2	9.5 mm (3/8") diameter x 2 m Length	66.00	lght												

Item No.	Description	Qty	Unit	Material Cost	Equipment Cost	Labor Cost	Estimated Direct Cost	Mark-ups in Percent		Total Mark Up		VAT	Total Indirect Cost	Total Cost	Unit Cost
								OCM	Profit	%age	Value				
								7	8	9	10	11	12	13	14
		1	2	3	4	5	6	7	8	9	7+8	x(5 + 10)	10+ 11	6 + 12	(13) / (1)
<b>23.D</b>	<b>AIR VENT SYSTEM DUCTING WORKS</b>														
23.15	Air Vent System	1.00	lot												
23.15.1	100 mm Ø PVC Pipes Series 1000	4.00	lengths												
23.15.2	100 mm Ø Flexible Duct Connector	1.00	lengths												
23.15.3	Extras for bends, offset and other fittings	1.00	lot												
23.15.4	100 mm Ø Backdraft Damper	6.00	pc/s												
23.15.5	100 mm Ø Ventilation Pipe Hood	6.00	pc/s												
23.16	Testing, Commissioning, Hand-Over	1.00	lot												
	Other work items not mentioned in item 23.0 but necessary to complete (Please identify)														
<b>24.0</b>	<b>ELECTRICAL WORKS</b>														
<b>24.A</b>	<b>Electrical Power</b>														
	Supply, delivery and installation of lightning protection and grounding system including equipment, devices, wiring, roughing ins and necessary items to complete installation as shown on drawings and as described in technical specifications	1.00	lot												
24.1	Ground Rod Copper Clad Steel 20mm dia X 3000 mm long	2.00	Set/s												
24.1.1	30mm2 BCW	9.00	lm												
24.1.2	22mm2 BCW	9.00	lm												
24.1.3	25 mm Dia PVC Pipe	6.00	Lgth												
24.1.4	Exothermic Weld Connector	2.00	Pcs.												
24.1.5	Solderless Connector	2.00	Pcs.												
24.1.6	Pre-Drilled Grounding Bus bar (Inclusive of Wall Mounting Bracket with Poly-Insulator)	2.00	Set/s												
24.1.7	Low Voltage Electrical Distribution														
24.1.8															
	Supply, installation, termination and commissioning of low voltage electrical distribution conductors and cables, conduits, connectors, fittings, enclosed circuit breakers including termination accessories and all necessary items to complete the works														
24.2	Wires and Cables	3,905.00	Lin.m												
24.2.1	150mm² THHN Wire	114.00	lm												
24.2.2	60mm² THHN Wire	60.00	lm												
24.2.3	50mm² THHN Wire	26.00	lm												
24.2.4	38mm² THHN Wire	60.00	lm												
24.2.5	30mm² THHN Wire	-	lm												
24.2.6	22mm² THHN Wire	25.00	lm												
24.2.7	14mm² THHN Wire	-	lm												
24.2.8	8.0mm² THHN Wire	-	lm												
24.2.9	5.5mm² THHN Wire	420.00	lm												
24.2.10	3.5mm² THHN Wire	3,200.00	lm												
24.3	Raceways	1,074.00	Lin.m												
24.3.1	90 mm Ø PVC Conduit	7.00	lgth												
24.3.2	65 mm Ø PVC Conduit	19.00	lgth												
24.3.3	50 mm Ø IMC Conduit	-	lgth												
24.3.4	40 mm Ø IMC Conduit	20.00	lgth												
24.3.5	25 mm Ø IMC Conduit	15.00	lgth												
24.3.6	32 mm Ø IMC Conduit	-	lgth												
24.3.7	20 mm Ø IMC Conduit	-	lgth												
24.3.8	15 mm Ø IMC Conduit	-	lgth												
24.3.9	25 mm Ø PVC Conduit	57.00	lgth												
24.3.10	20 mm Ø PVC Conduit	240.00	lgth												
24.3.11	15 mm Ø Flexible Metallic Conduit	75.00	lm												
24.3.12	15 mm Ø FMC Straight Connector	150.00	pcs												
24.4	Low Voltage Distribution & Circuit Protective Devices	9.00	Assy												
24.4.1	ECB, 600AT, 3P, 230V in NEMA 3R	1.00	Assy												
24.4.2	ECB, 40AT, 2P, 230V in NEMA 3R	3.00	Assy												
24.4.3	ECB, 30AT, 2P, 230V in NEMA 3R	5.00	Assy												



Item No.	Description	Qty	Unit	Material Cost	Equipment Cost	Labor Cost	Estimated Direct Cost	Mark-ups in Percent		Total Mark Up		VAT	Total Indirect Cost	Total Cost	Unit Cost
								OCM	Profit	%age	Value				
								7	8	9	10	11	12	13	14
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
											7+8	x(5 + 10)	10+ 11	6 + 12	(13) / (1)
24.5	Switchboards and Panelboard	3.00	Assy												
24.5.1	Panel: MDP-1 in NEMA 1 - Surface Mounted	1.00	Assy												
	Main: 1-600AT, 600AF, 3P, 230V, 22KAIC														
	Branches: 1-125AT, 225AF, 2P, 230V, 22KAIC														
	1-150AT, 225AF, 3P, 230V, 22KAIC														
	1-80AT, 100AF, 3P, 230V, 22KAIC														
	2-50AT, 50AF, 3P, 230V, 22KAIC														
	1-160AT, 225AF, 3P, 230V, 22KAIC														
24.5.2	Panel: PPACU in NEMA 1 - Surface Mounted	1.00	Assy												
	Main: 1-150AT, 225AF, 3P, 230V, 22KAIC														
	Branches: 9-30AT, 50AF, 2P, 230V, 10KAIC														
	3-40AT, 50AF, 2P, 230V, 10KAIC														
24.5.3	Panel: LPA in NEMA 1 - Surface Mounted	1.00	Assy												
	Main: 1-80AT, 100AF, 3P, 230V, 18KAIC														
	Branches: 24-20AT, 50AF, 2P, 230V, 10KAIC														
24.6	Wiring Devices and Boxes	310.00	sets												
24.6.1	Duplex Convenience Outlet, 15A, 240V, Wall or Table Mounted	33.00	Set/s												
24.6.2	Simplex Convenience Outlet, 15A, 240V	6.00	Set/s												
24.6.3	Duplex Convenience Outlet, 15A, 240V, Floor Mounted	1.00	Set/s												
24.6.4	One Way Switch-One Gang	13.00	Set/s												
24.6.5	One Way Switch-Two Gang	8.00	Set/s												
24.6.6	One Way Switch-Three Gang	3.00	Set/s												
24.6.7	Three Way Switch-One Gang	1.00	Set/s												
24.6.8	Three Way Switch-Two Gang	2.00	Set/s												
24.6.9	Utility Box	67.00	Set/s												
24.6.10	Junction Box	150.00	Set/s												
24.6.11	Square Box	14.00	Set/s												
24.6.12	Pull Box ( 6" X 12" X 12")	12.00	Set/s												
24.7	Lighting Devices	143.00	Sets												
24.7.1	4" Dia. Recessed Type Downlight with T-20W CFL (Daylight)	78.00	Set/s												
24.7.2	2'x4' Commercial Recessed Type with Aluminum Reflector in 2-9V Straight LED Fixture	28.00	Set/s												
24.7.3	Surface Mounted Fluorescent Luminaire, 1-T5 with Diffuser	27.00	Set/s												
24.7.4	Battery Pack Emergency Lights with 1x8W LED Lamp, Nickel Cadmium, 3 Hours Duration	8.00	Set/s												
24.7.5	Ceiling Mounted Exit Signage with 2W LED Luminaire Complete with Emergency Battery Pack, 3 Hours Duration	2.00	Set/s												
24.8	Miscellaneous	1.00	lot												
24.8.1	Hangers and Supports (Steel Rods, Expansion Bolts, C/Strut-Channels, Conduit Straps, and other necessary items to support installations of panel boards, ECB's, conduit runs and wiring devices)	1.00	lot												
24.8.2	Hardwares and Consumables(Butane, Cutting Discs, Drill Bits, Electrical Tapes, Mica tubes, and other necessary items to be consumed to assure correct installations of Panels, conduit runs and wiring devices)	1.00	lot												
24.8.3	Concrete Encasement	1.00	lot												
24.8.4	Concrete Pedestal/Private Pole (Inclusive of Cast in Place Concrete	-	lot												
24.9	Testing and Commissioning	1.00	lot												
	<b>Other work items not mentioned in item 23.0 but necessary to complete (Please identify)</b>														
<b>25.0</b>	<b>COMMUNICATIONS</b>														
<b>25.A</b>	<b>Telephone and Data Structured Cabling</b>														
25.1	Equipment	3.00	units												
25.1.1	Intermediate Distribution Frame (Inclusive of Patch Panels, Network Switches, PoE Switches, Patch Cords and other accessories for complete installation)	1.00	Units												
25.1.2	Telephone Terminal Cabinet(TTC) ( patch panel, switches, hubs, cable managers, cords and other necessary accessories to complete installation)	1.00	Units												
25.1.3	Uninterruptible Power Supply (UPS)	1.00	Units												

Item No.	Description	Qty	Unit	Material Cost	Equipment Cost	Labor Cost	Estimated Direct Cost	Mark-ups in Percent		Total Mark Up		VAT	Total Indirect Cost	Total Cost	Unit Cost
								OCM	Profit	%age	Value				
								7	8	9	10	11	12	13	14
		1	2	3	4	5	6	7	8	9	7+8	x(5 + 10)	10+ 11	6 + 12	(13) / (1)
25.2	Wires, Raceways, Boxes	1.00	lot												
25.2.1	4PR Cat6 UTP Cable	860.00	lm												
25.2.2	25mm Dia PVC	50.00	lgth												
25.2.3	20mm Dia PVC	42.00	lgth												
25.2.4	Conduit Connectors and Fittings	1.00	lot												
25.2.5	Utility Box	22.00	Set/s												
25.2.6	Pull Box 4" X 6" X 6"	1.00	Set/s												
25.3	Wiring Devices	24.00	sets												
25.3.1	Data Outlet (Wall or Furniture Mounted)	20.00	Set/s												
25.3.2	Telephone/Data Outlet (FloorMounted)	2.00	Set/s												
25.3.3	Telephone/Data Outlet (Wall or Furniture Mounted)	2.00	Set/s												
25.4	Miscellaneous	1.00	lot												
25.4.1	Connecting cords,devices and adapters	1.00	lot												
25.4.2	Hangers and Supports (Steel Rods, Expansion Bolts, Strut-Channels, Conduit Straps, and other necessary items to support installations of distribution frames, wiring boxes, conduit runs and wiring devices)	1.00	lot												
25.4.3	Hardwares and Consumables(Butane, Cutting Discs, Drill Bits, Electrical Tapes, Mica tubes, and other necessary items to be consumed to assure correct installations of Distribution Frames, Telephone Cabinets, conduit runs and wiring devices)	1.00	lot												
25.B	<b>VIDEO SURVEILLANCE (CLOSED CIRCUIT TELE-VISION)</b>														
25.5	Wires/Cables, Raceways, Boxes	1.00	lot												
25.5.1	4PR Cat6 UTP Cable	300.00	lm												
25.5.2	20mm Dia PVC	72.00	lgth												
25.5.3	15mm Dia Flexible Metallic Conduit	5.00	mtrs												
25.5.4	15mm Dia Flexible Metallic Conduit Connector	10.00	pcs												
25.5.5	Conduit Connectors and Fittings	1.00	lot												
25.5.6	Junction Box	10.00	Set/s												
25.5.7	Pull Box 4" X 6" X 6"	1.00	Set/s												
25.6	Devices	10.00	sets												
25.6.1	Dome Type IP Camera, PoE Ready (with Mounting Base)	10.00	Set/s												
	Other work items not mentioned in item 25.0 but necessary to complete (Please identify)														
26.0	<b>ELECTRONIC SAFETY AND SECURITY</b>														
26.A	<b>FIRE DETECTION AND ALARM SYSTEM</b>														
26.1	Wires, Raceways, Boxes	1.00	lot												
26.1.1	#16 AWG Shielded Circuit Integrity Cable (CIC)	250.00	lm												
26.1.2	25 mm Dia IMC	65.00	lgth												
26.1.3	15mm Dia Flexible Metallic Conduit	8.00	mtrs												
26.1.4	15mm Dia Flexible Metallic Conduit Connector	16.00	pcs												
26.1.5	Conduit Connectors and Fittings	1.00	lot												
26.1.6	Junction Box	16.00	Set/s												
26.1.7	Utility Box	7.00	Set/s												
26.2	Wiring Devices	23.00	sets												
26.2.1	Addressable Smoke Detector	16.00	Set/s												
26.2.2	Manual Call Point	3.00	Set/s												
26.2.3	Horn and Strobe Light	4.00	Set/s												
	Other work items not mentioned in item 26.0 but necessary to complete (Please identify)														
	<b>Grand Total Cost</b>														
	Prepared by:														
	QS Engineer		Date												