

BOQ for Construction of Main Gate Air University Karachi

Abstract of Cost (Civil Work)					
SR	Description	BILL OF QUANTITY (BOQ)			
		Units	Qty	Rate	Amount
A)	GROUND FLOOR				
1a	Dismantling Work				
	Complete manual/mechanical dismantling and demolition of existing 85 RFT boundary wall including plaster, coping, foundation, and careful removal of two (02) steel boundary gates (15' length each) with posts and fittings without damage. Scope includes providing all labor, tools, equipment, scaffolding, sorting, cleaning, manual handling, loading, transportation, unloading, and proper handing over (taking over) of all salvaged bricks, steel, and gate structures to the designated Client/Employer store on-site. Work also fully covers collection, loading, hauling away, and off-site dumping of all non-reusable debris, along with final site clearing, leveling, and making the area clean and safe as directed by the Engineer-in-Charge. All complete under 1 Lump Sum (LS) scope.	LS	1		
1b	Excavation				
	Excavation in foundation of building, bridges and other structures, including dagbelling, dressing, refilling around structure with excavated earth, watering and ramming lead up to one chain (30 m) in ordinary soil.	Cft	1,878		
2	Compaction				
	Compaction of Natural Ground up to 95% Modified AASHTO density all as specified.	Sft	375.6		
3	Sand/Gassu Filling				
	Supplying and filling sand under floor; or plugging in wells				
a)	Under Flooring	Cft	2,981		
4	Anti termite				
	Anti termite Treatment with "ABILITY 2.5% EC" by Hextar Group(Malasian care systems) to mix ABILITY 01 litre with 250 liters of water to make spray emulsion at foundation trenches (Bed & sides) under floor before laying hard core material and outside under plinth protection	Sft	3,282		
5	PCC Lean				
	Cement concrete plain including placing,compacting, finishing and curing complete (including screening and washing of stone aggregate): 1500 PSI Cubical				
a)	PCC Lean Under Footings Ratio 1: 3: 6	Cft	187		

a)	Under Plinth Beams Ratio 1: 4: 8	Cft	106		
A)	GROUND FLOOR				
6	RCC Work				
	Reinforced cement concrete in roof slab, beams columns lintels, girders and other structural members laid in situ or precast laid in position, or prestressed members cast in situ, complete in all respects: - (nominal mix 1: 1.5: 3) the requisite strength of 3500 PSI				
a)	Columns	Cft	489		
b)	RCC Footings	Cft	391		
c)	RCC Plinth Beams	Cft	111		
d)	RCC Lintels	Cft	14		
e)	RCC Beams	Cft	149		
f)	RCC Slab	Cft	284		
7	Steel				
	Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings, including cost of binding wire and labour charges for binding of steel reinforcement (also includes removal of rust from bars):-Deformed bars				
a)	Deformed bars (Grade-60)	Kg	4,504.25		
8	Block Masonry				
	Providing and constructing Solid Cement Concrete Block masonry in cement mortar 1:6 (cement : coarse river sand) using factory made, load bearing, approved quality cement concrete blocks of specified size, density of blocks not less than 1800kg/cum, setting in position, curing, raking out joints wherever required etc., complete all leads and all as per specifications and directions of engineer-in-charge				
a)	8" Thick Hollow Blocks Size: 8"x16"x8"	Sft	131		
b)	5" Thick Hollow Blocks Size: 12"x8"x5"	Sft	1,334		
9	Plaster				
	Supply, make, apply and cure 1/2" thick smooth finished plaster in cement sand mortar, smooth finished curing etc; as per Specifications and as per sample approved by the Engineer.				
a)	Internal Plaster 1:5 cement sand mortar Ratio	Sft	1,334		
b)	External Plaster 1:4 cement sand mortar Ratio	Sft	1,803		
10	Flooring Work				
a)	Cement concrete plain including placing compacting, finishing and curing complete (including screening and washing of stone aggregate Ratio 1: 2: 4 1.5 to 2" thick PCC	Sft	570		

b)	Providing, laying, watering and ramming brick ballast 1½ to 2"(40 mm to 50 mm) gauge mixed with 25 % sand, for floor foundation, complete in all respects 3" thick	Cft	143		
A)	GROUND FLOOR				
11	MS/ GI Chowkat				
	Providing and fixing 2" wide MS/ GI Chowkat single/double rebate made of 16 SWG MS sheet pressed/welded / supported with M.S. flat 1- 1/4"x1/8" i/c 6"long M.S. Flat 1"x1/8"hold fasts (6-Nos) welded/ screwed, punching of lock hole covered with MS Box,coating with antirust paint including filling with cement sand mortar (1:8) and embedding hold fast in cement concrete (1:2:4) ,complete in all respect as approved and directed by Engineer Incharge.				
a)	10.5 " wide	Nos	2		
12	Roof Waterproofing				
	Providing and laying roof waterproofing and terracing treatment comprising 2 coats of hot bitumen (Grade 80/100), topped with polythene sheet and 1.5" thick Jambolon insulation sheet. System includes 3" to 4" thick mud/soil filling laid to proper slope, finished with brick tiles (size 12"x6"x1.5") including joint grouting, pointing, cleaning, and complete execution as per site layout and engineer's instructions.				
a)	10.5 " wide	Sft	570		
1	Porcelain Tile Flooring				
	Providing and laying Porcelain floor tiles inside building rooms 24"x48" over thick plaster of cement sand mortar (1:4) i/c filling joints in white cement and matching pigment complete in all respect with Skirting and best quality Tiles of approved color scheme (Base Rate up to Rs. @ 2500 Sqm) of Oreal /Times Ceramic Brand or equivalent.	Sft	570		
2	Paint Work (Plastic Emulsion)				
	In Internal Walls provide and apply Wall Putty with 2 coats Plastic Emulsion Paint (Brighto or Dimand)				
a)	Internal Walls (Plastic Emulsion)	Sft	1,334.17		
b)	Ceiling (Simple Emulsion)	Sft	1,286.50		
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3	POP Ceiling				
	P/L POP ceiling comprising of 5/8" thick plaster of paris sheet of required size in approved design with oneline of 6" wideniche all around , hanging with Copper wire(16 SWG) duly enriched with POPand flaxen i/c thecost of making space for rope light /screws/jute/making holes for lights and rawal plugs complete in all respects as approved and directed by the Incharge.(Measurement will be made as per carpet Area).	Sft	570		
5	Paint Work (weather shield) (External Walls)				
	On External Walls providing and applying Weather Shield Paint on external surface of building including preparation of surface, application of primer completes in all respect: new surface 2-coats (Brighto or Dimand)				
a)	External Walls (weather shield)	Sft	2,110.50		
6	Wooden Door (7'-6" height)				
	Supplying, fabricating, and installing solid Ash Wood door shutters of specified thickness, complete with solid hardwood chowkhats (frames), natural grain selection, kiln-dried seasoning, and approved PU polish finish. Including all necessary high-quality hardware fittings, mortise locks, hinges, handles, and labor for complete installation as per drawing specs and site engineer's approval.				
a)	Single Panel Door & Double Panel Door Size (4 x 7'-6")	Sft	64		
7	Marble Sills				

	Providing and laying 3/4" thick Suny Gray of approved quality, colour shade and texture for kitchen slabs set over 3/4" thick 1:3 cement sand mortar i/c rounding off front edge complete in all respect as shown in the drawings and / or as directed by the Engineer. (Base Rate@ 450 Sft).	Sft	45.94		
8	Aluminium Windows (Single Glazed)				
	Provide and fix aluminum glazed fixed / sliding windows / ventilators using sections of min 100mm wide and 1.3 mm thick in champghane or approved color frames, including best quality local make 6mm thick clear glass as approved, and glazing of "Ghani Glass" make and with all hardware etc; as per existing building. GR Brand Black Coat	Sft	45		
10	MS Grill				
	Providing and fixing M.S. grill fabricated with MS Square polished Vertical/horizontal Bars of specified size @ 4" c/c ' passed through punched holes in MS Patti of 1-1/4"x1/8" i/c the cost of 1-1/4"x1/8" MS patti for Frame of windows and painting 3 coat complete in all respect as approved and directed by the Engineer Incharge. 3/8" Square Bars 18 SWG	Sft	45		
11	Fiber Cement Board Cladding				
	Supply and installation of 8mm thick exterior-grade Fiber Cement Board cladding on both sides of the wall, fixed over MS/GI stud framing structure (1.5" x 1.5", 16 SWG @ 2'-0" C/C) using self-tapping counter-sunk screws. Joint treatment with fiber mesh tape, waterproof sealant, and surface finishing with 1 coat of primer and 2 coats of approved exterior weather-proof paint. Complete in all respects including alignment, scaffolding, cutting, waste handling, and finishing works as per architectural drawing.				
a)	On Top of Arch both Sides	Sft	280		
12	MS Arch Truss				
	Fabrication, supply, and installation of 40 Rft MS Arch Truss (1'-6" width/depth) featuring 3"x3"x1/4" top & bottom chords and 2"x2"x1/8" internal webbing members with precision bending and full welding as per Detail A. Surface preparation with 1 coat of red oxide primer and 3 coats of approved synthetic enamel paint finish.				

	Complete with structural base plates, anchor bolts, site erection, scaffolding, alignment, and finishing in all respects as per drawing.				
a)	MS Arch Truss	Rft	40		
13	Mian Gate				
	Providing, fabricating, fixing, and installing MS Main Entrance Gate (Size: 18'-6" x 12'-0", Total Area: 222 Sft) made of heavy-duty MS hollow sections/pipe frame and vertical MS grill bars in 14 SWG sheet/pipes as per approved CAD drawing layout. Complete with heavy-duty bottom caster wheels/tires, track rail/guide assembly, hinges, locking arrangements, red oxide primer, and 2 coats of approved enamel paint finish, complete in all respects as per site requirements and engineer's approval.				
a)	Mian Entrance Gate	Sft	444		
12	Molding Work				
	Fabrication, supply, and fixing of classical Tuscan Style Exterior Architectural Moldings in GRC / Fiber Cement, including 4 Nos. main columns (complete with Tuscan bases, shafts, and top capitals), top decorative beam cornices, wall coping borders, and bottom plinth moldings as per architectural elevation details. Fixing using heavy-duty chemical anchors, MS brackets, stainless steel screws, and tile adhesive, complete with joint filling, fiber mesh taping, surface grinding, and seamless alignment. Surface finishing including 1 coat of exterior primer and 2 coats of approved weather-proof / texture paint finish, complete with scaffolding, safety, and all associated civil/finishing works in all respects.	Job	1		
13	Sliding Door				
	Supply, fabrication, and installation of heavy-duty Aluminum Sliding Door System (approx. 1.6mm to 2.0mm gauge prime section) with 8mm/12mm tempered/clear glass, high-quality sliding rollers, locks, handles, weather strips, and sealing complete. Scope covers all labor, tools, material handling, shifting, loading, unloading, fixing, alignment, and site cleanup, all complete as per approved drawings and directions of the Engineer-in-Charge.	Sft	40		
14	Turnstile Door System				

	Supply, installation, testing, and commissioning of heavy-duty Full Height Dual Pedestrian Turnstile Gate (Model: UT-FHT-8002D), constructed with SS304 stainless steel frame. Integrated with bi-directional mechanical rotation, LED passage indicators, emergency break-in override, and seamless integration with RFID card readers, biometric scanners, and access control systems. Complete with wiring, mounting hardware, civil foundation anchorage, and commissioning as per site engineer's approval.	NO	1		
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ABSTRACT OF COST PUBLIC HEALTH ENGINEERING (PHE) WORK

Sr	Description	ENGINEERS COST ESTIMATE			
		Unit	Qty	Rate	Amount
1	Soil, Waste Vent and Rain Water & AC Drainage System				
	Providing, laying, fixing and testing uPVC soil, waste, vent and rain water as per BSS 4514 & 5255 or equivalent BS specifications including uPVC fittings with solvent cement jointing or rubber ring joints Master / Popular / Adam jee or equivalent make as approved by the Engineer In charge complete in all respects, including, clamps, bends, tees, Y-tees, cowls, reducers, clean out etc., embedded in floors and walls, clamped to walls, suspended from slab, painted MS horizontal and vertical pipe hangers of approved design making requisite no. of holes and making good the same complete in all respects.				
b)	4" dia	Rft	30		
2	Top Khurra (Roof Outlet):				
	Construction of standard size Top Khurra for roof drainage, including proper sloping, 1:2:4 cement concrete base, and finishing with smooth cement punning/bitumen coating to ensure water-tightness at the pipe mouth.				
a)	Top Khurra (Roof Outlet):	Each	2		
3	Bottom Khurra (Drainage Point):				
	Providing and fixing/constructing Bottom Khurra at ground level or floor terminal points. Includes excavation, PCC base, and masonry walls finished with cement plaster to guide water into the main drain.	Each	2		

ABSTRACT OF COST ELECTRICAL WORK

SR	Description	ENGINEERS COST ESTIMATE			
		Units	Qty	Rate	Amount

1	Wiring				
	Providing and laying of wiring 2×3/0.029 plus 1×1.5sqmm S/C PVC insulated wire Pakistan cables appropriate size of good quality PVC Pipe/Channel duct Adamjee or equivalent, surface/concealed in ceiling, wall/ floors complete all respect from fans, lights, exhaust fan and bell point to switch Boards. Approved by engineer. including Conduit				
a)	3/0.029 (1.5 mm) for WAPDA (From Point To Point Lights)	Points	2		
b)	7/0.029 (2.5 mm) (ii) (From Switch Board to Point)	Points	2		
c)	7/0.036 (4mm) (i) (From D. B to Switch Board)	Points	2		
2	Switch Plates				
	Supply, installation, testing, and commissioning of a complete switch Plates for lighting circuits. The work includes all components and labor, and shall be completed as per approved architectural and electrical drawings. Wiring with connection : Minimum 1.5 mm ² multi-strand, PVC-insulated copper conductors for Single phase Conduit: ISI-marked, heavy-duty, 20/25 mm diameter rigid PVC conduit, concealed within walls, floors, or ceiling slabs. This includes all necessary bends, couplings, and adapters. Back box: 16-gauge (minimum) steel back box, recessed into the wall. The box must be fitted with an earth terminal and painted with two coats of anti-rust paint. Plate: Flush-mounted, modular switch plate of approved make and finish, complete with all required grid plates and accessories. Installation: Includes chipping and channeling of walls, floors, or ceilings for conduit runs. All trenches must be neatly plastered and finished to match the surrounding surfaces after installation.				
a)	One Gang one way Switch 10 Amp Opal / Schneider / Equivalent	Nos	4		
b)	Two Gang one way Switch 10 Amp Opal / Schneider / Equivalent	Nos	4		
d)	Four Gang one way Switch 10 Amp Opal / Schneider / Equivalent	Nos	2		
e)	Six Gang one way Switch 10 Amp Opal / Schneider / Equivalent	Nos	2		
3	Ceiling Fans				

3	Providing & installing testing of CEILING FANS 56" Approve brand of best quality local or equivalent, Copper winding quality complete all respect with dimmer switch and above mention wiring work. Approved by engineer.				
a)	ELECTRIC CEILING FANS: AC/DC	Nos	2		
5	Lights				
	Supply, installation, and commissioning of Lights fixture, of approved make and model. Includes integral LED driver, mounting hardware for false ceiling, connection to power point, and testing, complete in all respects.				
a)	LED Ceiling/Down Light 3W/7W	Nos	24		
b)	Wall Light	Nos	6		
BOQ for Construction of Proposed Main Gate Air University Karachi					
ABSTRACT OF COST ELECTRICAL WORK					
6	Power Plug Socket (AMP SWI/SOC, PIENO Series, Local)				
	Supply, installation, testing, and commissioning of a single-gang, switched, 6A, 3-pin power socket outlet, of approved modular type (e.g., Schneider, Legrand, or equivalent). The rate includes the required wiring with 3 x 2.5 mm ² PVC-insulated copper conductor cables (Phase, Neutral, and Earth), laid in heavy-duty PVC conduit, complete with a galvanized iron (GI) back box, modular switch, faceplate, and all necessary fittings for a complete concealed installation as per the drawings.				
b)	AC SOCKET 16 TO 5 Amps	Nos	2		
c)	2/3 PIN SOCKET 13 Amps	Nos	2		
7	Distribution Board (DB)				
	Supply, installation, connecting, testing & commissioning of the Following indoor Distribution Boards as per layouts DBLP. as per layouts and attached specifications				
a)	Distribution Board (DB)	Nos	2		
8	Power Cables				
a)	Supply and erection of single core PVC insulated, PVC sheathed copper conductor, 600/1000 volts grade cable, in prelaid G.I. pipe/M.S. conduits/PVC pipe/G.I. wire/trenches, etc (rate for cable only):- 10.00 mm sq (7/0.052")	Rft	150		