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AGENCY:	University of the Philipines Baguio											
PROJECT:	Completion of UP Baguio Balay Internasyonal Phase 4											
LOCATION:	UP-BAGUIO, GOVERNMENT CENTER ROAD, BAGUIO CITY											
SUBJECT:	BILL OF QUANTITIES											
ITEM	DESCRIPTION	LOCATION ON PLAN	QUANTITY	UNIT	MATERIAL UNIT COST	TOTAL MATERIAL COST	LABOR UNIT COST	TOTAL DIRECT COST	OCM	VAT 5%	SUBTOTAL	TOTALS
	<b>Framing for Level 1.5 Balcony Railing</b>											
	1200mm High Truss Railing- 3"Ø Sch80 HSS Pipe Top and Bottom Chords with 2"Ø Sch80 Diagonal Members spaced at 1200mm OC [include cutting of existing floor tiles, dowel attachment, epoxy primer and acrylic top coat finish]	Level 1.5 Balcony	16.00	lm								
	All electric arc welding and cutting accessories, and consumables for welding work with zinc epoxy primer 3 coats + Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works [Entrance Lobby Building]	All welding works for Level 1.5 Balcony	1.00	lot								
	<b>Maintenance Ladder for Roof</b>											
	460mm wide x 3500mm L2"X2"X6m Steel Angle Bar on 1-1/2" Ladder Rung spaced at 300mm, include base plates and wall attachments [include preparation, 2 coats epoxy primer and 2 coat epoxy finish]	East Side near Fire Exit	1.00	assy.								
	All electric arc welding and cutting accessories, and consumables for welding work with zinc epoxy primer 3 coats + Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works [Entrance Lobby Building]	All welding works for Maintenance Ladder	1.00	lot								
	<b>Spider Web Hammock Assembly at Atrium Loft</b>											
	3"x3"6mm @ 6m Angle Bar and Eye bolt welded to angle bar spaced at 100mm [include 2 coat primer+2 coat finish epoxy matte black acrylic spray applied]	Level 1 Atrium	13.00	lm								
	M10mmØ X 110mm Anchor Rod spaced at 400mm O.C.[Hilti HAS-E 5.8 Rod Adhesive Anchor or equivalent]	Fastener for angle bar attachment to concrete for Nylon Rope	40.00	pc								
	Injectable Mortar for Anchor Rod [Hilti HVU adhesive or equivalent]	Fastener for angle bar attachment to concrete for vertical slat[see detail drawings]	40.00	tubes								
	16mm Ø Grey Nylon Rope @ 50mm O.C. Both Ways (Interlocking Weave)	Level 1 Atrium	16.00	m²								
	<b>Elevator Intermediate Beams</b>											
	W8X31x 12m Wide Flange Structural Metal Framing [include surface preparation,include 1 coat epoxy primer+2 coats epoxy top coat,spray applied]	Elevator Shaft	2.00	pc								
	All electric arc welding and cutting accessories, and consumables for welding work with zinc epoxy primer 3 coats + Weld Electrode E7018 3/16" x 14"; (fy: 415-570 MPa); Welding Works [Entrance Lobby Building]	All welding works for Elevator Intermediate Beams	1.00	lot								
	<b>Fire Exit Railing</b>											
	1400mm Steel Railing: 3"x 8mm Steel Flat Bar Hand Rail with 12mm Round Bars spaced at 100mm OC on 3"x8mm Bottom Rail and 3"x8mm Posts spaced at 1000mm welded on existing steel stairs [include epoxy primer and acrylic top coat]	Fire Stairs Railing	102.00	lm								

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	2100mm x 900mmx900mm 8mm Tempered Glass Enclosure sliding door, corner entry(include Stainless Steel mounting accesories)	Shower Enclosure	2.00	set								
	2100mmH x 1100mmL at 2-550mm sliding panels 8mm Tempered Glass Partition(include Stainless Steel mounting accesories)	Shower Enclosure	12.00	set								
	2100mmH x 1500mmL at 2-750mm sliding panels 8mm Tempered Glass Partition(include Stainless Steel mounting accesories)	Shower Enclosure	2.00	set								
	2100mmH x 2000mmL at 2-1000mm sliding panels 8mm Tempered Glass Partition(include Stainless Steel mounting accesories)	PWD Shower	1.00	set								
	2100mmH x 900mmL at 2-450mm sliding panels and 300mm Fixed Panel, 8mm Tempered Glass Partition(include Stainless Steel mounting accesories)	Shower Enclosure	2.00	set								
	2100mmH x 1400mmL at 2-700mm sliding panels 8mm Tempered Glass Partition(include Stainless Steel mounting accesories)	Shower Enclosure	1.00	set								
	Glass Railing											
	12mm Safety Tempered Glass Railing at 1000mm-1400mm on 100mmx50mm Black Powder Coated Aluminum Bottom Track[Include glass mount bracket for 38mm Timber Round Railing]	Dorm Building- All balcony railing	70.00	lm								
	10mm Tempered Glass Railing at 1000mm-1400mm on 100mmx50mm Black Powder Coated Aluminum Bottom Track[Include glass mount bracket for 38mm Timber Round Railing]	Entrance Bldg-Level 1.5 Balcony and Wall Railing at Entrance	16.00	lm								
	38mm Timber Railing at 900mm Mounting Height included coating-marine spar varnish [To be mounted on Glass mount railing]	Dorm Building- All balcony railing	70.00	lm								
	Timber Slat Railing											
	38mm Timber Railing at 900mm Mounting Height included coating-marine spar varnish [To be mounted on Glass mount railing]		20.00	lm								
10 21 00	Compartments and Cubicles											
	Toilet Partition Assembly 0720 x 16500mm (Phenolic black-core compact board or equivalent)with Stainless Steel Railing and U-Bar,Stainless Steel Accessories Includes Hinges, Indicator, Door Knob, Brackets, Adjustable Foot, Top Rail, Coat Hook, Handle LABOR INCLUDED	Level 4 Toilet- Ladies' WC	3.00	set								
	Toilet Partition Assembly 1500mm with Door (Phenolic black-core compact board or equivalent)with Stainless Steel Railing and U-Bar,Stainless Steel Accessories Includes Hinges, Indicator, Door Knob, Brackets, Adjustable Foot, Top Rail, Coat Hook, Handle LABOR INCLUDED	Level 4 Toilet- Men's WC	1.00	set								
	Urinal Screen 0400 x 900mm (Phenolic black-core compact board or equivalent) Stainless Steel Accessories Included	Level 4 Toilet- Men's WC	2.00	set								
	6mm Glass Mirror FEP (1600m x 1100mm) glued on 4.5 marine plywood screwed to wall tile with #8x1-1/2" Stainless Steel Screw	Level 4 Toilet, Public Toilet	2.00	set								
	6mm Glass Mirror FEP (600mm x 1100mm) glued on 4.5 marine plywood screwed to wall tile with #8x1-1/2" Stainless Steel Screw	Level 4 Toilet, Public Toilet	3.00	set								
	Signages/ Wayfinding											
	300mm x 150mm Acrylic Signage (include attachments)	Room Tags	22.00	set								
	300mm x 150mm Acrylic Signage (include attachments)	Public Toilets	8.00	set								

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	Shower Heater Single Point, Open Outlet Type, 3.5kW, 370mmH x 190mm x 93mm, 1.6kg, Water Flow Sensor, Manual Reset Thermostat, Auto Thermal Cut-off, Water Pressure: 1.4psi-55psi [Panasonic DH-3JL2P or equivalent]		21.00	set								
	Tapping of Soil Stack to Septic Tanks (100mmØ-150Ømm PVC Pipes and Fittings)		1.00	lot								
	Tapping of Rainwater to Cistern Tank		1.00	lot								
	DIVISION 22 SUBTOTAL											
23 00 00	DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)											
	100mm(4") Stainless Pipehood with Screen(include screws)[Mitsui or equivalent]		20.00	pc								
	Ceiling Mount Exhaust Fan 177x177mm, Single Speed, Air Volume 85m3/h(KDK 17 CUF or equivalent)		3.00	pc								
	Perforated Panel Manhole, 2'x2'x0.70mm, Bone White(JEA Steel or equivalent)		3.00	pc								
23 07 00	HVAC Insulation											
23 20 00	HVAC Piping and Pumps											
	4-Way Cassette Inverter Split Type(208V - 230V / 1 Ph / 60 Hz)-6.0HP[[Gree or equivalent]	Level 4 Function Hall	1.00	set								
	ACCU Brackets and Mobilization	Level 4 Function Hall	1.00	lot								
23 33 00	Duct and Power Supply Accessories; Installation Accessories; Pipe Hanger, pipes, wires,conduits and Wall Connection Accessories (ie U-Clamps, Expansion Bolts) INCLUDE LABOR	Level 4 Function Hall	1.00	lot								
	Restoration of Ceiling Cutouts [Cutting, Boring, Painting]	Level 4 Function Hall	1.00	lot								
	DIVISION 23 SUBTOTAL											
26 00 00	DIVISION 26 ELECTRICAL											
26 05 13	MEDIUM VOLTAGE CABLES											
	50 mm² XLPE Power Cable, Single Core, 24KV	Power Substation	100.00	lm								
	50mm² Heat Shrinkable Termionation Kit, 12/36 KV APKT36B1XO-T Outdoor 2/0-1/0 AWG[Raychem or equivalent]	Power Substation	2.00	set								
	Copper Compression Terminal Lugs,2 Hole Long Barrel 0-1099939-5 1/0AWG(50mm2) stud 1/2", 50 mm²	Power Substation	6.00	pcs								
	Insulation and Hi-Pot Test	Power Substation	1.00	lot								
	GROUNDING- SECONDARY											
	20Ø mm x 3000 mtrs Grounding Rods	Building Perimeter	12.00	pcs								
	250MCM Grounding Clamp	Building Perimeter	12.00	pcs								
	50 mm² Bare Copper Wire	Building Perimeter	150.00	lm								
26 05 19	LOW-VOLTAGE POWER CONDUCTORS AND CABLES											
	THHN Electrical Wire 22 mm² [Phelps Dodge orequivalent]	Fire Pump Supply	46.00	lm								

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	THHN Electrical Wire 14 mm² [Phelps Dodge orequivalent]	Fire Pump Supply	12.00	lm								
	3.5 mm² THHN Wire [Phelps Dodge orequivalent]	Entrance, Pathway, Minecraft Slope Protection, Fire Exit	2500.00	lm								
	Conduit for Electrical Systems											
	15mmØ 3m PVC Pipe for electrical PNS 14 [Atlanta Permaline uPVC or equivalent]		125.00	pcs								
	20mmØ 3m PVC Pipe for electrical PNS 14 [Atlanta Permaline uPVC or equivalent]		25.00	pcs								
	PVC Conduit Fittings and Embedment Chipping		1.00	lot								
	WIRING DEVICES											
	2 gang universal type C.O. w/ ground and plate cover [Schneider SE-CA_CSCS3045SAT3P or equivalent]	Dorm Units, Cafeteria	4.00	pcs								
	2 gang switch with plate cover [Schneider Concept series or equivalent]		5.00	pcs								
	1 gang switch with plate cover [Schneider Concept series or equivalent]		6.00	pcs								
26 24 16.13	PANELBOARDS											
	Branches : 1 - 20 AT/ 50 AF,2P,230V	Panelboard DPL1.5, Entrance Lobby	1.00	pcs								
	2 - 15 AT / 50 AF, 2P	Panelboard DPL1.5, Entrance Lobby	2.00	pcs								
26 05 33.16	Boxes for Electrical Systems											
	Junction Box PVC, with cover	Entrance, Pathway	5.00	pcs								
	Utility Box PVC	Entrance, Pathway	175.00	pcs								
26 41 00	FACILITY LIGHTNING PROTECTION											
	Helita Pulsar 60 High Pulse Voltage ESE Lightning Conductor, complete with stainless steel threaded extension mast 30mm dia. including conductor clamp. 107m radius at level 4	Roof Deck	1.00	set								
	125mm² terminal lug	Roof Deck	2.00	pcs								
	50 mm² terminal lug	Roof Deck	18.00	pcs								
	Mounting Support	Roof Deck	1.00	lot								
26 51 00	Interior Lighting											
	All lighting includes luminaires - color temperature to be determined upon approval of products											
	170mm x 80mm Twin MR16 Downlight Fixture with GU10 Lampholder(Firefly FD208WH or equivalent) with 2 pcs each-MR16 Warm White and Cool White 9W LED Light	Dorm Units, Hallways (Level 0, Level -1), Level 1.5, Level 0.5	170.00	assy								
	Surface Square Downlight, 4" Diameter, E27, 10 Watts LED Bulb, Warmwhite	Fire Exit Landing, Veranda	18.00	pcs								

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	8W LED COB Warm/Cold White Wall Light Wall Lamp Wall Mounted AC 85-265V Night Light Black/Grey, IP65	Atrium, Fire Exit Landing	16.00	pcs								
26 56 00	Exterior Lighting											
	Recessed deck light 55mm diameter x 88mm LED Cree -3535 3Wx1 / 300Lm Ra: >80 Aluminium lamp body, Tempered glass diffuser, Silicone ruber gasket, anodized coating finish (Yunda deck light 003702 + B or equivalent), with LED Driver [include concrete wall cutting for power supply]	Entrance Pathway, Level -2, Fire Exit Landing	107.00	assy								
	LED Bollard, E27 Bulb, 300mmØ x 1000mm, Warm White, 6063 High-Quality Aluminum Body, IP65 Bulb Rating [Ecoshift or equivalent]	Landscape at Entrance Pathway	20.00	assy								
	Security Light for LED Streetlight with 25' Hot Dip galvanized Lamp post with base plate [include Anchor bolt M20 x 600mm x 100mm and Concrete Post]	Parking	3.00	assy								
	150W High Power LED Street Light, Warm White, IP65 rating, on 75mmØ GI Pipe painted black, with photoswitch	Parking	3.00	pcs								
	DIVISION 26 ELECTRICAL											
27 00 00	DIVISION 27 COMMUNICATION SYSTEM											
27 05 26	Grounding and Bonding for Communications Systems ( Tel.,FDAS, DATA, CCTV )											
	30 sq.mm concentric bare copper wire		100.00	mtrs								
	20mmØ x 3m long copper clad ground rod		3.00	pcs								
	Ground rod clamp 250 MCM		3.00	pcs								
	cadweld powder #115		3.00	sets								
	cadweld powder #90		3.00	sets								
	Grounding Busbar		1.00	assy								
	PoE Switch 24GBe RJ45 Port,2 SFP ports		1.00	set								
	L2 Switch Enterprise Router(MikroTik or equivalent)		1.00	set								
	Wifi Access Point capable of 300mbps with a range of up to 400ft(UniFi or equivalent)		6.00	set								
	DIVISION 27 COMMUNICATION SYTEM											
28 00 00	DIVISION 28 ELECTRONIC SAFETY AND SECURITY											
28 30 00	FIRE DETECTION AND ALARM SYSTEM											
28 31 00												
	Intelligent Fire Alarm Control Panel Two Loop with Capacity of 477 Devices, Flush Mounted Structure, 30 zones, Integrated PSU with Battery Charger		1.00	unit								
	Intelligent Photoelectronic Smoke Detector With Common Detector Base		50.00	unit								
	Communication Card		1.00	unit								
	Back-up Card		1.00	unit								
	Back-up Battery		1.00	unit								
	Digital MAnual Call Point		8.00	unit								
	Inteligent Sounder Strobe		8.00	unit								

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	Surge Protector		1.00	unit								
	DIVISION 28 SUBTOTAL											
32 00 00	DIVISION 32 EXTERIOR IMPROVEMENTS											
	Unit Paving											
	Porous Concrete Unit Pavers 100x200x50mm Cobblestone arrangement on 50mm fine sand include basecourse and mechanical compaction	Level -2	183.00	m²								
	Cyclone Wire Perimeter Fence 2000mm Cyclone Wire 2"x2" Opening on 1 1-1/2Ø GI Pipe 2000mmx3000mm Frame SpacingPainted Black[include preparation,primer and top coat], 200mmØ x 500mm concrete pile	South and Western Section of Property	198.00	lm								
	2000mm Bi-Fold Gate 1-1/2" 4.5mm Angle Bar spaced at 100mm on 2"x2" 4.5mm Top,Mid and Bottom Supports [include preparation,primer and top coat], Heavy Duty Gate hinges and Barrel Hinge, 4"x4" Tubular Steel Posts on Concrete Pedestal	Parking Gate	13.00	lm								
	Resin Trench Drain L1000 x W150 x H240 (Inside); L1000 x W190 x H280 (Outside); U-Shaped resin concrete drainage channel with cast iron cover(3tons moving load capacity) include 110mm with cast in place concrete 20Mpa all around drain (CX 150-Z03-D Concrete Resin Rainwater Drain System or equivalent)[SEE DETAILED SECTION][include excavation and disposal of soil bank volume]	Southside of Entrance Building	19.00	pcs								
	200mmØ PVC Subsurface drainage [include excavation,soil back fill and slab restoration]	From resin trench drain going down access road	95.00	lm								
	DIVISION 28 SUBTOTAL											
	TOTAL											