

PROJECT: **Refurbishment and Completion of the UP Baguio Cultural Hub (Bulwagan Juan Luna) Phase 2**
LOCATION: **UP-BAGUIO, GOVERNMENT CENTER ROAD, BAGUIO CITY**
SUBJECT: **AGENCY & DETAILED ESTIMATE**

Item	DESCRIPTION	Location on Plan	QUANTITY	UNIT	MATERIAL UNIT COST	LABOR UNIT COST	TOTAL DIRECT COST	PROFIT	VAT(5%)	TOTAL COST	TOTALS
01000	DIVISION 01 - GENERAL REQUIREMENTS										
	Mobilization and Demobilization		1.00	lot							
	Temporary Facilities		1.00	lot							
	Lifting Cost		1.00	lot							
	Scaffolding Rental		1.00	lot							
	Equipment and Tools		1.00	lot							
	Safety Provision (See Project Manual for Details)		1.00	lot							
DIVISION 1 SUBTOTAL											
02000	DIVISION 02 - SITEWORK										
	Excavation										
	Fill including tampering at every 100mm soil fill										
	500mm Ø x 6000mm Bore piling	S1 Theater Lobby Foundation	37.00	holes							
	600mm Ø Concrete Culvert with excavation and fill restoration of stairs and pavers	Stormdrain	26.00	m³							
	Site Demolition										
	Door and Frame To Be Removed include hauling within the campus	S2 Level 1	9.00	pc							
	Window and Frame To Be Removed include hauling within the campus	S2 Level 1	8.00	pc							
	Finish Floor To Be Removed include disposal	S2 Level 1	243.00	m²							
	Floor Slab To Be Removed include disposal	S2 Level 1 & 2	515.00	m²							
	All types of Walls To Be Removed (i.e. CMU walls, wall tiles, existing wood panels etc.) include disposal of unusable materials and hauling within the campus of recyclable ones	S2 Level 1	140.00	m²							
	Existing Stone Masonry	S2 Level 1	28.00	m²							
	4" HSS Pipe	S2 Level 5	2.00	pc							
	Existing Steel beam alteration	S2 Stair Shafts	20.00	pc							
DIVISION 2 SUBTOTAL											
03000	DIVISION 03 - CONCRETE										
	Concrete Forms and Accessories										
	12mm Phenolic Formwork + steel scaffolding Rental for Cast-in-Place Concrete	S1 theater Lobby floor and stair slab with integrated beams	446.00	m²							
	12mm Phenolic Formwork + steel scaffolding Rental for Cast-in-Place Concrete	S1 theater Lobby Stepped Staircase	17.00	m²							
	12mm Phenolic Formwork Rental for Cast-in-Place Concrete	S1 Concrete pile cap	43.00	m²							
	12mm Phenolic Formwork Rental for Cast-in-Place Concrete	S1 Concrete Beams	43.00	m²							
	12mm Phenolic Formwork Rental for Cast-in-Place Concrete	Elevator Lobby Tie Beam	4.00	m²							
	12mm Phenolic Formwork Rental for Cast-in-Place Concrete	Elevator Shaft Pile cap	12.00	m²							

12mm Phenolic Formwork Rental for Cast-in-Place Concrete	Elevator Shaft Column	5.00 m²
12mm Phenolic Formwork Rental for Cast-in-Place Concrete	Elevator Structural Wall	7.00 m²
12mm Phenolic/Steel Formwork Rental for Cast-in-Place Concrete	S2 Stair Shaft Level 6 Stairs	6.00 m²
12mm Phenolic/Steel Formwork Rental for Cast-in-Place Concrete	Hardscape	216.00 m²
12mm Phenolic/Steel Formwork Rental for Cast-in-Place Concrete	Structural Wall S2 Level 1 & Level 2	62.00 m²
12mm Phenolic/Steel Formwork Rental for Cast-in-Place Concrete	Elevator RC Wall and RC pedestal column; elevator lobby pedestal column	30.00 m²
12mm Phenolic/Steel Formwork Rental for Cast-in-Place Concrete	Rainwater Catch basin	9.81 m²
Reinforcement		
* Add #16 GI Tie Wire to reinforcement and wastage to unit costs		
Foundation		
20mm Reinforcing Steel Bar G60; fy 413 MPa	S1 Circular Bored Pile Main Bars	5,632.00 kg
12mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Circular Bored Pile Circular Ties	1,559.00 kg
Pile Cap		
20mm Reinforcing Steel Bar G60; fy 413 MPa	S1 Theater Lobby Foundation	134.00 kg
20mm Reinforcing Steel Bar G60; fy 413 MPa	S2 Level 1 Timber Deck Foundation	119.00 kg
Composite Column		
16mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Circular Hollow Section Composite Column Main Bars	2,617.00 kg
Pile Cap / Elevator Shaft		
34.8mPA (5000PSI @ 28 days) Elevator Foundation Slab serving as pile cap and 4 sets of piles: Foundation Slab is 3000mm x 3000mm x 900mm reinforced top and bottom with 20mmØ G60 RSB spaced at 150mm bothways; Piles are 500mmØ x 6000mm reinforced with 8-20mmØ G60 with 10mmØ G60 circular ties; tie wires included; provide 50 mm thk gravel base; Labor for Bore Piling included	Elevator Pit Foundation Slab and Pile	1.00 lot
200mm 34.48MPa Cast in place Reinforced Concrete Wall (5000PSI @28 days) with 12mmØ rebar G60; fy420 (300mm OC bothways)	Elevator Pit RC wall	3.00 m³
4-400mmX400mm1200mm 34.48MPa Cast in place reinforced Concrete Column (5000PSI @28 days) with 16mm Vertical Main Rebar G60 and 10mm G60 Lateral Ties	Elevator Pit RC pedestal column	1.00 m³
Beams		
20mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Concrete Beam Main Bars	2,647.00 kg
12mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Concrete Beam Stirrups	2,056.00 kg
20mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Concrete Tie Beam Main Bars Elevator Lobby	184.00 kg
12mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Concrete Tie Beam Stirrups Elevator Lobby	54.00 kg

Floor Slab

16mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 200mm bothways]	S1 Theater Lobby 250mm Flat slab and ramp	6,238.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	S1 Elevator Lobby 125mm Slab Level 1	205.00 kg
16mm Reinforcing Steel Bar G60; fy 420 MPa [200mm OC bothways + 200mm bothways]	S1 Elevator Lobby 250mm Flat slab Level 2	332.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	S1 Elevator Lobby 125mm Slab Level 3	259.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	S1 Elevator Lobby 100mm Slab Level 5	192.00 kg
16mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 200mm bothways]	S2 200mm Structural Slab Level 1 & 2	12,056.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	S2 Floor Slab @ level 2 125mm slab topping	6,635.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	S2 Floor Slab @ level 3 125mm slab topping	6,844.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	S2 Stair Shaft 125mm Landing Level 3	250.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 200mm bothways]	S2 100mm Floor Slab @ level 5	1,500.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 200mm bothways]	S2 Stair Shaft 100mm Landing Level 3.7, 5, 5.7, & 6.5	1,125.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 200mm bothways]	Elevator Shaft	92.00 kg

Hardscape

16mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 200mm bothways]	250mm Flat Slab Level 3	531.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	S1 125mm Stepped Staircase	1,125.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	125mm SLab Level 1	327.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	125mm SLab Level 2	879.00 kg
12mm Reinforcing Steel Bar G60; fy 420 MPa [150mm OC bothways + 150mm bothways]	125mm SLab Level 3	347.00 kg
12mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Stepped Staircase	1,618.00 kg
16mm Reinforcing Steel Bar G60; fy 420 MPa	S1 Stepped Staircase	2,872.00 kg

Staircase

12mm Reinforcing Steel Bar G60; fy 414 MPa	S1 Theater Lobby Stepped Staircase	355.00 kg
16mm Reinforcing Steel Bar G60; fy 420 MPa	S1 Theater Lobby Stepped Staircase	630.00 kg
12mm Reinforcing Steel Bar G60; fy 414 MPa	S2 Stair Shaft	35.00 kg
16mm Reinforcing Steel Bar G60; fy 420 MPa	S2 Stair Shaft	62.00 kg
12mm Reinforcing Steel Bar G60; fy 414 MPa	S2 Multi Purpose Hall Entrance	87.00 kg
16mm Reinforcing Steel Bar G60; fy 420 MPa	S2 Multi Purpose Hall Entrance	154.00 kg
12mm Reinforcing Steel Bar G60; fy 414 MPa	S2 Level 1 Staircase To Level 2	146.00 kg
16mm Reinforcing Steel Bar G60; fy 420 MPa	S2 Level 1 Staircase To Level 2	259.00 kg

Cast in place Concrete Wall

12mm Reinforcing Steel Bar G60; fy 420 MPa	Level 1-2	3,127.00 kg
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Cast in place Concrete Catch basin

10mm Reinforcing Steel Bar G60; fy 420 MPa	Library	295.00 kg
10mm Reinforcing Steel Bar G60; fy 420 MPa	Library	59.00 kg

Cast in Place Concrete

**Allow for wastage and contingency cost to unit costs*

**All Concrete is 30 MPa or as otherwise indicated*

Note: Include in unit cost of mandatory testing of concrete shall be to a minimum of 12 cylinders per batch

Foundation

S.1-F1 500mm Ø Poured Concrete Bored Pile 24MPa[3500PSI]	S1 Theater Lobby Foundation	33.00 m³
S.1-P1 600x600x600mm Cast in place Concrete Pile Cap	S1 Theater Lobby Foundation	9.00 m³
S.2-F3 450x450x600mm Cast in place Concrete Footing	S2 Level 1 Timber Deck Foundation	2.00 m³

Composite Column

Reinforced Concrete Filler for Black Iron Pipe 12" (300mm) Composite Column 25MPa[3500PSI]	S1 Theater Lobby	13.00 m³
Concrete Filler for Steel-HSS Round 100mm (4") x 10mm thk Composite Column 25MPa[3500PSI]	S2 Level 1	1.00 m³

Beams

S.1 BO2 200mm x 450mm cast-in place concrete beams 27.5MPa[4000PSI]	S1 Theater Lobby Framing	6.00 m³
S.1 BO4 300mm x 450mm cast-in place concrete beams 27.5MPa[4000PSI]	S1 Theater Lobby Framing	2.00 m³
S.1 TB01 300mm x 450mm cast-in place concrete beams 27.5MPa[4000PSI]	S1 Theater Lobby Framing	1.00 m³

Floor Slab

250mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S1 Theater Lobby Flat slab and ramp	73.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S1 Elevator Lobby Level 1	3.00 m³
250mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S1 Elevator Lobby Level 2	3.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S1 Elevator Lobby Level 3	2.00 m³
100mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S1 Elevator Lobby Level 5	1.30 m³
200mm Structural Cast in Place Concrete Slab 27.5MPa[4000PSI]	S2 200mm Structural Slab Level 1 & 2	110.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S2 Floor Slab @ level 2slab topping	67.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S2 Floor Slab @ level 3 slab topping	69.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S2 Stair Shaft Landing Level 3	3.00 m³
100mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S2 Floor Slab @ level 5	12.00 m³
100mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	S2 Stair Shaft Landing Level 3, 5, 5.7, & 6.5	9.00 m³

100mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	Elevator Shaft	1.00 m³
Hardscape		
250mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	Level 3	7.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	Stepped Staircase	18.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	Level 1	3.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	Level 2	9.00 m³
125mm Structural Cast in Place Concrete Flat Slab 27.5MPa[4000PSI]	Level 3	3.00 m³
Staircase		
150mm thk Stepped Cast in place Concrete Stairs case	S1 Theater Lobby Stepped Staircase	2.00 m³
125mm thk Cast in place Concrete Staircase	S2 Stair Shaft	1.00 m³
125mm thk Cast in place Concrete Staircase	S2 Multi Purpose Hall Entrance	1.00 m³
125mm thk Cast in place Concrete Staircase	S2 Level 1 Staircase To Level 2 Art gallery	2.00 m³
Cast in place Concrete Wall		
200mm Cast in Place Concrete Retaining Wall 27.5MPa[4000PSI]	S2 Level 1	127.00 m³
150mm Cast in Place Concrete	Hardscape	64.00 m³
100mm Cast in Place Concrete	Hardscape	1.00 m³
Cast in place Concrete Catch basin		
1100 (L) x 1100 (W) x 1000 (H) mm Cast in Place Concrete Catch basin	Library	3.76 m³
1100 (L) x 1100 (W) x 600 (H) mm Cast in Place Concrete Catch basin	Library	0.75 m³
25mm Gravel 50mm thk	Catch basin Bedding	12.10 m³

DIVISION 3 SUBTOTAL

04000 DIVISION 04 - MASONRY

125x200x400mm Concrete Hollow Block Assembly- 3 Core, including Mortar fill and Reinforcement 10mm Rebar G33; fy 275, 600 OC bothways include 25mm smooth sand cement plaster finish on both sides and drilling of rebar into existing floor and column filled with HV concrete epoxy	S2 & S3 Exterior Walls	1,592.00 m²
3-5mm Thk high-Performance Acrylic Render	All Exposed Columns and Beams	1,777.00 m²

DIVISION 4 SUBTOTAL

05000 DIVISION 05 - METALS

<i>*wastage included in quantities</i>		
Structural Composite Columns		
Steel-HSS Round 100mm (4") x 10mm thk @ 6M include 3 coats epoxy primer + finish	S2 Level 1 Timber Deck	13 pcs
Galvanized Iron Pipe 10" (250mm) x 6m Composite Column filled with 25MPa[3500PSI] Reinforced Concrete include 2 coats epoxy finish + 1 primer	S1 Theater Lobby Composite Column	28 pcs

All electric arc welding and cutting accessories, and consumables for welding work,include smoothening of rough edges; Weld Electrode at E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works include x-ray testing for a minimum of 30m length		1 lot
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Structural Connectors

MS Plate 4'x8'x25mm include 4 knee braces per column ; include galvanization	S1 Column Base Plate to pile cap	6 pc
MS Plate 4'x8'x12mm timber base plate include galvanization and boring	75x225 Timber Column Base plate	4 pc
MS Plate 4'x8'x12mm timber base plate include galvanization and boring	48x200 Timber Column Base plate	1 pc
MS Plate 4'x8'x8mm timber base plate include galvanization and boring	50x150 Timber Mullion Base plate	8 pc
MS Plate 4'x8'x12mm timber base plate include galvanization and boring	Timber Frame Connectors	5 pc

16mmØ x 3" High Tensile Hex Machine Bolt, w/ Nut and Washer	Timber Frame Connectors	432.00 set
12mmØ x 3" High Tensile Hex Machine Bolt, w/ Nut and Washer	Timber Frame Connectors	1,072.00 set
10mmØ x 3" High Tensile Hex Machine Bolt, w/ Nut and Washer	Timber Frame Connectors	1,320.00 set

All electric arc welding and cutting accessories, and consumables for welding work,include smoothening of rough edges; Weld Electrode at E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works include x-ray testing for a minimum of 30m length	Timber Frame Connectors	1.00 lot
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2" Galvanized Nails to anchor concrete floor to Wooden supports spaced @ 100mm aligned to wood supports	Elevator lobby level 3	2 kg
PUR Polyurethane Adehesive injected to gaps	Timber Framing & Timber Mullions	10

Level 1 Timber deck

Timber Connector, 4'x8'x6mm Thk. MS Plate,cut to size with grey epoxy primer and two coats epoxy finish,Black [see details]	S2 Level 1 Timber Deck	3.00 pc
10mmØ x 3" High Tensile Hex Machine Bolt, w/ Nut and Washer	S2 Level 1 Timber Deck	108.00 set
4"Øx3/16" Thk at 6m Steel-HSS Round, 3000mm Depth from Grade (with Concrete mix inside) with grey epoxy primer and two coats epoxy finish,Black [see details]	S2 Level 1 Timber Deck	22.00 pc
300mmØ x 1000mm Cast in place Concrete 27.5MPa[4000PSI]	S2 Level 1 Timber Deck	8.00 m³
All electric arc welding and cutting accessories, and consumables for welding work,include smoothening of rough edges; Weld Electrode at E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works include x-ray testing for a minimum of 30m length	S2 Level 1 Timber Deck	1.00 lot

Elevator Shaft

W10X45 @12m Wide Flange Structural Metal Framing ASTM A992	S1 elevator Shaft	4 pc
W10X68 @ 6 Wide Flange Structural Metal Framing ASTM A992	S1 elevator Shaft Beam	9 pc
W10X68 @ 12m Wide Flange Structural Metal Framing ASTM A992	S1 elevator Shaft Column	7 pc
W12X26 @ 6m Wide Flange Structural Metal Framing ASTM A992	S1 elevator Lobby Beam	4 pc

W6X9 @ 12m Wide Flange Structural Metal Framing ASTM A992	S2 Stair Shaft Additional Support	5 pc
Electric arc welding and cutting accessories, and consumables for welding work Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa);	S1 Structural Items[for Angle Bar, Wide Flange, Structural Columns]	1.00 lot
Stair Shaft Flange Section Alteration and Stiffener to existing Steel Column		
MS Plate 4'x8'x12mm ; include galvanization	S2 Stair Shaft Steel beam flange	16 pc
Electric arc welding and cutting accessories, and consumables for welding work Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa);	S2 Stair Shaft Steel beam alteration	1.00 lot
Weathering Steel		
4'X8'X 3mm Atmospheric Corrosion Resistant Plates (COR-TEN Steel) include wastage into unit costs	Wall type EPW-06 & EPW-07	23 pcs
4'X8'X 6mm Atmospheric Corrosion Resistant Plates (COR-TEN Steel) include wastage into unit costs	Wall type EPW-05	24 pcs
4'X8'X12mm Atmospheric Corrosion Resistant Plates (COR-TEN Steel) include wastage into unit costs		
includes the following layered from bottom to top:	Planter Boxes @ Multi Purpose	
Root resistant Water ptoofing layer covering all inner layer of the box	Roof Top (See Plans for Planter Dimentions)	23 pcs
300mm Heavy Duty Polypropylene Drainage cells		
High tensile-strength nonwoven polypropylene fabric Geotextile Underlayment		
38mmØ UuPVC drain pipe include concrete coring		
Steel Angle Bar L2X2X6mm @ 300 mm o.c (V), 1200 mm o.c (H)	Corten wall framing	23 pcs
Steel Angle Bar L2X2X6mm @ 300 mm o.c (V), 1200 mm o.c (H)	Corten canopy faming	24 pcs
Electric arc welding and cutting accessories, and consumables for welding work Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa);	For Weathering(Cor-Ten) Steel Roof	1.00 lot
Wall Interior Framing		
Steel Angle Bar L2X2X6mm @ 300 mm o.c (V), 1200 mm o.c (H)	S2 Level 3 Multi Purpose Hall	34 pcs
Railing		
R1 Railing Assembly: Baluster: 16 mm Ø Plain round bar 100mm spacing OC (1.2m Rail Height) welded onto 35mm x 8mm flat bar top and bottom with grey epoxy primer and two coats epoxy finish, Handrail: 45 x 75mm Pressure Treated Timber on 34mmx6mm Stainless flat bar screwed from below with 6x25mm galvanized wood screw, recessed and screwed welded to baluster assembly bolted to wall / structure	Theater Lobby, L1-S2-Office and Lounge, Library, L1-S3-Office, L1-S3- Research Lab, Theatre Entry, Changing Room Lobby, L4.5-S3-Office, Multi Purpose Theater, L2-S2	193.00 lm

R2 Railing Assembly: Baluster: 16 mm Ø Plain round bar 100mm spacing OC (1.35m Rail Height) welded onto 35mm x 8mm flat bar top and bottom with grey epoxy primer and two coats epoxy finish, Handrail: 45 x 75mm Pressure Treated Timber on 34mmx6mm Stainless flat bar screwed from below with 6x25mm galvanized wood screw, recessed and screwed welded to baluster assembly bolted to wall / structure	S2 Multi Purpose Roof Top	151.00	lm
R3 Wall Mount Handrail Assembly: 2"x3"S4S Laminated Timber Handrail with 25mm flat [with grey epoxy primer and two coats epoxy finish] bar underneath, recessed and screwed welded to Stainless Steel Handrail Wall bracket	S2 Multi Purpose Roof Top	61.00	lm
R4 Railing Assembly baluster: 16 mm Ø Plain round bar @ 4" (0.9m Rail Height) welded onto 35mm x 6mm flat bar top and bottom with grey epoxy primer and two coats epoxy finish, handrail: 40 mm Ø Stainless brushed satin finish G40 welded to baluster assembly bolted to wall / structure	Stairs to Roof Top	54.00	lm
R5 Railing Assembly: Baluster: 25 mm Ø Plain round bar & 1000mm spacing OC (1m Rail Height) welded onto steel frame with grey epoxy primer and two coats epoxy finish, with 16 mm Ø horizontal Plain round bar spaced @ 300mm OC welded to baluster with grey epoxy primer and two coats epoxy finish, handrail: 50 mm Ø Steel Pipe welded to baluster with grey epoxy primer and two coats epoxy finish	Catwalk Railing	77.00	lm
Electric arc welding and cutting accessories, and consumables for welding work Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa);		1.00	lot
Wood Staircase Framing			
Steel Angle Bar L2X2X6mm spaced @ 400 mm o.c	Cantilevered Bleachers	44	pc
Electric arc welding and cutting accessories, and consumables for welding work Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa);	Cantilevered Bleachers	1	lot
Existing Beams Rehabilitation			
Removal of existing sand-cement plaster[All Column and Beam]	Structure 2 - Level 1 & 2	938.00	m²
L 3"x3"x6mm Angle Structural Metal Framing 6m include 3 coats of epoxy primer 3coats	Structure 2 - Level 1 & 2	184.00	pc
L 3"x3"x10mm Angle Structural Metal Framing 6m include 3 coats of epoxy primer 3 coats	Structure 2 - Level 1 & 2	121.00	pc
L 4"x4"x10mm Angle Structural Metal Framing 6m include 3 coats of epoxy primer 3 coats	Structure 2 - Level 1 & 2	301.00	pc

½" Ø Plain Round Bar (cross bracing) @ 6m include 3 coats of epoxy primer 3coats	Structure 2 - Level 1 & 2	95.00 pc
2"x6mm x 6m Flat Bar/Plate strap welded to top chord spaced at every 600mm on all beams to be rehabilitated include 3 coats of epoxy primer 3coats	Structure 2 - Level 1 & 2	11.00 pc
2"x6mm x 6m Flat Bar/Plate strap spaced at every 500mm at all bottom chords of rehab truss include 3 coats of epoxy primer 3coats	Structure 2 - Level 1 & 2	7.00 pc
19mm Eye and Eye Turnbuckle Drop Forged Carbon Steel, Meets design requirements of ASTM F1145, Type 1, Grade 1, Class D	Structure 2 - Level 1 & 2	50.00 pc
12Ø x 75mm Wedge Expansion Bolt / Member to Slab (Truss Brace)	Structure 2 - Level 1 & 2	1,168.00 pc
16Ø x 100mm Wedge Expansion Bolt	Structure 2 - Level 1 & 2	1,168.00 pc
Shrinkage Compensated Grout, self-leveling,pre- mixed cementitious grouting mortar, complies to ASTM C-1107, Pressure Applied	Fill gaps between concrete and steel surfaces, gaps between steel and existing concrete	4.00 bag
Epoxy Resin Bonding Agent, Solvent- Free,Thixotopic, 2-component strucutral epoxy resin adhesive	Bond between existing concrete structural members to Steel Angles and Circular Columns+ Concrete Crack Filler	1.00 set
All electric arc welding and cutting accessories, and consumables for welding work with zinc epoxy primer 3 coats [Temporary Gallery] + Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works include x-ray testing for a minimum of 30m length	All Existing Beam Rehabilitation Welding Works	1.00 lot
Column Truss Rehabilitation		
Removal of existing sand-cement plaster[All Column and Beam]	Structure 2 - Level 1 & 2	403.00 m²
Custom Rounded MS Plate 4'x8'x12mm include 3 coats of epoxy primer and self leveling grout	Structure 2 - Level 1 & 2	10.00 pc
Custom Rounded MS Plate 4'x8'x10mm include 3 coats of epoxy primer and self leveling grout	Structure 2 - Level 1 & 2	67.00 pc
12 Ø 150mm Length Anchor Bolt ASTM A325N Bolts with Nut and washer	Structure 2 - Level 1 & 2	355.00 pc
All electric arc welding and cutting accessories, and consumables for welding work with zinc epoxy primer 3 coats [Temporary Gallery] + Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works include x-ray testing for a minimum of 30m length	All Existing Beam Rehabilitation Welding Works	1.00 lot
Shrinkage Compensated Grout, self-leveling,pre- mixed cementitious grouting mortar, complies to ASTM C-1107, Pressure Applied	Fill gaps between concrete and steel surfaces, column gaps between steel and existing concrete	50.00 bag
Epoxy Resin Bonding Agent, Solvent- Free,Thixotopic, 2-component strucutral epoxy resin adhesive	Bond between existing concrete structural members to Steel Angles and Circular Columns+ Concrete Crack Filler	20.00 set
Ga.20 1" Hole Galvanized Steel Chicken wire	For Fiberglass insulation mounting	877.00 m²
Steel Angle Bar L4X4X6mm	Level 6 Catwalk Framing	14 pcs
Expanded metal screen	Catwalk Grating	143.73 sq
MS Plate 4'x8'x16mm gutter include galvanization and boring	S1 Theater Glass Roof Gutter	1 pc

Electric arc welding and cutting accessories, and consumables for welding work Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa);	S2 Stair Shaft Steel beam alteration	1.00 lot
DIVISION 5 SUBTOTAL		
06000 DIVISION 06 - WOOD & PLASTICS		
2x4" S4S KD Timber Cap Finished and Smoothed with Lacquer Matte Finish, include attachment to 12mmx64mm Timber Section below	Stair Wall Railing	339.00 lm
20X98 mm Pressure Treated Timber Slats w/ 8mm gap on 20x48 paralellogram section Pressure Treated timber horizontal battens @ 500mm OC [include #8x25mm stainless screw attachment to steel frame @2pc /lm include painting with extra durable woodstain UV and water resistant]	S2 Exterior Wall Finish	1,222.00 m²
21x46 mm Polarwood TREATED NATURAL SAWN TIMBER SLATS [include #8x25mm stainless screw attachment to Timber frame @2pc /lm include painting with 2 coats versatile woodstain]	Level 3 Multi-function hall	502.00 m²
2"x3" Rough Lumber Studs 1230mm(V) & 1230(H) o.c include nail connection between studs, Expansion bolt connections to floor and to steel structure above and outrigger supports to adjacent wall every 2.4x2.4m grid intersections	Level 3 Multi-function hall for baffle wall	1,756.00 lm
Timber Framing		
48x200mm Finnwood Natural Laminated Structural Beam include painting of extra durable woodstain UV and water resistant	S1 Timber Framing	108.00 lm
48x200mm Finnwood Natural Laminated Structural Beam include painting of extra durable woodstain UV and water resistant	S2 Timber Deck Framing	302.00 lm
48x200mm Finnwood Natural Laminated Structural Beam include painting of extra durable woodstain UV and water resistant	Elevator Lobby	31.00 lm
75x225mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	Elevator Lobby	52.00 lm
75x225mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	S1 Timber Framing	575.00 lm
75x225mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	S2 Pergola Timber Framing	81.00 lm
75x225mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	S2 Timber Deck Framing	33.00 lm
47x150mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	S1 Theater Lobby Stair Tread	205.00 lm
47x150mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	S1 Theater Lobby Stair Riser	82.00 lm
Timber & Glass Curtain Wall Assembly		
47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	Wall Type CW-5 (Elevator Lobby)	105.00 lm

47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	Wall Type CW-6 (Elevator Shaft)	21.00 lm
47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	Wall Type CW-5 (S1 Theater Lobby)	310.00 lm
47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	Wall Type CW-5 (S2 Level 1)	141.00 lm
47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	Wall Type CW-3 (S2 Level 2 Art Gallery)	42.00 lm
47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	Wall Type CW-3 (S2 Level 2 Entrance)	32.00 lm
47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	S2 Level 3	6.00 lm
47x147mm Polarwood Treated Natural Sawn Rough Planks include painting of extra durable woodstain UV and water resistant	S1 Theater Lobby Glass Roof	111.00 lm
12mm (w) Structural Glazing Tape (Glass to Timber adhesive) on 32mm x1.5mm aluminium flat bar screwed to timber every 125mm with 6x32mm	Wall Type CW-3 CW-5 CW-6	1,139.00 lm
10mm Clear Tempered Float Glass Panels, gaps are filled with High grade Silicon Sealant includes aluminium 25mm U-channel at top and bottom	Wall Type CW-3 (S2 Level 2 Offices & Entrance, & Level 1)	185.00 m²
12mm Clear Tempered Float Glass Panels, gaps are filled with High grade Silicon Sealant includes aluminium 25mm U-channel at top and bottom	Wall Type CW-4, CW-5 (Elevator Lobby, S1 Theater Lobby, & S2 Level 1, Level 3, Level 5)	636.00 m²
12mm Clear (Safety) Tempered Float Glass Panels, gaps are filled with High grade Silicon Sealant includes aluminium 25mm U-channel at top and bottom	S1 Theater Lobby Glass Roof	37.00 m²
W4 - 1200X1200 mm 10mm Clear Tempered Float Glass on High Quality Heavy Section Aluminium on 100mm Frame, include High grade Silicon Sealant and locksets	Wall Type CW-4, CW-5 (S1 Theater Lobby and Elevator Lobby)	35 set
Timber Roof Framing / members 38mm x 100mm sawn timber battens include #8x25mm stainless screw attachment to Timber frame	S1 standing seam roof battens	639.00 lm

DIVISION 6 SUBTOTAL

07000 DIVISION 07 - THERMAL & MOISTURE PROTECTION

*INCLUDE WASTAGE INTO MATERIAL UNIT COSTS

WATERPROOFING AND DAMPROOFING

Torch-on Waterproofing Membrane

4mm Thk, Torch-on, Sheet Waterproofing membrane based on APP modified, reinforced bitumen, with sand broadcast surface,include laps and seams on Bituminous Primer	S2 Level 2 Timber Deck	164.00 m²
4mm Thk, Torch-on, Sheet Waterproofing membrane based on APP modified, reinforced bitumen, with sand broadcast surface,include laps and seams on Bituminous Primer	S2 Level 2 Toilets	59.00 m²

4mm Thk, Torch-on, Sheet Waterproofing membrane based on APP modified, reinforced bitumen, with sand broadcast surface,include laps and seams on Bituminous Primer	S2 Level 3 Toilets	26.00 m²
4mm Thk, Torch-on, Sheet Waterproofing membrane based on APP modified, reinforced bitumen, with sand broadcast surface,include laps and seams on Bituminous Primer	S3 Level 3 Toilets	9.00 m²
Polyester Fleece with Liquid Applied Membrane		
4 coats Liquid Applied Roof Waterproofing with Fleece Reinforcement Mesh (quantity includes edge seams and overlaps)	S2 Multi Purpose Roof Top	841.00 m²
4 coats Liquid Applied Roof Waterproofing with Fleece Reinforcement Mesh (quantity includes edge seams and overlaps)	Stair Shaft Roof Top, Elevator Shaft Roof top	70.00 m²
4 coats Liquid Applied Roof Waterproofing with Fleece Reinforcement Mesh (quantity includes edge seams and overlaps)	S3 Roof top	117.00 m²
4 coats Liquid Applied Roof Waterproofing with Fleece Reinforcement Mesh (quantity includes edge seams and overlaps)	Cantilevered Staircase/Bleachers	178.00 m²
INSULATION		
50mm x 1200mm x 15000mm 24kg/cu. m Roof Thermal and Acoustic Glass Fiber Batt Insulation include attachments to roof sheathing	S1 Theater Lobby	381.00 m²
Prepainted Standing S-span 406mm feed width with 0.6mm nominal thickness; color Black includes insulation, accessories, flashings, clips, and gutter	S1 Theater Lobby	381.00 m²
50mm x 1200mm x 15000mm 24kg/cu. m Roof Thermal and Acoustic Glass Fiber Batt Insulation include attachments to roof sheathing	S2 Pergola & Elevator Shaft	86.00 m²
Prepainted Standing S-span 406mm feed width with 0.6mm nominal thickness; color Black includes insulation, accessories, flashings, clips, and gutter	S2 Pergola & Elevator Shaft	86.00 m²
2mm Asphalt felt on wood and concrete termination	Elevator lobby level 6	14.00 m²
2mm Asphalt felt	S2 Exterior Wall Finish	1,222.00 m²
DIVISION 7 SUBTOTAL		
08000 DIVISION 08 - DOORS & WINDOWS		
HDF DOORS (HIGH DENSITY FIBERBOARD)		
HDF-01- 0600mm x 2100mm x 40mm HDF Honey Comb Core Flush Door, 90min Fire Rated with 2"x4" Wood Door Jamb - Single Rabbet		
include: 4pcs -3-1/2"x4"x 3mm Ball bearing Hinges 300mmx800mm Stainless Steel 304 Pushplate & Pull plate Key-in Lever type Lockset,Satin Finish,Industrial Heavy Duty		2 set

HDF-02- 0700mm x 2100mm x 40mm HDF Solid
Core Single Flush Door w/ Louver, 90min Fire
Rated with 2"x4" Wood Door Jamb - Single Rabbet

include:

4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
300mmx800mm Stainless Steel 304 Pushplate &
Pull plate
Key-in Lever type Privacy Lockset, Satin Finish,
Industrial Heavy Duty

5 set

HDF-03- 0800mm x 2100mm x 40mm HDF Solid
Core Flus Door, 90min Fire Rated with 2"x4" Wood
Door Jamb - Single Rabbet

include:

4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
300mmx800mm Stainless Steel 304 Pushplate &
Pull plate
Key-in Lever type Lockset,Satin Finish,Industrial
Heavy Duty

6 set

HDF-04- 0900mm x 2100mm x 40mm HDF Solid
Core Single Flush Door 90min Fire Rated with
2"x4" Wood Door Jamb - Single Rabbet

include:

4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
300mmx800mm Stainless Steel 304 Pushplate &
Pull plate
Key-in Lever type Lockset,Satin Finish,Industrial
Heavy Duty

9 set

HDF-05- 0900mm x 2100mm x 40mm HDF Solid
Core Single Flush Door w/ Louver, 90min Fire
Rated with 2"x4" Wood Door Jamb - Single Rabbet

include:

4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
300mmx800mm Stainless Steel 304 Pushplate &
Pull plate
Key-in Lever type Privacy Lockset, Satin Finish,
Industrial Heavy Duty

8 set

HDF-06- 1500mm x 2100mm x 40mm HDF Solid
Core Double Flush Door, 90min Fire Rated with
2"x4" Wood Door Jamb - Single Rabbet

include:

4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
300mmx800mm Stainless Steel 304 Pushplate &
Pull plate
Key-in Lever type Lockset,Satin Finish,Industrial
Heavy Duty

3 set

HDF-07- 1800mm x 2400mm x 40mm HDF Solid
Core Double Flush Door w/ Vision Panel, 90min
Fire Rated with 2"x4" Wood Door Jamb - Single
Rabbet

include:

4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
300mmx800mm Stainless Steel 304 Pushplate &
Pull plate
Key-in Lever type Lockset,Satin Finish,Industrial
Heavy Duty

2 set

HDF-08- 1700mm x 2400mm x 40mm HDF Solid Core Double Flush Door, 90min Fire Rated with 2"x4" Wood Door Jamb - Single Rabbet

include:
4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
900x600x1.2mm Satin Stainless Steel (Black) Kick Plate Drilled and Countersunk & Pull plate
Key-in Lever type Lockset,Satin Finish,Industrial Heavy Duty

4 set

HDF-09- 1800mm x 2400mm x 40mm HDF Solid Core Double Flush Door, 90min Fire Rated with 2"x4" Wood Door Jamb - Single Rabbet

include:
4pcs -3-1/2"x4"x 3mm Ball bearing Hinges
900x600x1.2mm Satin Stainless Steel (Black) Kick Plate Drilled and Countersunk & Pull plate
Key-in Lever type Lockset,Satin Finish,Industrial Heavy Duty

2 set

STEEL DOORS

SD-001 0700 x 2100mm Single Panel Steel Door; Positive/Negative Pressure;45mm Thick Galv Panel with insulation, Galv Single Rabbet Jamb; in accordance with and conforming to NAAMM/HMMA 861-06 and ANSI/SDI A250.8-2003 (include 2"x 4.5mm Steel angle bar door stiffener around door jamb connected to floor and ceiling)

S3 Roof Deck

1 set

include:
① 4pcs -1/2"x4"x3.4mm Butt Hinge,Painted,with 2 Ball Bearing,
② Key-in Lever type Lockset,Satin Finish,Industrial Heavy Duty,
③ Door Closer,Surface Mounted, 40 kg. max. door weight, satin chrome finish,
④ Door Stop/Door Holder (Floor mounted)]

SD-01 0900 x 2100mm Single Panel Steel Door; Positive/Negative Pressure;45mm Thick Galv Panel with insulation, Galv Single Rabbet Jamb; in accordance with and conforming to NAAMM/HMMA 861-06 and ANSI/SDI A250.8-2003 include 2"x 4.5mm Steel angle bar door stiffener around door jamb connected to floor and ceiling

Stair Shaft

14 set

include:
① 4pcs -1/2"x4"x3.4mm Butt Hinge,Painted,with 2 Ball Bearing,
② Door Closer,Surface Mounted, 40 kg. max. door weight, satin chrome finish,
③ Door Stop/Door Holder (Floor mounted)]
④ Panic Exit Device Horizontal Rim

SD-02 1000 x 2100mm Single Panel Steel Door; Positive/Negative Pressure;45mm Thick Galv Panel with insulation, Galv Single Rabbet Jamb; in accordance with and conforming to NAAMM/HMMA 861-06 and ANSI/SDI A250.8-2003 include 2"x 4.5mm Steel angle bar door stiffener around door jamb connected to floor and ceiling		Stair Shaft	9 set
include: ① 4pcs -1/2"x4"x3.4mm Butt Hinge,Painted,with 2 Ball Bearing, ② Door Closer,Surface Mounted, 40 kg. max. door weight, satin chrome finish, ③ Door Stop/Door Holder (Floor mounted)] ④ Panic Exit Device Horizontal Rim			
SLIDING DOORS			
SGD-01 2600 x 2400mm 3-Panel Sliding Door (P7 Lixil Tostem or equivalent)	Structure 2 Level 2 Offices		4 set
SGD-02 3100 x 2400mm 3-Panel Sliding Door (P7 Lixil Tostem or equivalent)	Structure 3 Level 1,2,3		5 set
SGD-03 4600 x 2400mm 3-Panel Sliding Door (P7 Lixil Tostem or equivalent)	Structure 3 Level 1,3		2 set
GLASS DOORS			
GD-01 - 900 x 2100mm x 12mm Curtain Wall Frameless Glass Single Door Floor with universal patch fittings and lockset with Stainless Door handles	Level 2 Office		1 set
GD-02 - 2000 x 2100mm x 10mm Curtain Wall Frameless Glass Double Door Floor with universal patch fittings and lockset with Stainless Door handles	S2 Multi Purpose Roof Top, Level 2 Offices, & Level 1 Art gallery; Elevator Lobby		17 set
GD-03 - 2000 x 2200mm x 10mm Curtain Wall Frameless Glass Double Door Floor with universal patch fittings and lockset with Stainless Door handles	S1 Theater Lobby & S2 Level 2 Entrance & Art Gallery		4 set
BI-FOLDING DOORS			
PA-01 2900mmWx2400mmH 6 Panels Bi-Fold Door on High Quality Aluminum Door Class A Matte Black Finish with 8mm clear tempered glass	Level 2 Art Gallery		7 set
PA-02 2800mmWx3000mmH 6 Panels Bi-Fold Door on High Quality Aluminum Door Class A Matte Black Finish with 8mm clear tempered glass	Structure 2 Level 3 Main Theater		7 set
WINDOWS			
W1 - 400X600 mm x 10mm clear tempered Frameless Fixed Window gap filled with High grade Silicon Sealant includes aluminium 25mm U-channel at top and bottom	Level 5 Control Room		1 set
W2 - 400X2500 mm Casement-Fixed High Quality Heavy Section Aluminium on 100mm Frame, include locksets	Structure 1 & 3- Exterior		3 set
SKYLIGHT			
W830 x L1700 mm using 12mm Laminated Safety Glass w/ Tubular Aluminium 150mmx50mmx2mm support spaced @ 400mm O.C.,B.W for walls and roof frame (incl. high grade Sealant and glass adhesive) see drawings	Structure 3- Level 5.5		2.00 m²

DIVISION 8 SUBTOTAL

09000 DIVISION 09- FINISHES

**INCLUDE WASTAGE INTO MATERIAL UNIT COSTS*

Ceiling

C1 - Ceiling Suspension Metal Joist 0.5mm 41mm 600mm OC bothways with hangers to concrete above (include .6mm carrying channel 1200 OC include, Corner Angles, hanger rods, expansion bolts)

Interior Ceiling

685.00 m²

C1 - 6mm Fiber Cement Board between boards [screw and joint compounds: Polyurethane Sealant]

685.00 m²

C2 - Ceiling Suspension Metal Joist 0.5mm 41mm 600mm OC bothways with hangers to concrete above (include .6mm carrying channel 1200 OC include, Corner Angles, hanger rods, expansion bolts)

Toilets @ Level 3 Exterior Ceilings

71.00 m²

C2 - 12mm Fiber Cement Board between boards [screw and joint compounds: Polyurethane Sealant]

71.00 m²

C3 - 6mm Fiber Cement Board between boards [screw and joint compounds: Polyurethane Sealant]

Cantilevered Bleachers

172.00 m²

C3 - 12mm Fiber Cement Board between boards [screw and joint compounds: Polyurethane Sealant]

172.00 m²

Floor Tiles

**INCLUDE WASTAGE INTO MATERIAL UNIT COSTS*

FF-02 300x600x10mm Non-Slip Homogenous Stain Resistant Ceramic Tile

Public Toilets

154.78 m²

FF-03 300x600x10mm Homogenous Commercial Floor Tile Graphite Grip R11

S2 Multi Purpose Roof Top & Multi Purpose Theater Entrance

104.50 m²

FF-04 600x600x10mm Homogenous Commercial Floor Tile - NON SLIP Stain Resistant High Quality Combination of Black, Dark Gray and Light Gray color

Utility Rooms

23.00 m²

FF-05 400x800x10mm Homogenous Commercial Floor Tile Graphite Grip R11

Exterior Tiles

184.80 m²

FF-08 Pressure Treated Timber Outdoor Flooring 28x120mm with Anti Slip Grooves Stained GI Hex Screw installed on treated 28x40 Battens 300mm OC GI screw installed on 100mm 17Mpa concrete slab on grade base (include finishing)

S2 Level 2 & Multi Purpose Roof Top; Cantilevered Bleachers

678.40 m²

FF-09 300x48mm Timber TNG Floor include painting of extra durable woodsatain UV and water resistant

Elevator Lobby

12.28 m²

FF-10 Polished Concrete Floor Semi-Gloss Finish include 2-3 steps process of grinding,honing & polishing using resin diamond pad grit #30 to grit #500, application of Lithium Floor Hardener/Densifier plus burnishing using burnishing machine with diamond impregnated pad, include sealerfor extra protection and gloss reflectance

S1 Theater Lobby; S2 Level 1, 2 & 3; S3 Level 3, 4.5 & 5.5

2,936.65 m²

FF-12 Artificial Turf with 20mm Rubber Infill system 0.8-2.5 Granule Size, 3/4 Tulted Sand/ Rubber Infill System, Monofilament Polyethylene Diamond Shape UV Resistant, Double 100% PP Thiobac backing, Latex compound base of styrene butadiene with drainage holes, pile height:50mm,30mm SBR Granules 0.5-2.4mm[Greenfield Slidemax XQ50] on Shockpad made of cross linked closed cell polyethylene foam	S2 Multi Purpose Roof Top	481.47 m²
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FL-06 28x120mm Pressure Treated Laminated Timber Outdoor Flooring with Anti Slip Grooves include Oil Stain, attached to Pressure Treated Timber Floor Joists with Stainless Screws #8x2"	S2 Level 1 Timber Deck	94.26 m²
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Wall Finish

**INCLUDE WASTAGE INTO MATERIAL UNIT COSTS*

75mm Web 0.6mm Metal Stud Framing 600mm H x 400mm V OC include top and bottom attachments and rivet connections	Interior walls (see plans for wall details and location)	260.00 m²
100mm Web 0.6mm Metal Stud Framing 600mm H x 400mm V OC include top and bottom attachments and rivet connections	Exterior and Interior walls (see plans for wall details and location)	2,487.00 m²

9mm Fiber Cement Board between boards [screw and joint compounds: Polyurethane Sealant]	Exterior and Interior walls (see plans for wall details and location)	2,529.00 m²
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9mm Fiber Cement Board between boards [screw and joint compounds: Polyurethane Sealant]	S1 Theater Lobby, Elevator Lobby and Pergola Ceiling	430.00 m²
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9mm High Quality Gypsum Wallboard Moisture Resistant (with manufacture approved jointing tape, screw and joint compounds)	Exterior and Interior walls (see plans for wall details and location)	509.00 m²
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12mm High Quality Gypsum Wallboard Moisture Resistant (with manufacture approved jointing tape, screw and joint compounds)	Exterior and Interior walls (see plans for wall details and location)	3,248.00 m²
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300mmx600mm Homogenous Wall Tile [Homogenous Stain Resistant Ceramic Wall Tile - High Quality - Class 1 (include grout and Tile Adhesive + Silicone Expansion Joints)]	S2 & S3 Toilets	398.00 m²
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50mm 24kg/cu. m Wall Thermal and Acoustic Glass Fiber Batt Insulation	Exterior and Interior walls (see plans for wall details and location)	3,307.00 m²
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Stair Finish

Polished Concrete Floor Semi-Gloss Finish include 2-3 steps process of grinding,honing & polishing using resin diamond pad grit #30 to grit #500, application of Lithium Floor Hardener/Densifier plus burnishing using burnishing machine with diamond impregnated pad, include sealerfor extra protection and gloss reflectance	Interior Stairs	711.37 m²
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Curtain Wall Assembly

CW-1 Curtain Wall Assembly- 10mm Clear Tempered Float Glass panels on 3"X4"x1.5mm spaced @ 400mm Aluminum Powder Coated black finish Mullion with Awning Windows	Elevator Shaft & Stair Shaft	361.00 m²
CW-2 Frameless Storefront Assembly- 10mm Clear Tempered Float Glass 1200mm panels with gap filled with High grade Silicon Sealant includes aluminium 25mm U-channel at top and bottom	S2 Level 2 Art Gallery, Offices & Multi Purpose Roof Top	93.00 m²
Structure 2 Glass Canopy		
12mm Tinted Laminated (Safety) Tempered Glass on Stainless Steel Glass Clamp attached to Structural Supports[See details]	Glass Canopy Roof at Level 3 Structure 2	238.00 m²
16mm Clear Tempered Float Glass panels on 3"X4"x1.5mm spaced @ 400mm Aluminum Powder Coated black finish Mullions	Glass Canopy Roof at Level 3 Structure 2	71.00 m²
Heat Vent		
Steel Louvered walls as heat vent. include epoxy paints 3 coats	elevator skylight	14.00 m²
Structure 2 Glass Canopy Structural Supports		
Steel-HSS Round Galvanized 3" Gauge 40 @ 6M include 1 coat epoxy primer + 2 coats epoxy finish spray applied	Glass Canopy Framing	19 pcs
Steel-HSS Round Galvanized 2" Gauge 40 @ 6M include 1 coat epoxy primer + 2 coats epoxy finish spray applied	Glass Canopy Framing	14 pcs
Steel-HSS Round Galvanized 1 1/2" Gauge 40 @ 6M include 1 coat epoxy primer + 2 coats epoxy finish spray applied	Glass Canopy Framing	15 pcs
Steel-HSS Round Galvanized 2" Gauge 40 @ 6M include 1 coat epoxy primer + 2 coats epoxy finish spray applied	Glass Canopy Mullion	143 pcs
Structure 2 Glass Canopy Architectural Louvers		
1"x6"x1.0mm Light metal Tubular Section, include 1 coat epoxy primer + 2 coats epoxy finish spray applied		40.00 pcs
Wall Railing		
50mm Expanded Polystyrene Panels (40mm styro thickness, incl.Accessories :Flat mesh, Angle mesh and U-mesh) include 25mm concrete render on both sides paper finish	Wall Type: IPW-18	343.00 m²
50mm Wall Thermal and Acoustic Glass Fiber Batt Insulation	Exterior and Interior Walls	2,583.00 m²
Paints and Coatings		
<i>*INCLUDE WASTAGE INTO MATERIAL UNIT COSTS</i>		
Semi-Gloss Latex Paint Finish (includes Preparation, 1 Coat Latex Primer, 2 Coats Finish Class AAA Finish) on prepared Walls	All Fibercement Board, Gypsum Board-faced Walls	4,264.00 m²
Flat Latex Paint Finish (includes Preparation, 1 Coat Flat Primer, 2 Coats Finish) on Ceilings	Exterior Ceiling	291.00 m²
Acrytex Acrylic Solvent-based Coating (includes Preparation, 1 Coat Flat Primer, 2 Coats Finish) on Concrete Plaster Walls	Exterior Walls	2,066.00 m²

3mm Veneer Paint-base cementitious Plaster white	on concrete Columns and misc Concrete Areas Structure 1, 2, & 3	825.00 m²
DIVISION 9 SUBTOTAL		
10000 DIVISION 10- SPECIALTIES		
Phenolic Core Board Toilet Partition		
<i>* all partition accessories are STAINLESS STEEL, WALL BRACKETS, SELF CLOSING HINGES, INDICATOR LOCKSET, COAT HOOK,KNOB - HANDLE, TOP RAIL, L-BRACKET</i>		
PD-01 900Lx 1400 x12mm Thk Phenolic black-core compact board or equivalent [Stainless Steel Accessories Included]	Toilets	21.00 set
PD-02 1800x1400mm Toilet Stall 12mm THK Phenolic Black Core Compact Board or equivalent [Stainless Steel Accessories Included]	Toilets	1.00 set
PD-03 1800x1800mm Toilet Stall 12mm THK Phenolic Black Core Compact Board or equivalent [Stainless Steel Accessories Included]	Toilets	1.00 set
PD-07 1400x1400mm Toilet Stall 12mm THK Phenolic Black Core Compact Board or equivalent [Stainless Steel Accessories Included]	Toilets	1.00 set
Urinal Screen 0400 x 900 x 12mm Phenolic black-core compact board or equivalent Stainless Steel Accessories Included	Toilets	9.00 set
Fire Protection Specialties		
Recessed Firehose Cabinet 610mmx860mm with Fire Extinguisher Assembly,with Stainless Steel Cover .8mm thick Brushed Satin Finish (include hose and accessories)		9.00 set
Electronic Safety and Security		
Fire Extinguisher (Yellow Label) include attachment to wall		1.00 set
Fire Extinguisher (Green Label) include attachment to wall		13.00 set
Toilet Accessories		
Stainless Steel Towel Dispenser	Toilets	6.00 pc
Stainless Steel Toilet Tissue Dispenser	Toilets	6.00 pc
Stainless Steel Waste Receptacle	Toilets	26.00 pc
36" Length Stainless Steel Grab Bar	Toilets	3.00 pc
42" Length Stainless Steel Grab Bar	Toilets	3.00 pc
6mm Glass Mirror FEP (600m x 1000mm)	Toilets	3.00 pc
6mm Glass Mirror FEP (1600m x 1000mm)	Toilets	2.00 pc
6mm Glass Mirror FEP (2400m x 1000mm)	Toilets	3.00 pc
6mm Glass Mirror FEP (3240mm x 1000mm)	Toilets	2.00 pc
Hand Dryer	Toilets	6.00 pc
Stainless Steel Soap Dispenser	Toilets	6.00 pc
600mm Towel Bar, Matt Nickel Finish	Changing Room Shower (Level 3)	1.00 pc
Square Glass Flat Shelf 580mm glass length	Changing Room Toilet (Level 3)	1.00 pc

Close Coupled Elongated Toilet, 3/4.5LPF Top Push	Toilets	27.00 pc
Rinsing Spray Stainless Steel 304	Toilets	27.00 pc
Urinal Wall Hung with Anti-Bac Glaze - include angle Lever Type 1LPF Flush Valve	Toilets	10.00 pc
Full Pedestal Lavatory 550mm x 460mm x 785mm with fixing bolt set	Changing Room Toilet (S3-Level 3) and PWD Toilets	3.00 pc
(1)Push Type Pop-Up, (1)Stainless P-Trap, (1) Angle Valve, (1)Flexible Hose	Toilets	27.00 pc
Mono Faucet, 10mm Spout L x 68mm Spout H x 98mm Faucet H	Toilets	21.00 pc
Multi-point Instant Water Heater, 4.5kW	Changing Room Shower (Level 3)	1.00 pc

Wash Basin, Above Counter 545mmL x 400mmW x184mmH	Toilets	18.00 pc
Mono Faucet,Extended	Toilets	18.00 pc
4 Lavatory Granite Countertop (2431mm x 550mm) include pedestal and carcass	Toilets (Level 2)	2.00 pc
3 Lavatory Granite Countertop (2431mm x 550mm) include pedestal and carcass	Toilets (Level 1)	2.00 pc
2 Lavatory Granite Countertop (1600mm x 550mm) include pedestal and carcass	Toilets (Level 3)	2.00 pc
0600mmW x600mm D x400mm H - 75mm Thk Reinforced Concrete Slopsink, Stainess Steel Finish 304 Gauge 11(3mm)(Incl. Accessories; Stainless Steel Hose bibb + Slop sink drain w/ strainer + waterproof Sealant on Edges)	Toilet (Level 2 & 3)	2.00 pc
0600mmW x800mm D x400mm H - 75mm Thk Reinforced Concrete Slopsink, Stainess Steel Finish 304 Gauge 11(3mm)(Incl. Accessories; Stainless Steel Hose bibb + Slop sink drain w/ strainer + waterproof Sealant on Edges)	Toilet (Level 2 & 3)	3.00 pc

DIVISION 10 SUBTOTAL

14000

DIVISION 14 - CONVEYING EQUIPMENT

Elevators

Public Elevator 1 - 1000kg Rated Capacity,Machine Room Less Elevator One/Simplex Grouping Control , 7.2kW Motor Power Output , 1.0m/s Speed, 5 stops, 5 door openings, 14.85m Travel, Flat Belt Traction Media, 400 Power Supply (Main), 30kVA AVR Rating, Stainless Steel AISI 304, 50x40 Door Frames		
Landing Position Indicator: Combined with LOP Landing Operating Panel: Touch Sensitive LOP Version: Surface Mounted Shaft: 1900mmx1500mmx1100mmx4200mm (Width, Depth, Pit, Headroom) Floor Designations: 1,2,3,5 & 6		1.00 lot
Car: 2100x900mm Door, Center-Opening, 1600x1400mm (Car Width, Depth) Side Walls, Rear Wall, Car Door & Front Finish: Stainless Steel AISI 304 Car Operating Panel Buttons: Touch Sensitive COP Version: Surface Mounted Ceiling: Stainless Steel LABOR, TAXES, IMPORTATION INCLUDED		

DIVISION 14 SUBTOTAL

15000 DIVISION 15- MECHANICAL

**All Sanitary Pipe dimensions are interior, all PPR
Pipes dimensions are exterior
*Allow for wastage and contingency cost to unit
costs*

Piping Accessories; Installation Accessories; Pipe
Hanger and Wall Connection Accessories (ie U-
Clamps, Expansion Bolts) INCLUDE LABOR 1.00 lot

**Sanitary Waste and Vent Piping (All Series
1000)**

150mmØ PVC Sanitary Pipe Series 1000 22.00 lm
100mmØ PVC Sanitary Pipe Series 1000 216.00 lm
80mmØ PVC Sanitary Pipe Series 1000 57.00 lm
50mmØ PVC Sanitary Pipe Series 1000 184.00 lm

Sanitary Vent Fittings (All Series 1000)

50 mmø-50 mmø Elbow 90 Deg Series 1000 90.00 pc
80 mmø-80 mmø Elbow 90 Deg Series 1000 7.50 pc

50 mmø-50 mmø-50 mmø Tee Sanitary Series
1000 57.00 pc
80 mmø-80 mmø-80 mmø Tee Sanitary Series
1000 5.00 pc

**PPR PN20 Pipe (All PN20) - POTABLE &
RECYCLED WATER**

25mmØ PPR Pipe PN20 272.00 lm
32mmØ PPR Pipe PN20 93.00 lm
40mmØ PPR Pipe PN20 80.00 lm

**PPR PN20 Fittings (All PN20) - POTABLE
WATER**

25 mmø-25 mmø Elbow PN20 50.00 pc
32 mmø-32 mmø Elbow PN20 2.00 pc
40 mmø-40 mmø Elbow PN20 3.00 pc

25 mmø-25 mmø-25 mmø Tee PN20 23.00 pc
32 mmø-32 mmø-25 mmø Tee PN20 4.00 pc
40 mmø-32 mmø-32 mmø Tee PN20 2.00 pc

25mmø Cap PN20 2.00 pc
32mmø Cap PN20 2.00 pc

**PPR Pipe Accessory (All PN20) - POTABLE
WATER**

Globe Valve Threaded 25mmØ-25mmØ 5.00 pc
Check Valve Threaded 25mmØ-25mmØ 5.00 pc

**PPR PN20 Pipe and Fittings (All PN20) -
RECYCLED WATER**

25 mmø-25 mmø Elbow PN20 53.00 pc
32 mmø-32 mmø Elbow PN20 3.00 pc
40 mmø-40 mmø Elbow PN20 7.00 pc

25 mmø-25 mmø-25 mmø Tee PN20 24.00 pc
32 mmø-32 mmø-25 mmø Tee PN20 2.00 pc
32 mmø-32 mmø-35 mmø Tee PN20 2.00 pc
40 mmø-32 mmø-32 mmø Tee PN20 2.00 pc

32mmø Cap PN20	2.00 pc
PPR Pipe Accessory (All PN20) - RECYCLED WATER	
Globe Valve Threaded 25mmØ-25mmØ	5.00 pc
Check Valve Threaded 25mmØ-25mmØ	4.00 pc
PVC Sanitary and Vent Pipe Fittings (All Series 1000)	
Sanitary Black	
50 mmø-50 mmø Bend Long Sweep or 2 45 deg bends Series 1000	3.00 pc
100 mmø-100 mmø Bend Long Sweep or 2 45 deg bends Series 1000	20.00 pc
50 mmø Cap Series 1000	3.00 pc
100 mmø Cap Series 1000	15.00 pc
100 mmø-100 mmø-50 mmø Tee-Wye Reducing Sanitary Series 1000	15.00 pc
100 mmø-100 mmø-80 mmø Tee-Wye Reducing Sanitary Series 1000	2.00 pc
50 mmø-50 mmø-50 mmø Wye 45 Deg Series 1000	20.00 pc
100 mmø-100 mmø-100 mmø Wye 45 Deg Series 1000	32.00 pc
150 mmø-150 mmø-150 mmø Wye 45 Deg Series 1000	3.00 pc
100 mmø-50 mmø Reducer - PVC - Sch 40 - DWV: Standard	3.00 pc
150 mmø-100 mmø Reducer - PVC - Sch 40 - DWV: Standard	4.00 pc
Sanitary Grey	
50mmø-50mmø P-Trap Series1000	32.00 pc
50 mmø-50 mmø Bend Long Sweep or 2 45 deg bends Series 1000	18.00 pc
80 mmø-80 mmø Bend Long Sweep or 2 45 deg bends Series 1000	2.00 pc
100 mmø-100 mmø Bend Long Sweep or 2 45 deg bends Series 1000	7.00 pc
50 mmø Cap Series 1000	10.00 pc
80 mmø Cap Series 1000	4.00 pc
100 mmø Cap Series 1000	7.00 pc
80 mmø-80 mmø-50 mmø Tee-Wye Reducing Sanitary Series 1000	13.00 pc
100 mmø-100 mmø-50 mmø Tee-Wye Reducing Sanitary Series 1000	3.00 pc
50 mmø-50 mmø-50 mmø Tee-Wye Sanitary Series 1000	58.00 pc
80 mmø-80 mmø-80 mmø Tee-Wye Sanitary Series 1000	2.00 pc
100 mmø-100 mmø-100 mmø Tee-Wye Sanitary Series 1000	5.00 pc
100 mmø-100 mmø-100 mmø Wye 45 Deg Series 1000	4.00 pc

80 mmø-50 mmø Reducer - PVC - Sch 40 - DWV: Standard		2.00 pc
100 mmø-80 mmø Reducer - PVC - Sch 40 - DWV: Standard		3.00 pc
Floor Drain Bronze Alloy Industrial Quality 150 x 150mm with Strainer - 50mm Drain	Toilets (Level 3)	18.00 pc
Roof Drain Bronze Alloy Industrial Quality 150 x 150mm with Strainer - 80mm Drain	Roof Drain	4.00 pc
Rainwater Piping (ALL Series 1000)		
Downspout - 80mm x 3mtrs PVC Series 1000	Roof Drain	40.00 lm
Downspout - 100mm x 3mtrs PVC Series 1000	Roof Drain	42.00 lm
Downspout - 300mm x 3mtrs PVC Series 1000	Roof Drain	136.00 lm
100 mmø Cap Series 1000		4.00 pc
100 mmø Cap Series 1000		2.00 pc
300 mmø Cap Series 1000		5.00 pc
80 mmø-80 mmø PVC Elbow 90 Deg Series 1000		8.00 pc
100 mmø-100 mmø PVC Elbow 90 Deg Series 1000		2.00 pc
300 mmø-300 mmø PVC Elbow 90 Deg Series 1000		14.00 pc
80 mmø-80 mmø-80 mmø Tee-Wye Sanitary Series 1000		10.00 pc
300 mmø-300 mmø-300 mmø Tee-Wye Sanitary Series 1000		13.00 pc
100 mmø-100 mmø-80 mmø Tee-Wye Reducing Sanitary Series 1000		2.00 pc
300 mmø-300 mmø-80 mmø Tee-Wye Reducing Sanitary Series 1000		2.00 pc
300 mmø-300 mmø-100 mmø Tee-Wye Reducing Sanitary Series 1000		2.00 pc
80 mmø-50 mmø Reducer - PVC - Sch 40 - DWV: Standard		3.00 pc
600mm dia Concrete Stormwater Culvert	Library	54.00 pc
400mm dia Concrete Stormwater Culvert	Library	19.00 pc
15400 PLUMBING SYSTEMS		
15410 Plumbing Fixtures and Equipment		
Grease Trap 8L,Heavy Duty Linear Density Polyethylene		2.00 pc
FIRE SUPPRESSION SYSTEMS		
DRY SYSTEM		
100mmØ (4") cPVC Pipe		25.00 pc
32mmØ (1-1/4") cPVC Pipe		53.00 pc
Elbow 90° 32mm(1-1/4")cPVC Fitting		32.00 pc
Elbow 90° 100mm(4")cPVC Fitting		10.00 pc
Bushing Reducer 100mmØ-65mmØ(4"x2-1/2") cPVC Fitting		2.00 pc
Bushing Reducer 100mmØ-40mmØ(4"x1/2") cPVC Fitting	Air vent	3.00 pc

Bushing Reducer 32mmØ-25mmØ(1-1/4"x1") cPVC Fitting		13.00 pc
Reducing Tee 100mmØ-100mmØ(4"x4") cPVC Fitting		2.00 pc
Reducing Tee 100mmØ-32mmØ(1-1/4"x4") cPVC Fitting		12.00 pc
Siamese Fire Department Connection (Siamese Twin 2-Way) 4"Ø x2-1/2"Ø x2-1/2"Ø		2.00 pc
65mm(2-1/2") Fire Hose Valve		12.00 pc
Air Release Valve 100mmØ		3.00 pc
WET SYSTEM		
Wet Pipe: 1/2 Pendent Type Sprinkler Head - Chrome Coated, UL Listed	Fire Sprinkler System	209.00 pc
Wet Pipe: 1/2 Upright - Chrome Coated,UL Listed	Fire Sprinkler System	144.00 pc
100mmØ (4") cPVC Pipe	Fire Sprinkler System	50.00 pc
65mmØ (2-1/2") cPVC Pipe	Fire Sprinkler System	35.00 pc
50mmØ (2") cPVC Pipe	Fire Sprinkler System	75.00 pc
40mmØ (1-1/2") cPVC Pipe	Fire Sprinkler System	4.00 pc
32mmØ (1-1/4") cPVC Pipe	Fire Sprinkler System	75.00 pc
25mmØ (1") cPVC Pipe	Fire Sprinkler System	197.00 pc
Flanged BI Pipes		
25mmØ (1") Flanged BI Pipe S-40	Fire Sprinkler System	3.00 lm
32mmØ (1-1/4") Flanged BI Pipe S-40	Fire Sprinkler System	5.00 lm
65mmØ (2-1/2") Flanged BI Pipe S-40	Fire Sprinkler System	7.00 lm
Flanged BI Fittings		
1-1/4"x1"Ø BI Tee Reducer	Fire Sprinkler System	13.00 pc
1" (25mm)Ø Flanged BI Elbow	Fire Sprinkler System	7.00 pc
1-1/4" (32mm)Ø Flanged BI Elbow	Fire Sprinkler System	13.00 pc
2-1/2" (65mm)Ø Flanged BI Elbow	Fire Sprinkler System	7.00 pc
2-1/2" (65mm) x 1-1/4" (32mm) Ø Flanged BI Bushing Reducer	Fire Sprinkler System	7.00 pc
Flange Adaptor 32mm(1-1/4")cPVC Fitting	Fire Sprinkler System	7.00 pc
Flange Adaptor 65mm(2-1/2")cPVC Fitting	Fire Sprinkler System	13.00 pc
Floor Control Valve Assembly		
incl. accessories; Check valve + Supervisory switch + Presure gauge + waterflow switch + sight glass + test valve + section drain valve+ pipe & fittings		7.00 set
Air Release Valve 100mmØ		3.00 pc
cPVC Wet System Pipe Fitting		
Cap 25mm(1")cPVC Fitting		5.00 pc
Cap 32mm(1-1/4")cPVC Fitting		3.00 pc
Cap 50mm(2")cPVC Fitting		3.00 pc
Cross 25mm(1")cPVC Fitting		4.00 pc
Cross 32mm(1-1/4")cPVC Fitting		13.00 pc

Cross 40mm(1-1/2")cPVC Fitting		2.00 pc
Cross 50mm(2")cPVC Fitting		15.00 pc
Cross 65mm(2-1/2")cPVC Fitting		3.00 pc
Elbow 90° 25mm(1")cPVC Fitting		229.00 pc
Elbow 90° 32mm(1-1/4")cPVC Fitting		14.00 pc
Elbow 90° 40mm(1-1/2")cPVC Fitting		2.00 pc
Elbow 90° 50mm(2")cPVC Fitting		15.00 pc
Elbow 90° 65mm(2-1/2")cPVC Fitting		17.00 pc
Bushing Reducer 32mm-25mm(1-1/4"-1")cPVC Fitting		60.00 pc
Bushing Reducer 40mm-25mm(1-1/2"-1")cPVC Fitting		5.00 pc
Bushing Reducer 40mm-32mm(1-1/2"-1-1/4")cPVC Fitting		4.00 pc
Bushing Reducer 50mm-25mm(2"-1")cPVC Fitting		29.00 pc
Bushing Reducer 50mm-32mm(2"-1-1/4")cPVC Fitting		4.00 pc
Bushing Reducer 50mm-40mm(2"-1-1/2")cPVC Fitting		2.00 pc
Bushing Reducer 65mm-25mm(2-1/2"-1")cPVC Fitting		4.00 pc
Bushing Reducer 65mm-32mm(2-1/2"-1-1/4")cPVC Fitting		5.00 pc
Bushing Reducer 65mm-40mm(2-1/2"-1-1/2")cPVC Fitting		2.00 pc
Bushing Reducer 65mm-50mm(2-1/2"-2")cPVC Fitting		12.00 pc
Bushing Reducer 100mm-40mm(4"-1/2")cPVC Fitting	Air vent	2.00 pc
Tee 25 mmø-25 mmø-25 mmø(1"x1"x1")cPVC Fitting		77.00 pc
Tee 32 mmø-32 mmø-32 mmø(1-1/4"x1-1/4"x1-1/4")cPVC Fitting		8.00 pc
Tee 40 mmø-40 mmø-40 mmø(1-1/2"x1-1/2"x1-1/2")cPVC Fitting		2.00 pc
Tee 50 mmø-50 mmø-50 mmø(2"x2"x2")cPVC Fitting		2.00 pc
Tee 65 mmø-65 mmø-65 mmø(2-1/2"x2-1/2"x2-1/2")cPVC Fitting		5.00 pc
Reducing Tee 32 mmø-25 mmø-25 mmø(1-1/4"x1"x1")cPVC Fitting		3.00 pc
Reducing Tee 32 mmø-32 mmø-25 mmø(1-1/4"x1-1/4"x1")cPVC Fitting		47.00 pc
Reducing Tee 40 mmø-40 mmø-25 mmø(1-1/2"x1-1/2"x1")cPVC Fitting		3.00 pc
Reducing Tee 40 mmø-40 mmø-32 mmø(1-1/2"x1-1/2"x1-1/4")cPVC Fitting		2.00 pc
Reducing Tee 50 mmø-50 mmø-25 mmø(2"x2"x1")cPVC Fitting		37.00 pc
Reducing Tee 50 mmø-50 mmø-32 mmø(2"x2"x1-1/4")cPVC Fitting		5.00 pc
Reducing Tee 50 mmø-50 mmø-40 mmø(2"x2"x1-1/2")cPVC Fitting		2.00 pc
Reducing Tee 65 mmø-65 mmø-25 mmø(2-1/2"x2-1/2"x1")cPVC Fitting		22.00 pc
Reducing Tee 65 mmø-65 mmø-32 mmø(2-1/2"x2-1/2"x1-1/4")cPVC Fitting		20.00 pc
Reducing Tee 100 mmø-100 mmø-50 mmø(4"x4"x2")cPVC Fitting		2.00 pc
Reducing Tee 100 mmø-100 mmø-65 mmø(4"x4"x2-1/2")cPVC Fitting		5.00 pc

Weld-On Fire Sprinkler Cement, One Step Cement, Heavy Bodied,ASTM F-493 Compliant		388.00	pint
Piping Accessories; Installation Accessories; Pipe Hanger and Wall Connection Accessories (ie U-Clamps, Expansion Bolts) include Labor		1.00	lot
Fire Pump			
ATLANTA TS 25 in 1 Intergrated Direct Driven Horizontal Fire Pump, 50HP, 3550 rpm, 230 Volts, 60Hertz, 4" water outlet, complete with 5HP Jockey Pump, Electric Motor, Pressure Tank, Water Filling Tank, Control Panel, Base Stand, Water Flow Testing Pipe, Flow Meter, Drain Valve, Pump Water Filling Pipe, Temperature Guard System, Water Filling Inlet, Overflow Drain Outlet, Water Level Detector, Pressure Exhaust Valve, Pressure Check Valve, Pressure Gauge, Pressure Tank Pipe, Expansion Joint, Outlet Control Valve, Outlet Check Valve, Pump Exhaust Valve, Drain Valve, Differential Pressure Gauge, Coupling, and Bearing Frame		1.00	pc
15700 Heating and Ventilating Equipment			
Inverter Duct Split Unit 12.0 TR, 3PH,380V, 60Hz	S2 Multi purpose Theater	4.00	unit
Inverter Ceiling Cassette Split Unit 5.0 TR, 220V, 1PH, 60Hz	S2 Level 2 Art Gallery	3.00	unit
Floor Standing FCU 3.0 TR, 220V, 1PH, 60Hz	S2 Level 1 Art Gallery	4.00	unit
Inverter Ceiling Cassette Split Unit 2.0 TR, 220V, 1PH, 60Hz	Meeting Room and Changing Room	2.00	unit
350mm dia. Duct Works Including Difussers and Grills (Spiral Duct)	Main Theater	4.00	unit
Installation of Indoor and Outdoor Unit,ACCU Brackets,Ducting,Piping And Mobilization/Preliminaries, includes installation of Copper refrigerant pipes and fittings, suction line closed cell rubber insulation, wires for control wirings, circuit breaker	All AC System	1.00	lot
Exhaust Fan, Condenser motor with thermal cut-off,17.7cm L x15 cm W x 17.7 cm H	Comfort Room Level 1,2 & 3	21.00	set
DIVISION 15 SUBTOTAL			
16000 DIVISION 16- ELECTRICAL			
*Allow for wastage and contingency cost to unit costs			
16110 RACEWAYS AND CONDUIT			
LIGHTING AND POWER SYSTEM			
1/2"Ø pvc pipe		1,950.00	pcs
1/2"Ø pvc adapter with locknut		2,062.00	pcs
1/2"Ø metal flex conduit		340.00	lm
1/2"Ø metal flex connnector		340.00	pcs
3/4"Ø pvc pipe		285.00	pcs
3/4"Ø pvc adapter with locknut		219.00	pcs
1 1/2"Ø pvc pipe		13.00	pcs
1 1/2"Ø pvc adapter with locknut		8.00	pcs
1 1/2"Ø PVC elbow		8.00	pcs
2"Ø pvc pipe		25.00	pcs
2"Ø pvc adapter with locknut		8.00	pcs

2"Ø PVC elbow	8.00 pcs
1/2 "Ø metal clamp	2,315.00 pcs
3/4"Ø metal clamp	314.00 pcs
1 1/2"Ø metal clamp	85.00 pcs
2"Ø metal clamp	126.00 pcs
40 mm long tox w/ screw	5,880.00 pcs
pvc solvent cement (400cc)	7.00 can
Consumables (screws, bolt and nuts, drill bits, masonry bits)	1.00 lot
FEEDERLINE SYSTEM	
3"Ø IMC pipe	15.00 pcs
3"Ø IMC elbow	8.00 pcs
3"Ø IMC locknut	8.00 pcs
3"Ø IMC bushing	10.00 pcs
3"Ø IMC coupling	6.00 pcs
2"Ø EMT pipe	12.00 pcs
2"Ø EMT elbow	4.00 pcs
2"Ø EMT set screw connector w/ locknut	14.00 pcs
2"Ø EMT set screw coupling	3.00 pcs
Anchor grip	131.00 pcs
Loop Hanger 3"	35.00 pcs
3" U-Bolt w/ nut and washer	90.00 pcs
2" U-Bolt w/ nut and washer	28.00 pcs
1 1/4"W x 1 1/4"H x 1/2"T x 3mm L Angle Bar	10.00 pcs
Consumables (screws, bolt and nuts, drill bits, masonry bits)	1.00 lot
16120 CONDUCTORS AND CABLES	
LIGHTING AND POWER SYSTEM	
22 mm² thhn cu. Wire	1,664.00 lm
14 mm² thhn cu. Wire	195.00 lm
5.5mm² thhn cu. Wire	550.00 lm
3.5mm² thhn cu. Wire	16,548.00 lm
8 mm² tw cu. Wire	650.00 lm
2.0 mm² tw cu. Wire	1,740.00 lm
Electrical Tape	338.00 roll
Rubber Tape	5.00 roll
10" cable tie	240.00 pcs
ga 16 g.i. wire	145.00 kgs
FEEDERLINE SYSTEM	
125 mm² thhn cu. Wire	90.00 lm
22 mm² thhn cu. Wire	130.00 lm
14 mm² thhn cu. Wire	50.00 lm
30 mm² tw cu. Wire	30.00 lm
8 mm² tw cu. Wire	90.00 lm
Rubber tape	16.00 roll
Electrical tape	40.00 roll
10" cable tie	175.00 pcs
ga 16 g.i. wire	40.00 kgs
16130 RACEWAYS AND BOXES	
LIGHTING AND POWER SYSTEM	
Junction Box PVC w/ Cover	958.00 pcs
Utility Box PVC	383.00 pcs

	Square Box PVC	110.00	pcs
	Pullbox 8" x 8" x 6"	5.00	pcs
	3/8" full threaded rod	62.00	pcs
	FEEDERLINE SYSTEM		
	15"(W) x 12"(D) x 48"(L) Wire Gutter,Guage 16	1.00	assy
	15"(W) x 10"(D) x 24"(L) Wire Gutter,Guage 16	1.00	assy
	12"W x 15"H x 10"D Pull Box	2.00	assy
	15"W x 15"H x 10"D Pull Box	2.00	assy
	3/8" full threaded rod	34.00	pcs
16140	WIRING DEVICES		
	1 gang switch with plate cover Schneider (Elongated)	43.00	sets
	2 gang switch with plate cover Schneider (Mid - size)	31.00	sets
	3 Way 1 gang switch with plate cover Schneider	10.00	sets
	3 Way 2 gang switch with plate cover Schneider	15.00	sets
	1 gang universal type C.O. w/ Ground and plate cover Schneider	54.00	sets
	2 gang universal type C.O. w/ Ground and plate cover Schneider	66.00	sets
	2 gang universal type C.O. w/ Ground and plate cover (weather proof)	2.00	sets
	2 gang universal type C.O. w/ Ground and plate cover (GFCI)	4.00	sets
	2 gang universal type C.O. w/ Ground and plate cover (Floor Convenience Outlet)	21.00	sets
16170	GROUNDING AND BONDING		
	Helita Pulsar 60 High Pulse Voltage Early Streamer Emission Lightning Protection System complete with S/S threaded extension mast and conductor clamp. 107m radius at Level 4.	1.00	unit
	Sky Lightning Counter	1.00	unit
	Supply of fabricated 2" dia x 6m long GI mast pole (side mounted) with standard supports, painted with enamel on epoxy primer base, excluding supply and installation of anchor bolts, baseplate, steel platform base, concrete pedestal and horizontal arm supports.	1.00	set
	Exothermic Powder Number 115	15.00	tube
	Exothermic Powder Number 90	15.00	tube
	50 sq.mm concentric bare copper wire	300.00	lm
	20mmΦ x 3m long copper clad ground rod	17.00	pcs
	Ground rod clamp 250 MCM	17.00	pcs
	Grounding Busbar	1.00	set
16300	Transmission and Distribution		
	TRANSFORMER	1.00	unit
	75 KVA,230/380V,60 hz, 3 Phase Dry Type Step- Up Voltage Transformer		
16440	SWITCHBOARDS, PANELBOARDS & METER CENTER		
	LPP 01	1.00	Assy

<p>PANEL BOARD with ground terminals, surface mounted , NEMA 1 encl. Main: 70AT/100AF,2P, 230V Branches: 5 -15AT/63 AF,2P, 230V 2 - 20AT/63 AF,2P, 230V 3 - Space</p>	
<p>LPP 02 PANEL BOARD with ground terminals, surface mounted , NEMA 1 encl. Main: 100AT/125AF,2P, 230V Branches: 3 -15AT/63 AF,2P, 230V 3 - 20AT/63 AF,2P, 230V 1 - 30AT/63 AF,2P, 230V 3 - Space</p>	<p>1.00 Assy</p>
<p>LPP 03 PANEL BOARD with ground terminals, surface mounted , NEMA 1 encl. Main: 100AT/125AF,2P, 230V Branches: 5 -15AT/63 AF,2P, 230V 4 - 20AT/63 AF,2P, 230V 1 - 30AT/63 AF,2P, 230V 2 - Space</p>	<p>1.00 Assy</p>
<p>LPP 4-6 PANEL BOARD with ground terminals, surface mounted , NEMA 1 encl. Main: 100AT/125AF,2P, 230V Branches: 8 -15AT/63 AF,2P, 230V 5 - 20AT/63 AF,2P, 230V 1 - Space</p>	<p>1.00 Assy</p>
<p>LPP ST-1 PANEL BOARD with ground terminals, surface mounted , NEMA 1 encl. Main: 70AT/100AF,2P, 400V Branches: 3 -15AT/63 AF,2P, 230V 1 - 20AT/63 AF,2P, 230V 3 - Space</p>	<p>1.00 Assy</p>
<p>PPACU PANEL BOARD with ground terminals, surface mounted , NEMA 1 encl. Main: 320AT/400AF,3P, 400V,36 kaic Branches: 4 -125AT/150 AF,3P, 400V,18kaic 1 - 80AT/100AF,3P, 400V,15 kaic 3 - Space</p>	<p>1.00 Assy</p>
<p>MDP PANEL BOARD with ground terminals, surface mounted , EIC encl. Main: 400AT/400AF,3P, 400V,50 kaic Branches: 1-300AT/400 AF,3P, 400V,36 kaic 3 - 100AT/150AF,2P, 230V,30 kaic 2 - 70AT/100 AF,2P, 230V,30 kaic 4 - Space</p>	<p>1.00 Assy</p>
<p>16500 LIGHTING FIXTURES BOX TYPE FLOURESCENT FIXTURE,1 - T8 LED LAMP,1200 MTRS, 9 WATTS, DAYLIGHT</p>	<p>56.00 sets</p>

BOX TYPE FLOURESCENT FIXTURE,2 - T8 LED LAMP,1200 MTRS, 9 WATTS, DAYLIGHT	7.00	sets
T5 LED SUSPENDED LINEAR BOX, 36 x 585 mm,WARM WHITE, 10 WATTS	25.00	sets
SURFACE MOUNTED LED PANEL LIGHT, 30 x 30 cm,DAYLIGHT	38.00	sets
SURFACE MOUNTED LED PANEL LIGHT, 60 x 60 cm,DAYLIGHT	1.00	sets
SUSPENDED LINEAR BOX LIGHTING, L5000 x W70 x H40 mm,DAYLIGHT	12.00	sets
SUSPENDED LINEAR BOX LIGHTING, L2500 x W70 x H40 mm,DAYLIGHT	1.00	sets
RECESSED CAN,GU10 BULB,DAYLIGHT,4", 12 WATTS, DAYLIGHT	31.00	sets
SURFACE MOUNTED ROUND,4" DIAMETER,GU10 BULB,DAYLIGHT	312.00	sets
TRACK LIGHT - GALLERY-20 WATTS	99.00	sets
TRACK LIGHT - THEATER-40 WATTS	179.00	sets
Track Bar for LED Track Light,1000 x 34 x 17 mm	284.00	sets
WALL LAMP - INTERNAL - GUIDE LIGHT	18.00	sets
WALL LAMP - EXTERNAL-STEP LAMP	75.00	sets
DOWNLIGHT - STAIR LIGHT, 3 Watts	101.00	sets
FLOOD LIGHT 300 WATTS	2.00	sets
EMERGENCY LIGHT	33.00	sets
EXIT SIGN (PLAIN)	20.00	sets
EXIT SIGN (LEFT)	1.00	sets
Consumables,Supports,Hangers & etc.	1.00	lot

16700 COMMUNICATION

16721 FIRE DETECTION AND ALARM SYSTEM

Riser System		
Conduit		
1"Ø EMT Conduit	20.00	pcs
1"Ø EMT connector	40.00	pcs
1"Ø EMT Elbow	20.00	pcs
1"Ø EMT coupling	30.00	pcs
Boxes and pullboxes		
FAPB Pullboxes 8"W x 8"H x 4"D	10.00	pcs
Hangers and Supports	1.00	lot
Miscellaneous and Consumables	1.00	lot
Distribution System		
Wire		
1.5 TF Wire, FDAS Wire/ 2core	2,250.00	lm
Others (Pls. Specify)		
Conduit		
3/4"Ø EMT Conduit	850.00	pcs
3/4"Ø EMT Coupling	520.00	pcs
3/4"Ø EMT Connector	650.00	pcs
3/4"Ø EMT Elbow	250.00	pcs
3/4" Metal Clamp	936.00	pcs
No. 8 Tox W/ Screw	1,560.00	pcs

FDAS equipment/Devices

Intelligent Fire Alarm Control Panel Two loop with capacity of 477 devices. Flush-mount new structure. 30 Zones, Integrated PSU with Battery Charger	1.00 sets
Digital Optical Detector, with Remote Indicator Output, With Common Detector Base	57.00 sets
Intelligent Sounder Strobe	8.00 sets
Manual Pull Station	8.00 sets
Communication Card	1.00 sets
Back-up Battery	4.00 pcs
Smoke Tester	2.00 pcs
1 KVA Servo Type AVR	1.00 unit
Surge Protector	1.00 pcs
Intelligent PSU	1.00 unit
Supervision, Programming, Commissioning, Testing and Training	1.00 lot
Boxes	
Utility Box G.I.	30.00 pcs
Junction Box G.I.	75.00 pcs
Square Box G.I.	15.00 pcs
16741 TELEPHONE,CCTV & DATA SYSTEM	
Riser System	
Conduit	
2"Ø PVC Conduit	24.00 pcs
2"Ø PVC Adapter W/ Locknut	35.00 pcs
2"Ø PVC Elbow	20.00 pcs
Others (Pls. specify)	
Boxes and pullboxes	
Pullboxes 12" x 12" x 10"	6.00 assy
Pullboxes 24" x 24" x 8"	1.00
Others (Pls. specify)	
Hangers and Supports	1.00 lot
Miscellaneous and Consumables	1.00 lot
Others (Pls. Specify)	
Distribution System	
Wires	
Cat6/4p	1,650.00 lm
Others (Pls. specify)	
Conduit	
20mmØ PVC Conduit (3/4")	338.00 pcs
20mmØ PVC Adapter w/ Locknut	120.00 pcs
Others (Pls. specify)	
Wiring Devices	
Telephone Floor outlet	3.00 sets
Data Floor Outlet	1.00 sets
Equipment/Devices	
24-Port Gigabit Smart PoE+ Switch with 4 Combo SFP Slots TL-SG2424P	1.00 sets
Wireless Access Controller, 32AP Mgt Capacity	1.00 sets
Wireless N300 High Power Access Point	2.00 sets
Wireless N300 Ceiling Access Point	6.00 sets

6 Lines by 2 Digital and 32 Analog Extension	1.00 unit
Back up Battery with Battery Cable	1.00 sets
AVR 500VA Servo Type	1.00 sets
Electronic Type Lightning Arrestor (1 per Line needed)	2.00 pcs
Kx DT 521 1Line LCD Digital Tel. unit for the operator	1.00 sets
Single Line Analog Telephone	3.00 sets
Pabx Installation Materials (4 pairs UTP cable, RJ45 connectors, Wiring block)	1.00 lot
Configuration, Termination and Programming of Analog and Digital Side.	1.00 lot

Boxes PVC

Utility Box	50.00 pcs
Junction Box	30.00 pcs
Square Box	15.00 pcs
Others (Pls. specify)	

CCTV System

Wires

Siamese rg6 coaxial cable with power for cctv	3,250.00 lm
Others (Pls. Specify)	

Conduit

3/4"Ø PVC Conduit	462.00 pcs
3/4"Ø Adapter w/ Locknut	92.00 pcs
Others (Pls. specify)	

Equipment/Devices

16CH HD Digital Video Recorder 16 Cameras 1080P Res. @ 240 fps Video Recording and Viewing 720P res. @ 480 fps Video Recording and Viewing HDMI, VGA and BNC Video Output Remote Monitoring Capable	1.00 sets
3TB Hard Disk Drive SATA	2.00 sets
21 IR LEDs HD 1080P Dome Type Camera 2MP HD resolution, f3.6mm lens 1/2.7" CMOS sensor	16.00 sets
21 IR LEDs HD 1080P Bullet Type Camera 2MP HD resolution, f3.6mm lens, IP66 1/2.7" CMOS sensor	4.00 sets
23" LED TV	1.00 sets
Automatic Voltage Regulator Servo Type 500VA	1.00 sets
MPS 20AMP 12VDC CCTV Camera Power Supply	1.00 sets
Pullboxes, Connectors, HDMI cables, and other consumables	1.00 lot
Others (Pls. specify)	

Boxes

Utility Box PVC	100.00 pcs
Junction Box PVC	90.00 pcs
Square Box PVC	60.00 pcs
Others (Pls. specify)	

182,446.55

DIVISION 16 SUBTOTAL

TOTAL

