PROJECT : **BUILDING - NATIONAL ISOTOPE CENTER PHASE 1 (SITE DEVELOPMENT AND BUILDING CONSTRUCTION)**
LOCATION : **PNRI Compound, Commonwealth Avenue, Diliman, Quezon City**
SUBJECT : **BILL OF QUANTITIES**

NSD-ESS-04

BILL OF QUANTITIES

ITEM NO.	ITEM/DESCRIPTION	QTY	UNIT	MATERIAL COST		LABOR COST		ESTIMATED DIRECT COST	MARK-UPS IN PERCENT		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
											(6)+(7)	(8)*(5)	5%*[(5) +(9)]	(9)+(10)	(5) + (11)	(12)/(3)
I	**GENERAL REQUIREMENTS**															
1	Mobilization and Demobilization	1	lot													
2	Bonds and Insurances (Construction Bond)	1	lot													
3	Permits and Licenses	1	lot													
4	Temporary Facilities / Utilities	1	lot													
5	Provision for Scaffoldings	1	lot													
6	Safety Occupational Hazards	1	lot													
7	As- Built Plans	1	lot													
8	Clearing, cleaning, and Hauling of Debris	1	lot													
9	Equipment Cost During Construction/Lifting Fee	1	lot													
10	Handling of Materials	1	lot													
11	Site Security Fee	1	lot													
	SUB-TOTAL (GENERAL REQUIREMENTS)															
II	**CIVIL/STRUCTURAL WORKS**															
A.	**BUILDING CONSTRUCTION**															
1.0	**EARTHWORKS**															
1.1	Structural Excavation	1,689.20	cu.m.													
1.2	Gravel Bedding	111.24	cu.m.													
1.3	Backfill and Compaction	1,477.06	cu.m.													
1.4	Soil Poisoning	2,116.54	sq.m.													
2.0	**CONCRETE WORKS**															
	Structural Concrete, 4000 psi, Class A 28 Days															
2.1	Girders and Beams	224.61	cu.m.													
2.2	Footings	225.61	cu.m.													
2.3	Footing Tie Beams	44.65	cu.m.													
2.4	Columns	438.68	cu.m.													
2.5	Slabs on Grade	56.86	cu.m.													
2.6	Slabs	652.07	cu.m.													
2.7	Wall Footings	6.57	cu.m.													
2.8	Stairs	47.52	cu.m.													
3.0	**REBAR WORKS**															
3.1	Reinforce Steel Bar, Grade 60	142,609.73	kg													
3.2	Reinforce Steel Bar, Grade 40	17,367.41	kg													
4.0	**FORMWORKS**															
4.1	Formworks	5,411.41	sq.m													
5.0	Miscellaneous and Consumables	1	lot													
B	**CONSTRUCTION OF TANKS**															
1.0	**EARTHWORKS**															
1.1	Structural Excavation	203.52	cu.m.													
1.2	Gravel Bedding	11.35	cu.m.													
1.3	Soil Poisoning	210.43	sq.m.													
2.0	**CONCRETE WORKS**															
	Structural Concrete, 4000 psi, Class A 28 Days															
2.1	Rainwater Tank	14.92	cu.m.													
2.2	Septic Tank	14.29	cu.m.													
2.3	Cistern Tank	14.36	cu.m.													
2.4	Fire Reserved Tank	45.74	cu.m.													
3.0	**REBAR WORKS**															
3.1	Reinforce Steel Bar, Grade 60	6,318.64	kg													
3.2	Reinforce Steel Bar, Grade 40	471.83	kg													
4.0	**FORMWORKS**															
4.1	Formworks	543.11	sq.m													
5.0	Miscellaneous and Consumables	1	lot													
	SUB-TOTAL (CIVIL/STRUCTURAL WORKS)															
III	**ARCHITECTURAL WORKS**															
1.0	**MASONRY WORKS**															
1.1	150 mm thk CHB Wall w/ mortar & 10 mm Ø rebar	1,535.14	sqm													
1.2	100 mm thk CHB Wall w/ mortar & 10 mm Ø rebar	1,371.62	sqm													
1.3	25 mm thk. Plastering	5,813.52	sqm													
2.0	**METAL WORKS**															
	Steel Pipe															

BILL OF QUANTITIES

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				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2.1	50mm Ø S.S Pipe Railing	125.83	lm													
2.2	25mm Ø S.S Pipe Railing	115.30	lm													
2.3	Aluminum Nosing	253.07	lm													
3.0	**THERMAL AND MOISTURE PROTECTION**															
	Waterproofing															
3.1	WP-01 Cementitious Waterproofing	113.10	sqm													
3.2	Torch Applied Membrane	536.82	sqm													
4.0	Miscellaneous and Consumables	1	lot													
	SUB-TOTAL (ARCHITECTURAL WORKS)															
IV.	**FIRE PROTECTION SYSTEM**															
1.0	**Fire Pump Equipments & Fire Reserve Tank**															
1.1	**Fire Pump, FP/1**	1.00	Unit													
	Vertical Turbine Fire Pump (Electric Motor Driven), UL Listed & FM Approved, complete with standard accessories															
	300 GPM x 290 ft. TDH															
	1770 RPM, 40 HP															
	400 Volts, 3-Ø (Three Phase), 60 Hz															
	Controller for Fire Pump Electric Motor Driven, FPC/1															
1.2	**Jockey Pump, JP/1**	1.00	Unit													
	Submersible type jockey pump complete with standard accessories															
	20 GPM Capacity x 315 ft. TDH															
	3500 RPM, 3 HP															
	400 Volts, 3-Ø (Three Phase), 60 Hz															
	Controller for Jockey Pump, JPC/1															
1.3	**Fire Reserve Tank, Reinforced Concrete Tank, Underground**	115.00	cu.m.													
	115 cu,m Capacity															
1.4	Miscellaneous and Consumables	1.00	LS													
1.5	Fire Pump Performance Testing	1.00	LS													
2.0	**Valves and Other Related Materials**															
	OS&Y Gate Valve & Supervisory Switch															
2.1	OS&Y Gate Valve, 4" Ø (100 mm)	3.00	pc/s													
2.2	OS&Y Gate Valve, 2" Ø (50 mm)	1.00	pc/s													
2.3	Tamper Switch for OS&Y Gate Valve	3.00	pc/s													
	Check Valve															
2.4	Check Valve, 4" Ø (100 mm)	1.00	pc/s													
2.5	Check Valve, 2" Ø (50 mm)	1.00	pc/s													
	Pressure Relief Valve															
2.6	Pressure Relief Valve, 4" Ø (100 mm)	1.00	pc/s													
	Flexible Connection															
2.7	Flexible Connection, 4" Ø (100 mm)	1.00	pc/s													
2.8	Flexible Connection, 2" Ø (50 mm)	1.00	pc/s													
2.9	Flow Meter, 4" Ø (100 mm)	1.00	pc/s													
2.10	75 mm x 65 mm (1 no.) Fire Pump Test Connection Valve	1.00	Unit													
	Pressure Gauge															
2.11	Pressure Gauge, 4" Ø (100 mm)	1.00	pc/s													
2.12	Pressure Gauge, 2" Ø (50 mm)	1.00	pc/s													
2.13	600 mm x 600 mm Access Manhole w/Ladder Rung	1.00	Unit													
3	**Fire Protection Distribution Materials**															
	Alarm Check Valve Riser															
3.1	Vertical Alarm Check Valve Assembly, 4" Ø (100 mm) complete with standard accessories and trimmings	1.00	Assy													
3.2	OS&Y Gate Valve, 4" Ø (100 mm)	1.00	pc/s													
3.3	Tamper Switch for 4" Ø (100 mm) OS&Y Gate Valve	1.00	pc/s													
	Floor Control Valve Assembly															
3.4	OS&Y Gate Valve, 3" Ø (75 mm)	4.00	pc/s													
3.5	Check Valve, 3" Ø (75 mm)	4.00	pc/s													
3.6	Water Flow Switch, 4" Ø (100 mm)	4.00	pc/s													
3.7	Supervisory Switch	4.00	pc/s													
3.8	25mmØ Test & Drain Valve	4.00	pc/s													
3.9	32mmØ Section Drain Valve	4.00	pc/s													
3.10	25mm Sight Glass	4.00	pc/s													
3.11	Pressure Gauge	4.00	pc/s													

BILL OF QUANTITIES

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				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
3.12	**Flushing Valve (Normally Closed), 1-1/2" Ø (40 mm)**	4.00	pc/s													
3.13	**25mmØ Remote Inspector Test Valve**	1.00	pc/s													
	Fire Department Connection															
3.14	65 mm Ø (2-way) x 100 mm Ø AFSS Fire Dep't. Connection	2.00	Unit													
3.15	65 mm Ø (2-way) x 100 mm Ø Dry Standpipe Fire Dep't. Connection	2.00	Units													
3.16	Check Valve , 4" Ø (100 mm)	2.00	Units													
3.17	65mm Fire Hose Valve	7.00	Units													
3.18	100mmØ x 65mmØ x 65mmØ (Two Way) Roof Manifold	2.00	Units													
	Sprinkler Head															
3.19	Sprinkler Head; Pendent Type 155 Deg F Standard Coverage, Standard Response K Factor 5.6 1/2" NPT	175.00	pc/s													
	Fire Hose Cabinet															
3.20	Fire Hose Cabinet - Complete with standard accessories	7.00	Sets													
	to include multipurpose dry chemical fire extinguisher															
	B.I. Pipe Sch. 40 x 6 m lm															
3.21	100 mm Ø	19.00	pc/s													
3.22	75 mmØ	7.00	pc/s													
3.23	65 mm Ø	8.00	pc/s													
3.24	50 mm Ø	10.00	pc/s													
3.25	40 mm Ø	25.00	pc/s													
3.26	32 mm Ø	16.00	pc/s													
3.27	25 mm Ø	55.00	pc/s													
	Fire Extinguisher															
3.28	Fire Extinguisher 10 lbs. (4.5 kg) ABC Dry Chemical	31.00	pc/s													
3.29	Fire Extinguisher 10 lbs. (4.5 kg) CO2 Carbon Dioxide	6.00	pc/s													
3.30	Fire Extinguisher 10 lbs. (4.5 kg) Wet Chemical	1.00	pc/s													
3.31	**B.I. Fittings**	1.00	LS													
3.32	**Pipe Hanger and Support**	1.00	LS													
3.33	**Consumable Materials**	1.00	lot													
3.34	**Testing and Commissioning (Pressure Leak Test)**	1.00	lot													
	SUB-TOTAL (FIRE PROTECTION SYSTEM)															
V.	**PLUMBING WORKS**															
	Plumbing and Sanitary Works															
1.0	**Pumps and Tanks**															
1.1	**BP/1 Duplex Type Booster Pump**	1	Set/s													
	Type: Vertical In-line															
	Each Pump Rating: 25 GPM, 1050 FT. TDH															
	Drive: Electric Motor, Closed Coupled															
	Motor Rating: 1.5HP, 3500RPM, 230V, 1Ph, 60Hz															
	w/ Duplex Type Variable Frequency Drive Controller															
1.2	**BP/2 Duplex Type Booster Pump**	1	Set/s													
	Type: Vertical In-line															
	Each Pump Rating: 25 GPM, 1050 FT. TDH															
	Drive: Electric Motor, Closed Coupled															
	Motor Rating: 1.5HP, 3500RPM, 230V, 1Ph, 60Hz															
	w/ Duplex Type Variable Frequency Drive Controller															
1.3	**BP/3 Duplex Type Booster Pump**	1	Set/s													
	Type: Submersible															
	Each Pump Rating: 65 GPM, 226 FT. TDH															
	Drive: Electric Motor, Closed Coupled															
	Motor Rating: 7.5HP, 3500RPM, 400V, 3Ph, 60Hz															
	w/ Duplex Type Variable Frequency Drive Controller															
1.4	**BP/4 Duplex Type Booster Pump**	1	Set/s													
	Type: Submersible															
	Each Pump Rating: 65 GPM, 226 FT. TDH															
	Drive: Electric Motor, Closed Coupled															
	Motor Rating: 7.5HP, 3500RPM, 400V, 3Ph, 60Hz															
	w/ Duplex Type Variable Frequency Drive Controller															
1.5	**TP/1 Duplex Type Transfer Pump**	1	Set/s													
	Type: Submersible															
	Each Pump Rating: 50 GPM, 146 FT. TDH															
	Drive: Electric Motor, Closed Coupled															
	Motor Rating: 3HP, 3500RPM, 400V, 3Ph, 60Hz															
	w/ Duplex Type Direct on Line Controller															

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				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.6	**TP/2 Duplex Type Transfer Pump**	1	Set/s													
	Type: Submersible															
	Each Pump Rating: 50 GPM, 146 FT. TDH															
	Drive: Electric Motor, Closed Coupled															
	Motor Rating: 3HP, 3500RPM, 400V, 3Ph, 60Hz															
	w/ Duplex Type Direct on Line Controller															
1.7	**Pump Operation / Performance Test**	1	Lot													
1.8	**RT/1 Roof Water Tank**	2	Unit/s													
	Capacity: 750 Gallons															
1.9	**BT/1 Bladder Tank**	1	Unit/s													
	Capacity: 90 Gallons															
	Membrane															
1.10	**BT/2 Bladder Tank**	1	Unit/s													
	Capacity: 30 Gallons															
	Membrane															
1.11	**EWH/1 Electric Water Heater**	1	Set/s													
	Type: Single Point Instantaneous															
	Motor Rating: 3.5kW, 230V, 1Ph, 60Hz															
	Capacity: 2 L/Min Flowrate															
1.12	**EWH/2 Electric Water Heater**	1	Set/s													
	Type: Single Point Instantaneous															
	Motor Rating: 3.5kW, 230V, 1Ph, 60Hz															
	Capacity: 2 L/Min Flowrate															
2.0	**Storm Drainage System**															
2.1	200 mm ⌀ High Density Polyethylene HDPE	19	Length													
2.2	150 mm ⌀ High Density Polyethylene HDPE	22	Length													
2.3	100 mm ⌀ High Density Polyethylene HDPE	76	Length													
2.4	75 mm ⌀ High Density Polyethylene HDPE	31	Length													
2.5	100 mm Ø Rainwater Outlet/ROOF DRAIN	7	set/s													
2.6	75 mm Ø Rainwater Outlet/ ROOF DRAIN	1	Set/s													
2.7	100 mm Ø Deck Drain (Brass Top w/ Cast Iron Body)	7	Set													
2.8	100 mm Ø Roof Drain (Brass Top w/ Cast Iron Body)	9	Set													
2.9	100 mm Ø Floor Clean-out (Brass)	1	Lump Sum													
2.10	50 mm Ø Floor Clean-out (Brass)	9	Lump Sum													
2.11	100 mm Ø Ceiling Clean-out (PVC)	9	Lump Sum													
2.12	50 mm Ø Ceiling Clean-out (PVC)	14	Lump Sum													
2.13	Catch Basin Cover 600mm x 600mm	11	Assembly													
2.14	Manhole Cover, 600mm w/ 780mm x 125mm frane	8	Assembly													
2.15	Pipe Connectors, Fittings and Accessories	1	lot													
2.16	Hanger / Bracket / Support / Concrete Saddle	1	lot													
2.17	Miscellaneous and Consumables	1	lot													
2.18	Testing Works	1	Lot													
3.0	**Sewer and Vent System**															
3.1	150 mm ⌀ High Density Polyethylene HDPE	6	Length													
3.2	100 mm ⌀ High Density Polyethylene HDPE	85	Length													
3.3	75 mm ⌀ High Density Polyethylene HDPE	20	Length													
3.4	50 mm ⌀ High Density Polyethylene HDPE	64	Length													
3.5	50 mm ⌀ PVC Pipe, Series 1000, 4m length	197	Length													
3.6	Rubber Insulation, 50 mm Ø x 2 m L x 25 mm Thick	295	Length													
3.7	100 mm Ø Floor Drain (Brass Top w/ Cast Iron Body)	4	Set													
3.8	75 mm Ø Floor Drain (Brass Top w/ Cast Iron Body)	1	Set													
3.9	50 mm Ø Floor Drain (Brass Top w/ Cast Iron Body)	31	Set													
3.10	150 mm Ø Floor Clean-out (Brass)	25	Set/s													
3.11	100 mm Ø Floor Clean-out (Brass)	25	Set/s													
3.12	75 mm Ø Floor Clean-out (Brass)	8	Set/s													
3.13	50 mm Ø Floor Clean-out (Brass)	10	Set/s													
3.14	25 mm Ø Ceiling Clean-out (PVC)	1	Set/s													
3.15	75 mm Ø Vent thru Roof	2	Set													
3.16	Pipe Connectors, Fittings and Accessories	1	Lot													
3.17	Hanger / Bracket / Support / Concrete Saddle	1	Lot													
3.18	Miscellaneous and Consumables	1	Lot													
3.19	Testing Works (Leak and Gravity Test)	1	Lot													
4.0	**Water Suppy System**															
4.1	65 mm ⌀ Galvanized Iron Pipe Sch 40, 6m	6	Length													
4.2	50 mm ⌀ Galvanized Iron Pipe Sch 40, 6m	8	Length													
4.3	40 mm ⌀ Galvanized Iron Pipe Sch 40, 6m	2	Length													

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				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4.4	65 mm ⌀ PPR Pipes PN20, 4m ATLANTA Pipes & Fittings	7	Length													
4.5	50 mm ⌀ PPR Pipes PN20, 4m	31	Length													
4.6	40 mm ⌀ PPR Pipes PN20, 4m	35	Length													
4.7	32 mm ⌀ PPR Pipes PN20, 4m	14	Length													
4.8	25 mm ⌀ PPR Pipes PN20, 4m	22	Length													
4.9	20 mm ⌀ PPR Pipes PN20, 4m	93	Length													

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				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4.10	40 mm ⌀ Gate Valve	9	Pieces													
4.11	25 mm ⌀ Gate Valve	7	Pieces													
4.12	20 mm ⌀ Gate Valve	25	Pieces													
4.13	50 mm ⌀ Check Valve Flange	1	Pieces													
4.14	25 mm ⌀ Water Hammer Arrester	18	Pieces													
4.15	20 mm ⌀ Hose Bibb	7	Pieces													
4.16	Pipe Connectors, Fittings and Accessories	1	Lot													
4.16	Hanger / Bracket / Support / Concrete Saddle	1	Lot													
4.17	Miscellaneous and Consumables	1	Lot													
4.18	Testing Works (Leak and Pressure Test)	1	Lot													
	SUB-TOTAL (PLUMBINGL WORKS)															
VI.	**HEATING, VENTILATING AND AIRCONDITIONING SYSTEM**															
A.	**Airconditioning Equipment**															
1.0	**Airconditioning VRF / VRV (Copper Refrigerant Pipes - Hard Drawn Type L)**															
1.1	Copper Pipe , Ø 41.3 mm (1 5/8") x 6 m L	19.00	Length													
1.2	Copper Pipe , Ø 34.9 mm (1 3/8) x 6 m L	29.00	Length													
1.3	Copper Pipe , Ø 28.6 mm (1 1/8) x 6 m L	35.00	Length													
1.4	Copper Pipe , Ø 19.1 mm (3/4) x 6 m L	53.00	Length													
1.5	Copper Pipe , Ø15.9 mm (5/8") x 6 m L	32.00	Length													
1.6	Copper Pipe , Ø 12.5 mm (1/2") x 6 m L	18.00	Length													
1.7	Copper Pipe , Ø 9.5 mm (3/8") x 6 m L	23.00	Length													
1.8	Copper Pipe , Ø 6.35 mm (1/4") x 6 m L	14.00	Length													
1.9	Miscellaneous and Consumables	1.00	lot													
2.0	**Airconditioning VRF / VRV Rubber Insulation - Closed Cell Elastomeric (CCE), Class 1 x 20 mm thick**															
2.1	Rubber Insulation, Ø 41.3 mm (1 5/8") x 2m	57.00	Length													
2.2	Rubber Insulation , Ø 34.9 mm (1 3/8) x 2m	87.00	Length													
2.3	Rubber Insulation , Ø 28.6 mm (1 1/8) x 2m	105.00	Length													
2.4	Rubber Insulation, Ø 19.1 mm (3/4) x 2m	159.00	Length													
2.5	Rubber Insulation, Ø 15.9 mm (5/8") x 2m	96.00	Length													
2.6	Rubber Insulation, Ø 12.5 mm (1/2") x 2m	54.00	Length													
2.7	Rubber Insulation, Ø 9.5 mm (3/8") x 2m	69.00	Length													
2.8	Rubber Insulation, Ø 6.35 mm (1/4") x 2m	42.00	Length													
2.9	Miscellaneous and Consumables	1.00	lot													
B.	**Ventilation Equipment**															
1.0	**Air Diffuser & Grilles & Accessories**															
1.1	Fresh Air Aluminum Louvers, 1,800 x 600 mm	1.00	pc/s													
1.2	Fresh Air Aluminum Louvers, 750 x 550 mm	2.00	pc/s													
1.3	Exhaust Air Aluminum Louver, 1,300 mm x 600 mm	2.00	pc/s													
1.4	Exhaust Air Aluminum Louver, 700 mm x 600 mm	2.00	pc/s													
1.5	Exhaust Air Aluminum Louver, 650 mm x 200 mm	2.00	pc/s													
1.6	Exhaust Air Aluminum Louver, 450 mm x 200 mm	1.00	pc/s													
1.7	Exhaust Air Grille (EAG), 400 mm x 400 mm	2.00	pc/s													
1.8	Exhaust Air Grille (EAG), 300 mm x 300 mm	3.00	pc/s													
1.9	Exhaust Air Grille (EAG), 250 mm x 250 mm	7.00	pc/s													
1.10	Exhaust Air Grille (EAG), 150 mm x 150 mm	5.00	pc/s													
1.11	Fresh Air Grille (FAG), 1,800 mm x 400 mm	1.00	pc/s													
1.12	Fresh Air Grille (FAG), 300 mm x 300 mm	3.00	pc/s													
1.13	Fresh Air Grille (FAG), 250 mm x 250 mm	9.00	pc/s													
1.14	Fresh Air Grille (FAG), 150 mm x 150 mm	7.00	pc/s													
1.15	Volume Dampers, 300 mm x 200 mm	1.00	pc/s													
1.16	Volume Dampers, 200 mm x 200 mm	4.00	pc/s													
1.16	Volume Dampers, 150 mm x 150 mm	9.00	pc/s													
1.17	Fire Dampers, 1,200 mm x 350 mm	1.00	pc/s													
1.18	Fire Dampers, 450 mm x 300 mm	1.00	pc/s													
1.19	Fire Dampers, 400 mm x 300 mm	1.00	pc/s													
1.20	Fire Dampers, 350 mm x 250 mm	1.00	pc/s													
1.21	Fire Dampers, 350 mm x 200 mm	1.00	pc/s													
1.22	Fire Dampers, 250 mm x 200 mm	1.00	pc/s													
1.23	Fire Dampers, 200 mm x 200 mm	2.00	pc/s													
1.24	Fire Dampers, 200 mm x 150 mm	3.00	pc/s													
1.25	Fire Dampers, 150 mm x 150 mm	8.00	pc/s													
1.25	Back Draft Dampers, 900 mm x 500 mm	2.00	pc/s													
1.26	Back Draft Dampers, 500 mm x 500 mm	2.00	pc/s													
1.27	Miscellaneous and Consumables	1.00	lot													
C.	**Piping Works**															
1.0	150 mm Ø PVC Pipe, Series 600, 3m Length	22.00	pc/s													
1.1	100 mm Ø PVC Pipe, Series 600, 3m Length	8.00	pc/s													
1.2	Airconditioning VRF / VRV (Fiberglass Insulation, 25 mm Thick x 48 kg/m^3, 1.2 m x 2.3 m roll, 1 side foil)	163.00	pc/s													

BILL OF QUANTITIES

ITEM NO.	ITEM/DESCRIPTION	QTY	UNIT	MATERIAL COST		LABOR COST		ESTIMATED DIRECT COST	MARK-UPS IN PERCENT		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.3	150 mm Ø Aluminum Vent Cap, with hood and insect screen, oven baked enamel paint finish	2.00	pc/s													

BILL OF QUANTITIES

ITEM NO.	ITEM/DESCRIPTION	QTY	UNIT	MATERIAL COST		LABOR COST		ESTIMATED DIRECT COST	MARK-UPS IN PERCENT		TOTAL MARK-UP		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1.4	G.I. Sheets #24, 1.22 m x 2.44 m	136.00	Sheet/s													
1.5	G.I. Sheets #22, 1.22 m x 2.44 m	52.00	Sheet/s													
1.6	G.I. Sheets #20, 1.22 m x 2.44 m	7.00	Sheet/s													
1.70	Miscellaneous and Consumables	1.00	lot													
	SUB-TOTAL (HEATING, VENTILATION AND AIRCONDITIONING SYSTEM)															
VII.	**ELECTRICAL WORKS**															
1.1	Grounding bonding system	1	item													
1.2	Lightning Protection	1	item													
	Boxes															
1.4	(L)108mm x (W)58mm x (H)45mm PVC Utility Box	340	Sets													
1.5	(H)45mm PVC Junctlon Box w/ Cover	612	Sets													
	Conduits (3 lm per piece)															
1.6	50mmØ IMC	7	pcs													
1.7	40mmØ IMC	3	pcs													
1.8	20mmØ IMC	31	pcs													
1.9	90mmØ PVC	144	pcs													
1.10	80mmØ PVC	9	pcs													
1.11	65mmØ PVC	30	pcs													
1.12	50mmØ PVC	40	pcs													
1.13	40mmØ PVC	16	pcs													
1.14	25mmØ PVC	15	pcs													
1.15	20mmØ PVC	2134	pcs													
1.16	20mmØ LIQUID TIGHT FLEXIBLE CONDUIT (LTFMC)	1530	lm													
1.17	20mmØ LTFMC Straight Connector	1224	set/s													
	Miscellaneous															
1.18	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	Lot													
1.19	Hardwares and Consumables(Butane, Cutting Discs, Drill Bits, Electrical Tapes and other necessary items to be consumed to assure correct installations of panel boards, ECB, conduit runs and wiring devices)	1	Lot													
1.20	Testing and Commisioning of Equipments and Devices	1	Lot													
	Civil Works															
1.21	1. Hand Hole	7	pcs													
1.22	2. Concrete incasement	92	lot													
	SUB-TOTAL (ELECTRICAL WORKS)															
VIII.	**COMMUNICATION**															
1.0	**CCTV**															
	Raceway and Boxes															
	Conduits															
1.1	32mm diameter IMC Pipe x 3 m	29	pc/s													
1.2	25mm diameter PVC pipe x 3 m	535	pc/s													
1.3	Utility box	33	sets													
1.4	Pullbox (type and size as required)	1	lot													
1.5	Miscellaneous and Consumables	1	lot													
2.0	**FDAS**															
	Raceway and Boxes															
	Conduits															
2.1	25mm diameter IMC Pipe x 3 m	24	pc/s													
2.2	20mm diameter PVC pipe x 3 m	615	pc/s													
2.3	Utility box	18	sets													
2.4	Junction box	84	sets													
2.5	Pullbox (type and size as required)	4	lot													
2.6	Miscellaneous and Consumables	1	lot													
3.0	**INTERCOM SYSTEM**															
	Raceway and Boxes															
	Conduits															
3.1	25mm diameter IMC Pipe x 3 m	16	pc/s													
3.2	20mm diameter PVC pipe x 3 m	300	pc/s													
3.3	Utility box	22	set/s													
3.4	Pullbox (type and size as required)	4	set/s													
3.5	Miscellaneous and Consumables	1	lot													

BILL OF QUANTITIES

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				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST		OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)					(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
4.0	**TELEPHONE AND LAN SYSTEM**															
	Raceway and Boxes															
	Conduits															
4.1	32mm diameter IMC Pipe x 3 m	8	pc/s													
4.2	25mm diameter IMC Pipe x 3 m	4	pc/s													
4.3	20mm diameter PVC pipe x 3 m	1316	pc/s													
4.4	Utility box	74	set/s													
4.5	Pullbox (type and size as required)	4	set/s													
4.6	Miscellaneous and Consumables	1	lot													
5.0	**DOOR ACCESS**															
	Raceway and Boxes															
5.1	25mm IMC pipe x 3 m	5	pc/s													
5.2	20mm EMT pipe x 3 m	84	pc/s													
5.3	Utility box	15	set/s													
5.4	Pullbox	2	set/s													
5.5	Miscellaneous and Consumables	1	lot													
	SUB-TOTAL (COMMUNICATION)															
	TOTAL															