

MARICULTURE CENTER

VOLUME 3

BILL OF QUANTITIES

GOVERNMENT OF THE UNITED ARAB EMIRATES
MINISTRY OF AGRICULTURE AND FISHERIES



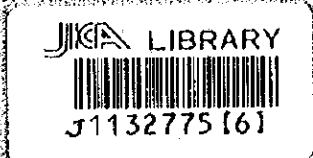
MARICULTURE CENTER

UMM AL QUWAIN U.A.E.

VOLUME 3

BILL OF QUANTITIES

NOVEMBER 1980



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

Name of Tenderer

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**GOVERNMENT OF THE UNITED ARAB EMIRATES
MINISTRY OF AGRICULTURE AND FISHERIES**



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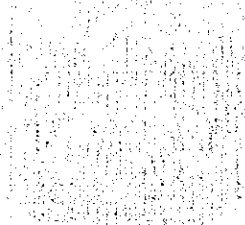
NOVEMBER 1980

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

Name of Tenderer

REPUBLIC OF THE PHILIPPINES

DEPARTMENT OF EDUCATION



OFFICE OF THE SECRETARY

MANILA



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I PRICING INSTRUCTIONS

1. GENERAL

- A. The rate for each item must be comprehensive and must include for complying in all respects with the requirements of the Specification, cover all the obligations under the Contract and all matters and things necessary for the proper construction, completion and maintenance of the works. No claims for additional payment will be allowed for any error or misunderstanding by the Contractor of the work involved.
- B. The rate for each item must include for all the following:-
- (1) Labour and all costs in connection
 - (2) Materials and goods including all costs in connection
 - (3) Fitting and fixing materials and goods in position including hoisting to any height or lowering to any depth.
 - (4) Use of Contractor's equipment and tools.
 - (5) Establishment and overhead charges and profit other than those allowed for in "Conditions of Contract".
- C. Where the word "allow" occurs the cost of the items shall be at the risk of the Contractor.
- D. Where items are described as FIX the rate for each item must include for all the following:-
- (1) Labour and all costs in connection
 - (2) All costs in connection with receiving, unloading, storing the materials, returning packing cases as applicable, assembling component parts and supplying sundry fixing, screws, plugs and the like for the proper installation of the materials.
 - (3) Fitting and fixing materials and goods in position including hoisting to any height or lowering to any depth.
 - (4) Use of Contractor's equipment and tools
 - (5) Establishment and overhead charges and profit other than those allowed for in "Conditions of Contract".

PRICING INSTRUCTIONS

E. The units of measurement are metres and kilogrammes in the Bills of Quantities the following abbreviations have been used:-

Kg.	-	Kilogramme
No.	-	Number
m.	-	Linear Metre
Sq.m.	-	Square Metre
Cu.m.	-	Cubic Metre
Ls.	-	Lump Sum

F. All quantities are the net measurement as fixed in position. The Contractor must allow in his rates for all laps, waste and trade or any traditional allowance.

G. In the event of any discrepancy between the details on the Drawings, description in the Technical Specification and in the Bills of Quantities then the item shall be deemed to have been priced in accordance with the description in the Bills of Quantities.

2. EXCAVATION AND EARTHWORK

- A. The rates for excavation are to include for excavating in any type of ground including rock whether above or below water table level. Excavations for foundation trenches, column bases and the like will be measured commencing from formation levels.
- B. All volumes of excavation have been measured net and not allowance has been made in the quantities for bulking, overbreak, working space, planking and strutting or formwork.
- C. The rates for excavation are to include for all additional excavation to provide working space, for getting out by any means necessary, depositing in temporary spoil heaps, returning filling and ramming around foundations, selecting setting aside approved excavated material to be used as filling under buildings, roads and paved areas, multiple handling and carting away surplus and depositing, spreading and levelling on site.
- D. Where the Engineer requires surplus excavated material to be removed from site this has been measured separately.
- E. The rate for removal of surplus excavated material from site shall include for handling, loading, transporting, unloading, the provision of a shoot, dump or tip and all fees payable in this connection.
- F. The rates for excavation are to include for keeping free from water, supports to sides and trimming, levelling or grading to slopes and falls and ramming bottoms and sides.

PRICING INSTRUCTIONS

- G. The rates for trench excavation for pipes and ducts are to include for deepening and widening the trench as necessary to enable the barrels of the pipes and ducts to rest on firm ground and to facilitate jointing.

3. MEASUREMENT OF FILLING

- A. The rates for filling are to include for all costs and contingent costs incurred in obtaining approved materials, handling, loading, transporting, unloading, tipping, placing, bringing up in stages as specified, spreading, compacting and watering as specified, trimming, grading, use of sprinklers where necessary and all other labours necessary to ensure that the filling material is correctly placed to level and profile to the required degree of compaction.
- B. No allowance has been included in the quantities for compaction of filling material and the Contractor is to make his own assessment of this and make due allowance in his rates accordingly.
- C. No distinction has been made between filling obtained from an approved borrow pit and material arising from excavation approved by the Engineer as suitable for filling. The Contractor is to make his own assessment of the percentage of excavated material suitable for filling and make due allowance in his rates accordingly.
- D. The rates for filling are to include for grading to slopes and falls, hand-packing to form vertical or battering faces and for forming sinkings.
- E. The rates for vapor barrier are to include for straight, raking and circular cutting and for notching around all obstructions.

4. CONCRETE WORK

- A. The rates for all concrete work are to include for mixing, hoisting to any height, providing forms placing and compaction in work of any sectional area or thickness, for forming any constructional joints including any necessary shuttering, for laying in bays in accordance with the Specification, for finishing to slopes and falls for leaving the surface ready to receive screeds or pavings, and for curing and protecting.
- B. The rates for all concrete work are to include for forming chamfers for cutting or forming chases and grooves for cutting or forming mortices and pockets and grouting with cement, for casting in for forming holes and subsequently making good around pipes, ducting and fittings and for forming all holes or openings.

PRICING INSTRUCTIONS

- C. The rates for concrete in blinding are to include for all necessary shuttering to edges.
- D. "Plain" concrete shall mean concrete which is unreinforced by steel bars or mesh reinforcement.
- E. "Reinforced" concrete shall mean concrete strengthened by placing of steel bar or mesh reinforcement before placing concrete and the rates for reinforced concrete shall, in addition, include for filling into shuttering and packing around reinforcement.
- F. The rates for reinforced concrete are to include for filling into shuttering, vibrating and working around reinforcement (reinforcement measured separately).
- G. The rates for steel bar reinforcement are to include for straightening as necessary, cutting to length, bending as required, hoisting to any height and fixing in foundations, columns, beams, slabs, staircases and any other position, cleaning, etc., and supporting in position during concreting including all necessary supports and spacer-bars (excluding stirrups and links), steel binding wire and approved distance pieces.
- H. The rates for welded wire fabric are to include for all straight, raking and circular cutting and notching around all obstructions, for all steel binding wire and approved distance pieces and for laps.
- I. Rates for formwork except for wrought formwork has been measured together with rates for concrete and shall include for all cutting and waste, splayed edges, notchings, allowances for overlaps and passings at angles, battens, strutting, propping, bolting, wedging, easing, striking and removal on completion or when directed. The Contractor must allow in his rates for all necessary fillets, boxings, etc., to achieve the profiles shown on the drawings.
- J. The rates for wrought formwork to produce fair finish are measured separately and are to include in addition to the requirements of the last clause for forming a fair face to the concrete in accordance with the Specification.
- K. The rates for formwork are to include for all fillets to form grooves and throats, splays not exceeding 100mm wide, raking and circular cutting and cutting around all pipes, ducting and fittings.

PRICING INSTRUCTIONS

- L. The rates for precast concrete are to include for moulds and for forming a fair face in accordance with the Specification to all exposed surfaces, hacking all other surfaces to form key for rendering etc., and hoisting to any height including providing any lifting holes or other devices to the approval of the Engineer, building in, including bedding and jointing in mortar and any necessary strutting and supporting.

5. BLOCKWORK

- A. The rates for block are to include for building at any level or height off slabs or beams, additional labours in kerbs, isolated and attached piers, all cutting, plumbing at angles, bonding at angles and intersections, building into or against adjacent work, wedging and pinning up to soffit including any special blocks at angles, intersections and next to openings and for providing whatever the Contractor deems necessary to prevent concrete case on top of hollow block walls and cavity walls falling into the cavities.
- B. The rates for block walling are to include for cutting or forming chases or grooves for slabs, partitions, staircases, etc., cutting grooves for waterbars and the like and making good; building in or cutting and pinning in and making good ends of lintels, timbers, steelwork pipe holderbats and the like and building in or cutting holes for and making good around pipes, ducting and fittings.
- C. The rates for hollow block walls are to include for filling the voids with concrete as specified by the Engineer.

6. MOISTURE AND THERMAL PROTECTION

- A. The rates for flexible waterproofing roofing membranes are to include for making good and cutting around openings, pipes, etc. The rates for upstands and the like are to include for angles, ends and short lengths, dressing over fillets, turning into grooves and wedging and jointing to roofing.
- B. The rates for galvanized steel flashings are to include for angles and ends.

7. CARPENTRY AND JOINERY

- A. All timber sizes are nominal sizes except where otherwise stated and all timber incorporated in the Works shall comply with the stated sizes, subject only to the permitted tolerances for softwood allowed in B.S. 4471.

PRICING INSTRUCTIONS

- B. The rates for all carpentry and joinery work are to include for working to size and cross sectional profile, short lengths, mitres and ends, fixing with nails unless otherwise described, all joints, cutting and fitting into steelwork, trimming around openings, notches and borings and sinkings for bolts and nuts.
- C. The rates for joinery work are to include for priming all surfaces before fixing.
- D. The rates for framed joinery are to include for properly framing, glueing, dowelling as necessary and screwing at joints.
- E. The rates for timber frames and linings are to include for bedding in mortar and pointing in mortar or mastic where required, frame cramps and dowels, etc.
- F. The rates for hardwood joinery are to include for keeping the material clean for clear finishes.
- G. The rates for plywood, blockboard and the like are to include for straight, raking and circular cutting and for notching around all obstructions. The rates for plywood, blockboard and the like faced on side with decorative plastic laminate are to include for applying a suitable balancing veneer to the other face.
- H. The rates for items described as plugged, lead shielded and expansion bolted are to include plugging brickwork, blockwork or concrete with approved proprietary type to the satisfaction of the Engineer. The requirements of this clause shall be applied to all relevant items in all trades.

8. METALWORK

- A. The rates for metalwork are to include for rolling margin, joints in the running length, notches, holes, slots, angles and ends.
- B. Rates for welded work shall include for grinding welds smooth where required for appearance or tolerance fitting with other work, and subsequent treatment of shop priming, galvanizing or otherwise treating as specified.

PRICING INSTRUCTIONS

- C. The use of the term "welded" shall be deemed to include all work of a similar nature, whether the work should be brazed, soldered or otherwise jointed, and in the absence of specific requirements shall include for all costs in connection with the techniques and materials employed, all of which shall be selected with due regard to the character of the work and the materials being connected.
- D. The use of the terms "bolted" shall be deemed in the absence of specific requirements to include for the cost of all bolts, rivets, screws, tapped holes, etc., all of which shall be selected with due regard to the character of the work and the materials being connected.
- E. The rates for all galvanized work are to include for the treatment of cut ends, etc.
- F. In the absence of specific requirements, the techniques and materials employed in welding shall be selected with due regard to the character of the work and the materials being connected.

9. DOORS, WINDOWS AND GLASS

- A. All doors, windows and ouvers have been measured by square meter of the masonry opening size as shown on drawings.
- B. Rates for doors and windows are to include for fitting and haning and also include for door and window frames, expansion anchors and other fixing materials, necessary iron monger, wooden trim, glass and glazing, caulking, painting and necessary ancillary items.

10. FINISHES

- A. The rates for all items of insitu finishings and tile, slab or block finishings are to include for all temporary rules, screeds, templates and supports, curing and cleaning off on completion.
- B. The rates for all items of insitu finishings, expanded metal lathing and tile, slab or block finishings are to include for work in small quantities and narrow widths and for making good or cutting around bolts and the like, dowels, pipes, ducting and fittings.

PRICING INSTRUCTIONS

- C. The rates for all insitu finishings are to include for hacking concrete or hacing concrete block walling and raking out joints to form key, brushing, cleaning off and damping the background surfaces before application of finishings, working at any height and for all square and rounded edges, quirks, square and splayed fair edges and making good up to frames, skirtings, etc.
- D. The rates for expanded metal lathing and tile, slab or block finishings are to include for straight, raking and circular cutting.
- E. The rates for terrazzo tile and terrazzo block paving are to include for polishing in accordance with the Specification.
- F. The rates for all paving items are to include for laying to falls where required.
- G. The rates for sills, skirtings and the like are to include for angles, ends and short lengths and for hacking concrete or hacking concrete block walling and raking out joints to form key.
- H. The rates for screeds are to include for brushings, cleaning off and dampening the background surfaces before laying.
- I. The rates for screeds are to include for finishing to falls where required.

11. GLAZING

- A. The rates for glazing are to include for straight and raking cuttings, bedding the edges of glass, replacing any cracked or broken panes, and cleaning on completion.
- B. The rates for glazing generally are to include for glazing to wood or metal lights in panes of any size, including taking off and refixing glazing beads.

12. PAINTING

- A. The rates for paintwork are to include for work at any height, painting in any colour, multicolour work, cutting into line at junctions of differing colours on paints at angles or plain surfaces, painting in small quantities and in narrow widths on any surfaces and for cleaning down on completion.

13. FURNISHINGS

- A. The rates for furnishings shall include for all fixings to any material including those requiring plugging, and for leaving all mortices, chases, etc., for and subsequently building in and making good around all fixing accessories, supports and brackets.

14. AIR CONDITIONING AND VENTILATING WORK

- A. The Contractor shall allow in his rates the supply of equipments to site including Customs Charges, loading, unloading, transporting to site and storing on site, all as specified.
- B. The Contractor shall allow in his rates for the taking from store and installing all A/C equipment, electrical equipment, ducting, pipe work and controls etc. for the satisfactory operation of the system.
- C. The rates shall include for all trench supports, machine bases, hangers, painting, cutting of or forming all necessary chases, holes, mortices etc. in block work or concrete and making good in all trades where these items are not measured separately.
- D. The rates for the instrumentation shall include for supply, installation and connection of all controls to ensure a workable system.
- E. The length of ducts has been measured net by length and along the centerlines of the various type and sizes of duct as shown on the drawings. No allowance has been made in the quantities for cutting, waste, etc.

15. PLUMBING WORK

- A. Pipings located up to 1.0m apart from the building, included in building work. Others are included in external work.
- B. The Contractor shall allow in his rates for cutting or forming all chases, holes and mortices in blockwork or concrete making good including fixing a strip of galvanized wire mesh (10 mm to 15 mm hexagonal mesh) 15 cm wider than the chase and for cutting away and making good in all trades.
- C. The rates shall include for all supports or fixings of pipe services, machine bases, hangers, painting, cutting of or forming all necessary chases, holes, mortices, etc. in block work or concrete and making good in all trades where these items are not measured separately.

PRICING INSTRUCTIONS

- D. The rates for sanitary fittings shall include for all chromed valves, traps, angle valves, connections to services and wastes, plugs and pop up traps.
- E. All piping has been measured net by length and no allowance has been made in the quantities for cutting, waste, etc.
- F. Concrete work, plain, or reinforced, is measured nett by volume as placed. The measurement is based on the dimensions shown on the drawings.

16. ELECTRICAL WORK

- A. The Contractor shall allow in his rates for cutting or forming all chases, holes and mortices in blockwork on concrete making good including fixing a strip of galvanized wire mesh (10 mm to 15 mm hexagonal mesh) 15 cm wider than the chase and for cutting away and making good in all trades.
- B. The rates shall include for all supports or fixings of cleats or cable trays where these items are not measured separately.
- C. The rates for the main and sub-main switch boards shall include for supply, erection and connecting the incoming and outgoing cables and connecting the sub-main switch board to the distribution boards including all trunking, conduit, conduit fittings and circuit wiring where applicable.
- D. The rates for lighting fittings and power circuits shall include for supply, erecting and connecting the fittings including all trunking, conduit, conduit fittings, circuit wiring from the related distribution boards and all switches, plugs and sockets, cover plates, lamps, tubes, shades, brackets, pendants, etc.
- E. All wiring and conduit have been measured net by length and no allowance has been made in the quantities for cutting, waste, overlaps, etc.

17. TELEPHONE INSTALLATION

- A. The Contractor shall allow in his rates for the supply and installation of all conduit, conduit fittings of the correct size and wiring internally and all draw wires for incoming ducts.
- B. The rates shall include for cutting or forming all chases, holes, mortices, etc. in blockwork or concrete and making good including fixing a strip of galvanized wire mesh (10 mm to 15 mm hexagonal mesh) 15 cm wider than the chase and for cutting away and making good in all trades.

PRICING INSTRUCTIONS

- C. Conduits have been measured net by length and no allowance has been made in the quantities for cutting, waste, etc.

18. PROTECTION AND HANDING OVER

- A. Rates are to include for protecting the works as necessary during construction and for handing over the Works in a clean and undamaged condition to the satisfaction of the Engineer on completion.

II BILL OF QUANTITIES

SUMMARY
OF
BILL OF QUANTITIES

<u>BILL. NO.</u>	<u>TRADE</u>	<u>AMOUNT (DH)</u>
1.	CIVIL WORK	
2.	LABORATORY	
3.	AQUARIUM	
4.	SEED PRODUCTION BUILDING	
5.	FILTRATION BUILDING	
6.	WORKSHOP	
7.	DORMITORY	
8.	SUB-STATION	
9.	SEA WATER INTAKE WELL	
10.	SEA WATER RESERVOIR	
11.	EXTERNAL STRUCTURAL WORK	
12.	EXTERNAL MECHANICAL WORK	
13.	EXTERNAL ELECTRICAL WORK	
	SUBTOTAL	DH
14.	ADD PROVISIONAL SUM OF TEN PERCENT (10%) OF CONSTRUCTION COST FOR CONTINGENCIES TO BE EXTENDED IN WHOLE OR IN PART AT THE ENGINEER'S DISCRETION	
	TOTAL	DH

Continue to Page (2)

<u>BILL NO.</u>	<u>TRADE</u>	<u>AMOUNT (DH)</u>
15.	PROVISIONAL SUM OF COST FOR INSTALLATIONS, CHARGES OF ELECTRICITY, CITY WATER AND TELEPHONE TO BE EXECUTED BY THE AUTHORITIES AND PAID BY THE CONTRACTOR. . THE AMOUNT OF COST PAID SHALL BE EXPENDED FROM THIS PROVISIONAL SUM IN WHOLE OR IN PART	
	a. PRIMARY HIGH VOLTAGE ELECTRIC POWER SUPPLY	
	b. CITY WATER MAIN PIPE FROM EXISTING MAIN PIPE TO THIS SITE	
	c. TELEPHONE	

TOTAL AMOUNT OF BILLS OF QUANTITIES CARRIED DH
TO FORM OF TENDER

IN WORDS -----

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
<u>BILL NO. 1</u>							
<u>EXTERNAL CIVIL WORKS</u>							
<u>SUB COLLECTION</u>							
C-1	APPROACH ROAD, ACCESS ROADS AND SERVICE ROAD.						
C-2	CULTURE POND, GATE STRUCTURE, CONCRETE STEP AND OUTFALLS.						
C-3	CHAIN LINK FENCE AND GATES.						
C-4	DRAINAGE CHANNEL, OPEN GUTTER AND DRAIN MANHOLE.						
C-5	SEA WATER INTAKE PIPING CONCRETE ENCASEMENT AND COFFERDAM.						
C-6	CONCRETE PIPE TRENCH.						
<u>SUB COLLECTION OF BILL NO. 1</u>							
1/1							

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fi
<u>BILL NO. 1</u>							
<u>EXTERNAL CIVIL WORKS</u>							
C-1	<u>APPROACH ROAD, ACCESS ROADS AND SERVICE ROAD</u>						
1.	Prepare ground, remove high spots and fill depressions with excavated material and compact surface to institute CBR of not less than 15% and 95% A.A.S.H.O. density.	549	Cu.m				
2.	15 cm thick gravel-sand based course compacted to not less than 95% A.A.S.H.O. density.	10,299	Sq.m				
3.	6 cm thick fine asphalt concrete (Type 1) surface course, coefficient not less than 500 kg.	10,299	Sq.m				
4.	Prime coat of bitumen as specified (one liter per square meter) laid on gravel-sand base course.	10,299	Sq.m				
<u>Curb stone</u>							
5.	22.5 cm wide x 10 cm deep, curb foundation with one 13 mm diameter mild steel bar 15 cm long set vertically at 30 cm centres including excavation	2,371	M				
6.	10 cm wide x 25 cm deep triangle curb foundation	2,371	M				
7.	12.5 cm wide x 25 cm deep chamfered curb, generally in 60 cm lengths.	2,371	M				
<u>Concrete paving tile side walk</u>							
8.	Filling of with approved selected material arising from existing ground making up levels under tile.	81	Cu.m				
9.	30 cm x 30 cm square, 3 cm thick precast concrete paving tile with 5 mm mortar joint	267	Sq.m				
10.	Reinforced concrete (Type A) 10 cm thick side walk over drain channel and pipe trench including formwork.	3,5	Cu.m				
11.	Deformed high tensile rod reinforcement as specified in 9 mm diameter.	655	Kg.				
		1/2					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
	- Cont'd -						
	<u>Prepare and apply two coats of white road marking paint on fine asphalt concrete</u>						
12.	15 cm wide centre line	32	Sq.m				
13.	Direction allow marking	25	Sq.m				
14.	Island marking for intersection	16	Sq.m				
15.	Public and staff car parking	80	Sq.m				
16.	15 cm wide edge marking on culture pond walk way	205	Sq.m				
17.	Painting for concrete step in pond	11	Sq.m				
	<u>Traffic sign</u>						
18.	Traffic department standard type for roundabout traffic sign board, post and fixed on ground with concrete foundation	2	No.				
	To collection						

Item	Description	Quantity	Unit	Unit DH.	Rate Files	Total DH.	Total Files
C-2	<u>CULTURE POND, GATE STRUCTURE, CONCRETE STEP AND OUTFALLS</u>						
1.	Excavate for culture pond	10,438	Cu.m				
2.	Filling of with approved selected material arising from excavations in making up levels in pond dike	10,198	Cu.m				
3.	Load into conveyances and cart away surplus excavated material	240	Cu.m				
4.	15 cm thick concrete (Type A) on pond dike slope and bottom, filed into and including form work and packed around ber mat	389	Cu.m				
5.	15 cm thick concrete (Type A) on top of dike walk way filed into and including form work and packed around ber mat	206	Cu.m				
6.	9 mm diameter steel fabric ber mat, 15 cm x 15 cm mesh, minimum overlap 30 cm	14,945	Kg.				
7.	Deformed high tensil reinforcement as specified in joint walls, bottom slab tie bar, 13 mm diameter	1,930	Kg.				
8.	16 mm diameter vinyl pipe for 13 mm tie ber sleeve	970	M				
9.	P.V.C water stop dumbbell pattern 20 cm wide in concrete walls and bottom f pond	963	M				
10.	Expansion joint in concrete walls and walk way comprising 20 mm thick premolded filler	282	Sq.m				
11.	Water proofing sheet in bottom of pond, 2mm thick (minimum) and tensile strength 50 kg/cm ² , fear resistance 20 kg/cm ² (minimum) with water-tight joint.	6,817	Sq.m				
		1/4					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
	<u>Gate structure</u>						
12.	Excavate for gate structure	169	Cu.m				
13.	Filling of with approved selected material arising from excavations in making up levels in top elevation.	65	Cu.m				
14.	Load into conveyances and cart away surplus excavated material.	104	Cu.m				
15.	Concrete (Type b) in 10 cm thick blinding.	18	Cu.m				
16.	Reinforced concrete (Type A) filled into and including from work and packed around rod reinforcement	133	Cu.m				
17.	Deformed high tensilroad reinforcement as specified, in bottom slab, walls wing walls and top slab, 16 mm diameter	1,816	Kg.				
18.	Ditto, 13 mm diameter	6,028	Kg.				
19.	Ditto, 10 mm diameter	2,444	Kg.				
20.	Steel works for lifting arch post 8 Nos. H-150mm x 150mm x 1.85M long, and horizontal tying beam 4 Nos. H-150mm x 150m x 4.9M long, including base plate and gusset plate.	3,402	Kg.				

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Fi.
	- Cont'd -						
21.	High tensil rod anchor bolt and nuts 25 mm diameter 0.6 M long	32	No.				
22.	Stainless steel frame for gate leaf 8-80, stainless steel, 10 mm thick including lifting handle, plate, bolt and nuts for wood gate leaf.	1,855	kg.				
23.	Stainless steel wire mesh screen 25mm x 25mm mesh No.8 gauge and frame steel bolt and nut all as drawing.	16	No.				
24.	Gate leaf, hard wood plank 35cm wide x 15 cm thick, 1.5 M long, with fair face finished.	56	No.				
25.	Rubber sheet, 6mm thick, fixed to plank gate leaf with countersunk screw.	19	Sq.m				
	<u>Concrete step</u>						
26.	Excavation for concrete step	209	Cu.m				
27.	Filling of with approved selected material arising from excavations in making up underneath top slab.	174	Cu.m				
28.	Load into conveyances and cart away surplus excavated material.	35	Cu.m				
29.	Concrete (Type B) in 10cm thick binding.	8	Cu.m				
30.	Reinforced concrete (Type A) filled into and including form work and packed round rod reinforcement.	46	Cu.m				
31.	Deformed high tensil rod reinforcement as specified in bottom slab, walls, 12 treads, 13mm diameter	3,074	kg.				
32.	Crushed stone, underneath treads, 15cm thick, gradation (Type C) as specified.	24	Cu.m				
	<u>Pond outfall pipe</u>						
33.	Excavation for outfall pipe and get out, part return fill in and ram and remainder cart away.	1,216	Cu.m				
34.	Return fill in and well ram with excavated material around concrete encasement, and well water and consolidate in layers not exceeding 15cm thick.	645	Cu.m				
		1/6					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
	- Cont'd -						
35.	Load into conveyances and cart away surplus excavated material.	571	Cu.m				
36.	Concrete (Type B) in 10 cm thick binding.	45	Cu.m				
37.	Reinforced concrete (Type A) rectangular bed and surround 2.1 M square to 1200 mm diameter reinforced concrete pipes including formwork.	615	Cu.m				
38.	Deformed high tensile rod reinforcement as specified in 13 mm diameter.	12,572	kg.				
39.	Expansion joint in concrete encasement surround 1200 mm diameter concrete pipes comprising 20 mm thick premolded filler.	26	Sq.m				
40.	1200 mm diameter reinforced concrete pipe laid and jointed in trench.	195	M				
	To collection						
		1/7					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
C-3	<u>CHAIN LINK FENCING & GATES</u>						
1.	Steel gate, double swing 8.02M wide x 1.75 M high steel frame, horizontal bracing digonal bracing and cleats No.10 gauge x 2" mesh chain link fixed between framework. mild steel post including padlock and key and concrete base, all as drawing.	1	No.				
2.	Steel gate, single swing 4.00 M wide x 1.72 M high, ditto. <u>Concrete foundation filled into and including formwork and temped around post</u>	1	No.				
3.	40 cm x 40 cm x 60 cm Deep base	541	No.				
4.	40 cm x 90 cm x 60 cm Deep base	108	No.				
5.	80 cm x 80 cm x 1.70m Deep base	4	No.				
	<u>Fence posts, strut and intermediate post and fence</u>						
6.	Galvanized mild steel strut post set, consisting of 75 mm x 75 mm x 6 mm angle 1.65 M long, every 10 m interval and each corner.	108	No.				
7.	Galvanized mild steel intermediate post, 60.5 mm diameter x 2.88 M long, 2.0 M interval.	541	No.				
8.	Galvanized mild steel pipe 34 mm diameter x 3.2 mm on top of chain link mesh and secured intermediate posts.	2,164	M				
9.	No.10 gauge x 2" mesh galvanized chain link fencing 1.98 M high.	1,082	M				
10.	Three strands of No.14 gauge 2 ply galvanized mild steel barbed wire with four point barbs at 8cm center fixed to straining posts centres fixed to straining posts at approximately 66.0M centres and secured to intermediate posts at 2.00 M, centres with No.14 gauge galvanized annealed tying wire.	3,246	M				
	To collection						
		1/8					

Item	Description	Quantity	Unit	Unit DH.	Rate Files	Total DH.	Total Fil
C-4	<u>DRAINAGE CHANNEL, OPEN GUTTER,)AND DRAIN MANHOLE</u>						
1.	<u>Drainage Channel</u> Excavate surface trench average 1.15M deep and get out, part return fill in and ram and remainder cart away	195	Cu.m				
2.	Concrete (Type B) in 10 cm thick blinding	10	Cu.m				
3.	Reinforced concrete (Type A) filled into and including formwork and packed around rod reinforcement.	31	Cu.m				
4.	Deformed high tensile rod reinforce- ment as specified in bed and walls 13mm diameter.	1,969	kg.				
5.	P.V.C. water stop dumbell pattern 20cm wide in bed and walls of channel.	10	M				
6.	Expansion joint in concrete walls and slab comprising 20mm thick premoulded filler.	2	Sq.m				
	<u>Open gutter°</u>						
7.	Excavate surface trench average 0.75m deep and get out, part return fill in and ram and remainder cart away.	283	Cu.m				
8.	Concrete (Type B) in 10cm thick blinding.	15	Cu.m				
9.	Reinforced concrete (Type A) filled into and including formwork and packed around rod reinforcement.	43	Cu.m				
10.	Deformed high tensile rod reinforce- ment as specified in bed and walls 13mm diameter.	2,688	kg.				
11.	P.V.C. water stop dumbell pattern 20cm wide in bed and walls of gutter.	9	M				
12.	Expansion joint in concrete walls and slab comprising 20mm thick premolded filler.	2	Sq.m				
		1/9					

Item	Description	Quantity	Unit	Unit Rate DH. Fils	Total DH. Fils
	- Cont'd -				
	<u>Drain manhole</u>				
13.	Excavate for manhole not exceeding 1.8M deep and get out, part return, fill in and well ram and remainder coat away.	45	Cu.m		
14.	Concrete (Type B) in 10cm thick blinding.	0.5	Cu.m		
15.	Reinforced concrete (Type A) filled into and including formwork and packed around rod reinforcement.	4	Cu.m		
16.	Deformed high tensil rod reinforcement as specified in bed, walls and top slab 13mm diameter.	214	kg.		
17.	600 mm diameter clear opening medium duty circular cover and frame to B.S. 497 reference B4-20 (weighting approximately 130 kg) with circular flat top.	1	No.		
	<u>Drain pipe</u>				
18.	Excavate for trench average 1.15M deep and get out, part return, fill in and well ram and remainder cart away.	362	Cu.m		
19.	Concrete (Type B) in 10cm thick blinding.	12	Cu.m		
20.	Reinforced concrete (Type A) filled into and including formwork and packed around rod reinforcement in pipe encasement.	41	Cu.m		
21.	Expansion joint in concrete encasement comprising 20mm thick premolded filler.	4	Sq.m		
22.	600 mm diameter reinforced concrete pipe laid and jointed in trench.	100	M		
	To collection				
		1/10			

Item	Description	Quantity	Unit	Unit DH.	Rate File	Total DH.	Total File
C-5	<u>SEA WATER INTAKE PIPING CONCRETE ENCASEMENT AND COFFERDAM</u>						
1.	Excavate trench	1,485	Cu.m				
2.	Return fill in and well ram with excavated material around concrete pipe and encasement.	1,429	Cu.m				
3.	Disposal surplus excavated material.	56	Cu.m				
4.	Remove and stockpile existing stone wall armouring and harting rubble stone.	932	Cu.m				
5.	Restore existing harting rubble stone.	672	Cu.m				
6.	Restore existing armouring stone.	224	Cu.m				
7.	Concrete (Type B) 10cm thick blinding.	5	Cu.m				
8.	Concrete (Type A) 1.65M x 1.65M x 27.0M Long including formwork and 13mm reinforcing steel bar.	53	Cu.m				
9.	1.00M Diameter reinforcing concrete pipe.	72	M				
10.	20 mm thick expansion joint premoulded filler.	2	Sq.m				
11.	No.10 gauge, 50mm x 50mm stainless steel wire mesh with tying wire.	8	Sq.m				
12.	Rubble stone 20cm - 30cm diameter dumped on intake pipe concrete encasement.	236	Cu.m				
13.	Armouring stone 0.8M - 1.0M diameter dumped over to rubble stone.	339	Cu.m				
14.	Rubble stons half tone weight	158	Cu.m				
15.	Temporary cofferdam, top wide 10.0m, approximately 160.0M long, fill in and well ram with excavated material, side slope (two on one) and including seepage dewatering.	10,433	Cu.m				
	To collection						
		1/11					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
C-6	<u>CONCRETE TRENCH</u>						
1.	Excavate for trench 1.15M deep and get out.	1,563	Cu.m				
2.	Return fill in and well ram with excavated material around walls.	962	Cu.m				
3.	Disposal surplus excavated material.	601	Cu.m				
4.	Concrete (Type B) 10cm thick blinding.	60	Cu.m				
5.	Reinforced concrete (Type A) filled into and including formwork and packed around rod reinforcement.	197	Cu.m				
6.	Deformed high tensile rod reinforcement as specified in bed and walls 13mm diameter.	18,290					
7.	Expansion joint in concrete walls and slab comprising 20mm thick pre moulded filler.	8	Sq.m				
8.	Wood cover for trench swan hardwood, treated with wood preservative dimension all as drawing.	29	Cu.m				
9.	Asbestos cement pipe for external pipe sleeve, general use by U.A.E. Government 20cm diameter.	222	M				
10.	Ditto, 30cm diameter	140	M				
	To collection						
		1/12					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
	<u>BILL NO. 2</u>						
	<u>LABORATORY BUILDING</u>						
	<u>SUB-COLLECTION</u>						
LA	<u>LABORATORY BUILDING</u>						
LA-1	EARTH EXCAVATION, BACKFILL AND FILL						
LA-2	CONCRETE						
LA-3	CONCRETE BLOCK WORK						
LA-4	MISCELLANEOUS METAL						
LA-5	MOISTURE AND THERMAL PROTECTION						
LA-6	DOORS, WINDOWS AND GLASS						
LA-7	FINISHES						
LA-8	SPECIALITIES						
LA-9	FURNISHING						
LA-10	AIR CONDITIONING SYSTEM						
LA-11	VENTILATING SYSTEM						
LA-12	PLUMBING						
LA-13	SEA WATER SYSTEM						
LA-14	AIR DISTRIBUTION SYSTEM						
LA-15	FIRE EXTINGUISHER						
LA-16	DISTRIBUTION BOARDS						
LA-17	MOTOR CONTROL EQUIPMENT						
LA-18	CABLES AND FITTINGS						
LA-19	LIGHTING FITTINGS						
LA-20	FIRE ALARM SYSTEM						
LA-21	TELEPHONE CONDUIT SYSTEM						
	<u>SUB-COLLECTION OF BILL NO. 2</u>						DH
		2/1					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
LA	<u>LABORATORY BUILDING</u>						
LA-1	<u>EARTH EXCAVATION, BACKFILL AND FILL</u>						
1.	Excavate trench for foundations commencing at reduced level and not exceeding 1.50 meters deep.	384	Cu.m				
2.	Backfill, selected excavated material around foundation	161	Cu.m				
3.	Selected excavated materials in filling to make up levels under ground slabs, spread, levelled, watered and well compacted in layers not exceeding 15 cm thick as described.	357	Cu.m				
4.	Compaction of subgrade under ground slabs prior to casting concrete thereon to not less than 95 percent maximum density for a depth of 20 cm as determined by modified AASHO T-180 or the latest revision thereof	1,567	Sq.m				
5.	Filling with approved imported material spread levelled and compacted in layers not exceeding 20 cm in making up levels under ground floor slab.	134	Cu.m				
	To collection						
		2/2					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
LA-2	<u>CONCRETE</u>						
1.	Reinforced concrete class "A" with sulphate resisting cement;						
	a. in foundations	66	Cu.m				
	b. in grade beams	124	Cu.m				
	c. in ground slab	235	Cu.m				
2.	Reinforced concrete class "A" with ordinary portland cement;						
	a. in walls	34	Cu.m				
	b. in beams	107	Cu.m				
	c. in columns	47	Cu.m				
	d. in slabs	213	Cu.m				
	e. in upstand beams, parapet, walls, etc.	28	Cu.m				
	f. in staircases	2	Cu.m				
3.	Plain concrete class "B" with sulphate resisting cement;						
	a. in 60 mm thick layer of blinding	1,861	Sq.m				
4.	Reinforcement;						
	a. deformed hard grade bar reinforcement of various diameter in structures	71,200	kg				
5.	Extra over concrete work for forms;						
	a. open cutter in ground slab	8	m				
6.	Extra over concrete for producing a fair faced finish as specified.	178	Sq.m				
7.	Form expansion joints in walls/columns/beams/slabs comprising of 2 cm thick preformed joint filler. All as shown on the drawings and to engineer's satisfaction	62	Sq.m				
	To collection						
		2/3					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-3	<u>CONCRETE BLOCKWORK</u>						
1.	Hollow core concrete block including grouting cement mortar, and steel reinforcement;						
	a. 190 mm thick wall	428	Sq.m.				
	b. 140 mm thick wall	483	Sq.m.				
	c. 100 mm thick wall	127	Sq.m.				
2.	Concrete reinforced lintel blocks;						
	a. 190 x 190 mm	8	m.				
	b. 140 x 190 mm	37	m.				
	c. 100 x 190 mm	2	m.				
3.	Concrete reinforced sill blocks;						
	a. 190 x 190 mm	85	m.				
	b. 140 x 190 mm	5	m.				
4.	Precast concrete splash block;						
	450 x 300 x 100 m	2	No				
	To Collection						
		2/4					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-4	<u>MISCELLANEOUS METAL</u>						
1.	Roof drain, scupper type, cast iron, including precast concrete curb with cement mortar bed and 114.3 mm O.D. cast iron pipe 400 mm ϕ . (Refer to Dwg. A-9-2).	7	No.				
2.	Ditto, including precast concrete curb with cement mortar bed and 100 mm ϕ PVC pipe, 160 mm ϕ . (Refer to Dwg. A-9-3)	4	No.				
3.	Rain leader, PVC pipe, including 3.2 x 19 mm steel hanger straps and 3.2 mm thick steel anchor straps. (Refer to Dwg. A-9-3)	20.2	m.				
4.	Drain pipe, PVC. for open gutter drain. (Refer to Dwg. A-15-2). 25 mm ϕ x 400 mm ϕ	20	No.				
5.	Stainless steel ladder, 22 mm ϕ stainless steel pipe, including 50 x 9mm stainless steel cleats anchored to concrete structures (Refer to Dwg. A-15-7). 300 mmW x 4,180 mmH	1	No.				
6.	Stainless steel handrail, 48.6 mm O.D. stainless steel pipe handrail with 34.0 mm O.D. stainless steel balusters, including pipe sleeve and lead caulking (Refer to Dwg. A-15-8). 200 mmH	13	m.				
7.	Cable trench, including 4.5 mm thick steel checkered plate, cover, steel angle edge and stiffeners and cement mortar steel trowel finish, painted (Refer to Dwg. A-15-4). 600 x 600 mm	11.8	m.				
	To Collection						
		2/5					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
LA-5	<u>MOISTURE AND THERMAL PROTECTION</u>						
1.	Roofing, consisting of concrete with steel trowel finish, membrane waterproofing, polystyrene foam insulation apply with hot bifumes and concrete paver tile	912	Sq.m.				
2.	Parapet waterproofing, consisting of cement mortar with steel trowel finish, 1-layer of gravel surfaced waterproofing and 30 x 10 mm steel flat bar, including caulking and concrete cast.						
	a. 475 mm H	259	m.				
	b. 650 mm H	79	m.				
3.	Rockwool insulation, between Mechanical Room and Watchmen's Room, 1s walls. 50 mm thick	15	Sq.m.				
4.	Waterproofing for 2nd floor toilet, consisting of concrete with steel trawel finish, and membrane waterproofing	23	Sq.m.				
5.	Expansion joint cover, consisting of 0.48 mm thick GSS cap, flashing, 38.3 mm steel flat bar with fasteners and caulking (Refer to Dwg. A-9-4)	19	m.				
6.	Polyethylene film vapor barrier, on under slab on grade	590	Sq.m.				
7.	Caulking for expansion joint, 20 mm width	44	m.				
8.	Caulking with neoprene rubber compressive back-up materials, for expansion joint, 20 mm width	4.2	m.				
9.	Expansion joint at external stair floor consisting of caulking, neoprene rubber compressive back-up materials and stainless steel angle edge guard with anchor straps (Refer to Dwg. A1-8-20).	1.2	m.				
	To Collection						
		2/6					

Item	Description	Quantity	Unit	Unit Rate DH.	Total DH.	Total Fil
LA-6	<u>DOORS, WINDOWS AND GLASS</u>					
1.	Wood external doors;					
	a. 45mm thick	17.6	Sq.m.			
2.	Wood internal doors;					
	a. 35 mm thick	50.2	Sq.m.			
3.	Wood windows;					
	a. Fixed glass windows with doors	82.7	Sq.m.			
4.	Aluminum windows;					
	a. Fixed windows	62.2	Sq.m.			
	b. Fixed windows with double acting doors	66.8	Sq.m.			
	c. Sliding windows	30.4	Sq.m.			
	d. Bottom hinged projected windows	24.5	Sq.m.			
	e. Vertical pivoted windows	11.1	Sq.m.			
	f. Sliding window with fixed transom	4.3	Sq.m.			
5.	Aluminum louvers	0.5	Sq.m.			
6.	Alum access door, for pipe space, 30 mm thick W/Bit key lock	0.96	Sq.m.			
7.	Wood opening frame including wood trim, caulking, paint and necessary fixing materials and hardware, for 800 x 2,200 mm	1	No.			
	To Collection					
		2/7				

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fil
LA-7	<u>FINISHES</u>						
	External Surfaces						
1.	Floors;						
	a. Concrete monolithic finish	39	Sq.m.				
	b. Ceramic floor tile, with cement mortar setting bed, 50 mm thick	300	Sq.m.				
	c. Terrazzo tile, with cement mortar setting bed, 50 mm thick	35	Sq.m.				
2.	Walls;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 25 mm thick	1,739	Sq.m.				
3.	Soffit and stair bottom;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories 12 mm thick on soffit	314	Sq.m.				
	b. Ditto, 15 mm thick on stair bottom	17	Sq.m.				
4.	Non slip nosing tile with cement mortar setting bed.	25.5	m.				
5.	Open gutter, with cement mortar steel trowel finish, including PVC drain pipes 20 mm thick, 200 x 50 mm	47.2	m.				
	Internal Surfaces						
6.	Floors;						
	a. Terrazzo tile with cement mortar setting bed, 50 mm thick	525	Sq.m.				
	b. Mosaic floor tile with cement mortar setting bed, 30 mm thick	55	Sq.m.				
	c. Ceramic floor tile with cement mortar setting bed, 50 mm thick	225	Sq.m.				
	d. Cement mortar with steel trowel finish, 30 mm thick	46	Sq.m.				
		2/8					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-7	<u>FINISHES</u> - Cont'd						
7.	Skirtings;						
	a. Cement mortar with steel trowel finish, 100mm x 20mm thick.	359	m.				
8.	Walls;						
	a. Ceramic wall tile with cement mortar setting bed, 25mm thick.	332	Sq.m.				
	b. Cement plaster with steel trowel finish, including control joint and plastering accessories, 20mm thick.	1,305	Sq.m.				
9.	Ceilings;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 12mm thick.	650	Sq.m.				
	b. Mineral fibre acoustic tile with gypsum wall board under layer and plastic ceiling moulding strip, including steel ceiling framing and necessary access panels.	25	Sq.m.				
	c. Asbestos cement board, 6mm thick, including steel ceiling framing and necessary access panels.	55	Sq.m.				
10.	Stair tread and rises;						
	a. Terrazzo tile stair tread with cement, mortar setting bed, 280mm wide.	21.3	m.				
	b. Terrazzo tile stair rider with cement mortar setting bed, 177.7mm high.	22.5	m.				
	c. Terrazzo tile stair border with cement mortar setting bed, 100mm wide	4.4	m.				
11.	Terrazzo tile threshold with cement mortar setting bed, 100mm wide	31	m.				
12.	External painting;						
	a. Acrylic enamel paint, solvent type, 3-coats on cement plaster	2,028	Sq.m.				
	b. Ditto, on fair faced concrete columns	18	Sq.m.				
		2/9					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
LA-7	<u>FINISHES</u> - Cont'd						
13.	Internal painting;						
	a. Acrylic enamel paint, solvent type, 3-coats, on cement mortar skirting	32	Sq.m.				
	b. Ditto, on cement plaster walls	303	Sq.m.				
	c. Ditto, on cement plaster ceiling	204	Sq.m.				
	d. Ditto, on mineral acoustic ceiling	25	Sq.m.				
	e. Emulsion paint, synthetic resin type, 1-primer and 2-coats, on cement plaster walls	639	Sq.m.				
	f. Ditto, on cement plaster ceilings	447	Sq.m.				
	g. Ditto, on asbestos cement board ceilings	55	Sq.m.				
	To Collection						
	2/10						

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-8	<u>SPECIALITIES</u>						
1.	Toilet booth, plywood panel consisting of doors; hardware and stainless steel top rail (Refer to Dwg. A-17-8, 9).	33.3	Sq.m.				
2.	Toilet accessories;						
	a. Mirror, 455mm x 608mm x 5mm thick	10	No.				
	b. Soap dish	10	No.				
	c. Stainless steel curtain rod, with flanges, 21.7mm O.D.	3	m.				
	d. Toilet paper holder	5	No.				
3.	Wood opening frame for wall exhaust fan, including paint and necessary fixing materials, 200 x 200mm	3	No.				
	To Collection						
		2/11					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-9	<u>FURNISHING</u>						
1.	Wooden closet with pipe hanger, consisting of bi-hold door, sliding door, plywood shelf, stainless steel coat hanger (Refer to Dwg. A-17-6). 700 x 3,000 x 1,820mm	1	No.				
2.	Kitchen base cabinet, laminated plastic surfaces. Ready-made, consisting of laminates plastic and stainless steel counter top, doors, shelves, drawers and stainless steel sink (Refer to Dwg. A-16-5).						
	a. 600 x 900 x 2,480mm	1	No.				
	b. 600 x 900 x 2,560mm	1	No.				
3.	Kitchen wall cabinet, laminated plaster surfaces. Ready-made, consisting of doors and shelves (Refer to Dwg. A-16-6). 300 x 750 x 1,800mm	2	No.				
4.	Darkroom counter, laminated plastic surfaces, consisting of stainless steel sink (Refer to Dwg. A-16-4). 600 x 800 x 2,770mm	1	No.				
5.	Laboratory counter, laminated plastic surfaces, consisting of counter top, PVC sink, doors and drawers (Refer to Dwg. A-16-1).						
	a. 750 x 800 x 5,400mm	4	No.				
	b. (Refer to Dwg. A-16-3) 1,500 x 800 x 4,200mm	2	No.				
	c. (Refer to Dwg. A-16-2) 750 x 800 x 3,600mm	2	No.				
6.	Wooden shelves, consisting of plywood shelves, painted, 4-rolls (Refer to Dwg. A-18-2,3,4 & 5).						
	a. (Refer to Dwg. A-16-9) 400 x 2,200 x 1,200mm	4	No.				
	b. (Refer to Dwg. A-16-10) 400 x 2,200 x 2,400mm	1	No.				
	c. (Refer to Dwg. A-16-11) 400 x 2,200 x 4,800mm	2	No.				
	d. (Refer to Dwg. A-16-12) 800 x 2,200 x 3,600mm	2	No.				
		2/12					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil.
LA-9	<u>FURNISHING</u> - Cont'd						
	e. (Refer to Dwg. A-16-14) 500 x 2,200 x 1,200mm	2	No.				
	f. (Refer to Dwg. A-17-1) 500 x 2,200 x 3,600mm	1	No.				
	g. (Refer to Dwg. A-17-2) 1,000 x 2,200 x 1,200mm	2	No.				
7.	Electric range with oven, commercial grade, 530 x 700 x 850mmH	1	No.				
8.	Electric range, commercial grade, 530 x 700mm	1	No.				
	To Collection						
		2/13					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-10	<u>AIR CONDITIONING SYSTEM</u>						
1.	Equipments						
A.	Air Cooled Packaged Air Conditioner; Floor Mt. Indoor Unit & Outdoor Con- denser Unit; Complete; Cooling Ca- pacity, Comp Motor & Fan Motor Output (3P-415V), Condenser Fan Motor (3P- 415V)						
	w/. Concrete Foundation, Vibration Isolator, Anchor Bolts, Expenditure, Blancing & Operating, Maintenance Instructions, Complete Installation						
	a. FAC-101, 102 15,900Kcal/H x 5.5Kw (8HP) x 0.35Kw x 0.3Kw	2	No.				
B.	Air Cooled Air Conditioner; Ceiling Type Indoor Unit, Outdoor Com- pressor & Condenser Unit, Complete; Cooling Cap., Power Consumption w/. Concrete Foundation, Anchor Bolts, Supporting Frame, Remote Control Switch, Expenditure, Blancing & Operating Instructions, Complete Installation						
	a. CAC - 101-104 Comp. 5HP 9,600Kcal/H x 6.5Kw (3P-415V)	4	No.				
	b. CAC - 105-111 Comp. 4HP 7,200Kcal/H x 4.8Kw (sP-415V)	7	No.				
	c. CAC - 112-114 Comp. 3HP 5,300Kcal/H x 3.9Kw (sP-415V)	3	No.				
	d. CAC - 115-120 Comp. 2HP 3,200Kcal/H x 2.7Kw (1P-240V)	6	No.				
	e. CAC - 121-124 Comp. 1.5HP 2,200Kcal/H x 1.7Kw (1P-240V)	4	No.				
2.	Piping Work						
A.	Refrigerant Piping Including Copper Tubes, Fittings, Hangers, Insulating, Taping, Sleeves & Opening Expenses, Complete Installation, Expenditure, Interconnection Wiring						
	a. Exposed piping (1) 19.05, 15.88mm Diameter	1	m				
		2/14					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
LA-10	<u>AIR CONDITIONING SYSTEM - Cont'd</u>						
	(2) 19.05, 12.70mm Diameter	5	m				
	(3) 15.88, 9.53mm Diameter	12	m				
	(4) 15.88, 6.35mm Diameter	32	m				
	b. Concealed piping						
	(1) 15.88, 6.35mm Diameter	7	m				
	c. Exposed to weather piping						
	(1) 19.05, 15.88mm Diameter	2	m				
	(2) 19.05, 12.70mm Diameter	11	m				
	(3) 15.88, 9.53mm Diameter	16	m				
	(4) 15.88, 6.35mm Diameter	23	m				
	d. Under ground piping						
	(1) 19.05, 15.88mm Diameter	17	m				
B.	Condensate Drain Piping Including PVC Pipes, Fittings, Hangers, Expenditure, Painting, Sleeves & Opening Expenses, Complete Installation, Expenditure						
	a. Exposed piping						
	(1) Pipe 50mm Diameter	2	m				
	(2) Pipe 32mm Diameter	44	m				
	(3) Pipe 25mm Diameter	52	m				
	b. Exposed to weather piping						
	(1) Pipe 32mm Diameter	4	m				
	(2) Pipe 25mm Diameter	14	m				
	c. Under ground piping						
	(1) Pipe 50mm Diameter	7	m				
C.	Indirect Waste Reseptor Including Complete Installation	1	LS				
	To collection						
		2/15					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-11	<u>VENTILATING SYSTEM</u>						
1.	Equipments						
A.	Air Exhaust Fans, Complete; Wall Propeller Fan, Air Flow, Fan Dia- meter & Fan Motor Input w/. Shutter, Anchor Bolts, Complete Installation a. EF-101-102 580CMH x 20cm x 30W (1P-240V)	2	No.				
B.	Air Exhaust Fans, Complete; Window Propeller Fan, Air Flow, Fan Dia- meter & Fan Motor Input w/. Shutter, Complete Installation a. EF-103-114, 116-127 490CMH x 20cm x 30W (1P-240V)	21	No.				
C.	Air Exhaust Fans, Complete; Tubuler Propeller Fan Air Flow, Static Pressure Drop & Fan Motor Input w/. Supporting Hanger, Anchor Bolts, Complete Installation a. 300CMH x 5mmAq x 79W (1P-240V)	2	No.				
2.	Duct Work						
A.	Galvanized Steel Sheet Round Air Ducts Including Fittings, Hangers, Supports, Anchors, Complete Installation a. 150mm Diameter	8	m				
B.	Exhaust Air Register Including Complete Installation SLIT-200 x 200mm	2	No.				
C.	Air Exhaust Grille Including Complete Installation a. 150mm Diameter	2	No.				
D.	Fresh Air Intake Grille Including Complete Installation	1	LS				
E.	Sound Absorbent Trap Including Supports, Anchor Bolts, Build'up, Sound Insulation, Painting, Expenditure, Complete Installation	1	LS				
		2/16					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Fils
LA-11	<u>VENTILATING SYSTEM - Cont'd</u>						
F.	Volume Damper Including Complete Installation						
	a. VD 150mm Diameter	2	No.				
G.	Weather Cover Including Anchor Bolts, Build'up, Painting, Expenditure, Complete Installation	1	LS				
H.	Flexible Duct Connections Including Complete Installation	1	LS				
	To collection						
		2/17					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fi
LA-12	<u>PLUMBING</u>						
1.	Potable Water Supply System;						
A.	Galvanized Steel Pipe "Schedule 40" Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation Cleaning, Tests, Stervilization and Painting						
	a. 50mm Diameter	7	m				
	b. 40mm Diameter	63	m				
	c. 32mm Diameter	30	m				
	d. 25mm Diameter	91	m				
	e. 20mm Diameter	111	m				
B.	Gate Valve; Screwed, Brass Body, w/Comp. Cast Iron Box, Including Installation						
	a. 50mm Diameter	1	No.				
	b. 40mm Diameter	2	No.				
	c. 25mm Diameter	2	No.				
	d. 20mm Diameter	5	No.				
2.	Hot Water Supply System;						
A.	Electric Water Heater; Vertical Type, w/Comp. Thermostat, Thermometer, Safety Valve, Vacuum Relief Valve, Pressure Reducing Valve, Including Complete Installation						
	a. Heating Element 1.2Kw-240V Capacity 100L (EWH-1)	1	No.				
	b. Heating Element 1.2Kw-240V Capacity 50L (EWH-2)	1	No.				
	c. Heating Element 1.0Kw-240V Capacity 30L (EWH-3)	2	No.				
B.	Copper Tubing; Type-L, Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning, Tests, Sterilization, Insulation and Painting						
	a. 13mm Diameter	25	m				
		2/18					

Item	Description	Quantity	Unit	Unit Rate DH.	Fils	Total DH.	Fil
LA-12	<u>PLUMBING</u> - Cont'd						
3.	Plumbing Fixtures and Fittings;						
A.	Water Closet (WC-1); Syphonic Wash-down W.C., Close Coupled 9 Litres Cistern w/Comp. All Necessary Fittings and Parts Including Complete Installation, Protection, and Adjustment	6	No.				
B.	Water Closet (WC-2); Wash-down Squating Type, 9 Litres Wall Hang Cistern, w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection, and Adjustment	2	No.				
C.	Urinal; Wall Hang Type w/Comp. Push Button Flush, All Necessary Fittings and Protection and Adjustment	4	No.				
D.	Lavatory; w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	10	No.				
E.	Bidet; w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustments	3	No.				
F.	Service Sink; w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	2	No.				
G.	Bath Tub; w/Comp. Bath Mixer, Shower Head Hose Rest, Wall Hanger Twin Hand-grips, Combined Chain Waste and Over Flow, All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	1	No.				
H.	Shower Mixer; w/Comp. Step Cock, Shower Head. All Necessary Fittings and Parts Including Complete Installation, Protection and Adjustment	2	No.				
I.	Miscellaneous Fixtures and Fittings w/Comp. All Necessary Fittings and Parts Including Complete Installation, Protection and Adjustment						
	a. Screen;	2	No.				
	b. Faucet; Combination Type 13mm	3	No.				
	c. Faucet; Swinging Type 13mm (PVC Coating)	30	No.				
		2/19					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
LA-12	<u>PLUMBING</u> - Cont'd						
	d. Hose Bib; 13mm Floor Mount (w/Castiron Box)	3	No.				
	e. Hose Bib; 13mm Wall Mount	2	No.				
4.	Soil, Waste, and Vent System						
A.	Polyvinylchloride Soil Pipe; Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 100mm Diameter	75	m				
	b. 75mm Diameter	10	m				
	c. 65mm Diameter	18	m				
	d. 50mm Diameter	28	m				
	e. 40mm Diameter	28	m				
B.	Polyvinylchloride Vent Pipes; Including Pipe Fittings, Supports, Hangers, Sleeves, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 100mm Diameter	6	m				
	b. 50mm Diameter	37	m				
C.	Floor Cleanout; Including All Necessary Parts and Installation						
	a. 100mm Diameter	9	No.				
	b. 65mm Diameter	1	No.				
	c. 50mm Diameter	4	No.				
D.	Floor Drain; 50mm Diameter Including All Necessary Parts and Installation	2	No.				
E.	Bath Room Floor Drain; 50mm Diameter, Including All Necessary Parts and Installation	1	No.				
F.	Vent Cap; Including All Necessary Parts and Installation						
	a. 100mm Diameter	1	No.				
	b. 50mm Diameter	1	No.				
	To collection						
		2/20					

Item	Description	Quantity	Unit	Unit Rate		Total	
				DH.	Fils	DH.	Fil
LA-14	<u>AIR DISTRIBUTION SYSTEM</u>						
1.	Equipment						
	Rotary Blower; Bore 150mm Cap. 0.8m ³ /min S.P.5,000mmAg Motor 2.2Kw (3φ-415V-50Hz) Common Base, Concrete Foundation Safty Valve, Suction Filter, Silencer, Including Complete Installation	2	No.				
2.	Air Distribution Supply System						
A.	Polyvinylchloride Pipe; Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 50mm Diameter	105	m				
	b. 20mm Diameter	73	m				
B.	Ball Valve; Flanged PVC Body w/Comp. Including Installation						
	a. 50mm Diameter	2	No.				
	b. 20mm Diameter	10	No.				
C.	Check Valve; PVC Body 50mm Diameter w/Comp. Including Installation	2	No.				
D.	Flexible Joint; 50mm Diameter Including Supports, and Installation	2	No.				
	To collection						
		2/22					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-15	<u>FIRE EXTINGUISHER</u>						
1.	Carbon Dioxide (CO ₂) Extinguisher w/Comp. Wall Hanger, Including Complete Installation						
	Cap. 5lb.	6	No.				
	To collection						
		2/23					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fil
LA-16	<u>DISTRIBUTION BOARDS</u>						
1.	Distribution Board "EP4"; Surface mounted type, 3-phase, 4-wire, 240/415V, 50 hz. 225amp bus with neutral and earthing terminals blocks, main 4P-225AF-150AT moulded case earth-leakage circuit-breaker, branches, 3 ea of 3P-100AF-75AT earth-leakage moulded case circuit-breaker and 3 ea of 3P-100AF-10AT moulded case circuitbreaker.	1	No.				
2.	Distribution Board "M"; Surface mounted type, 3-phase, 4-wire, 240/415V, 50 hz, 400amp bus with earthing and neutral terminals blocks, main 4P-400AF-250AT moulded case earth-leakage circuit-breaker branches, 2 ea of 1P-100AF-100AT 1ea of 1P-100AF-75AT moulded case circuit-breaker, 3 ea of 3P-100AF-60AT earth-leakage circuit-breaker.	1	No.				
3.	Distribution Board "PA"; Surface mounted type, 3-phase, 4-wire 240/415V, 50hz, 100amp bus, with neutral and earthing terminals blocks, main 3P-100AF-60AT moulded case circuit-breaker, branches, 2 ea of 3P-50AF-30AT, 2 ea of 3P-50AF-15AT. 3 ea. of 1P-50AF-20AT and 3 ea. of 1P-50AF-10AT miniature circuit-breaker.	1	No.				
4.	Distribution Board "PB"; As same as D.B. "PA", except the following: branches, 6 ea. of 3P-50AF-10AT, 2 ea. of 3P-50AF-15AT, 4 ea. of 1P-50AF-15AT and 2 ea. of 1P-50AF-20AT miniature circuit-breaker.	1	No.				
5.	Distribution Board "PC"; As same as D.B. "PA", except the following: branches, 8 ea. of 3P-50AF-20AT, 2 ea. of 1P-50AF-20AT, and 4 ea. of 1P-50AF-15AT miniature circuit-breaker	1	No.				
		2/24					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
LA-16	<u>DISTRIBUTION BOARDS</u> - Cont'd						
6.	Distribution Board "LPA"; Flush mounted type, 1-phase, 2-wire, 240V, 50hz, 100amp bus, with neutral and earthing terminals blocks, main 2P-100AF-75AT moulded case earth-leakage circuit-breaker, branches, 9 ea. of 1P-50AF-10AT and 3 ea. of 1P-50AF-15AT miniature circuit-breaker.	1	No.				
7.	Distribution Board "LPB"; As same as D.B. "LPA", except the following: branches 8 ea. of 1P-50AF-10AT and 6 ea. of 1P-50AF-15AT miniature circuit-breaker.	1	No.				
8.	Distribution Board "LPC"; As same as D.B. "LPB", except the following: main, 2P-100AF-75AT moulded case earth-leakage circuit-breaker.	1	No.				
	To collection						

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
LA-17	<u>MOTOR CONTROL EQUIPMENT</u>						
1.	Motor starter, wall mounted, across the line voltage starting type, with control transformer 240-110V, and manual start and stop switch for: 3-phase 415 volts 2.2kw. motor.	2	No.				
2.	Motor starter, wall mounted, auto-transformer type reduced voltage starting, with control transformer 240-110V., and selector switch, for: 3-phase 415 volts 30kw. motor.	3	No.				
3.	Manual alternating switch for 2 motors selection with box.	4	No.				
4.	Manual alternating switch for 3 step control of 2 motors among 3. with box.	1	No.				
	<p>Remark;</p> <p>The boxes or enclosures for above item shall be dust-tight type.</p>						
	To collection						
		2/26					

Item	Description	Quantity	Unit	Unit Rate DH. Fils	Total DH. Fil
LA-18	<u>CABLES AND FITTINGS</u>				
1.	Cables p.v.c. insulated 1000V;				
	a. 1.5 sqmm.	7,000	M		
	b. 2.5 sqmm.	3,000	M		
	c. 4.0 sqmm.	150	M		
	f. 16 sqmm.	200	M		
	g. 25 sqmm.	300	M		
	h. 35 sqmm.	600	M		
	k. 95 sqmm.	50	M		
	l. 6 sqmm.	300	M		
2.	Conduit p.v.c. heavy duty;				
	a. 19 mmφ.	2,000	M		
	b. 25 mmφ.	600	M		
	c. 40 mmφ.	100	M		
	d. 50 mmφ.	100	M		
	e. 63 mmφ.	100	M		
3.	Outlet box p.v.c. with lighting fitting mounting reinforcement.	180	No.		
4.	Socket-outlet with box and cover plate;				
	a. 3-pin, 13 amp. type.	60	No.		
	b. ditto, weather proof type	25	No.		
	c. 3-pin, 5 amp. type	25	No.		
5.	Wall switch with box and cover plate;				
	a. 1P, 5 amp. type	40	No.		
	b. 1P, 15 amp. type	2	No.		
	c. 2 way 15 amp. type	2	No.		
6.	Motors and control devices connection work with oil-tight flexible conduit and connectors;				
	a. blower motor 2.2 kw.	2	No.		
	b. blower motor 30 kw.	3	No.		
	c. air-conditioner indoor unit	26	No.		
	d. ditto, outdoor unit	26	No.		
	e. room thermostat	24	No.		
		2/27			

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
LA-18	<u>CABLES AND FITTINGS - Cont'd</u>						
7.	Draw box, 300mm L, 150mm W, 100mm D, p.v.c. with decorated cover plate matching with surrounding color.	6	No.				
	To collection						

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fil
LA-19	<u>LIGHTING FITTINGS - Cont'd</u>						
13.	Type "W" Incandescent wall mounted fitting as same as Type "L", except with stencil lettered as "WORKING".	2	No.				
	<p>Remarks: All lighting fittings shall be for 240 volts 50Hz system, and control gears shall be of high power factor type, rapid starting for 40 watts fluorescent lamps and trigger or glow starting for smaller wattage fluorescent lamps.</p>						
	To collection						
		2/30					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-20	<u>FIRE ALARM SYSTEM</u>						
1.	Metal encased miniature circuit-breaker IP-50AF-10AT with neutral and earthing terminals.	1	No.				
2.	Fire alarm control panel, flush mounted type, 1-phase 240 volts input. consisting of: a. 3 window illuminated annunciator panel. b. 24 volts d.c. nickel-cadmium batteries having the capacity to serve the system for 10 hours and enable to actuate bells continuously for 30 minutes. c. automatic trickle battery charger for the battery described above. d. relay for future connection to fire station through telephone system, and automatic fire detection system.	1	No.				
3.	Break-glass manual fire alarm station flush mounted.	3	No.				
4.	Fire alarm bell 150 mm ϕ 24 volts d.c. box to be flush mounted type.	3	No.				
5.	Cables and conduit fittings; a. wire p.v.c. insulated 1.5 sqmm. b. conduit p.v.c. heavy duty orange coloured (i) 19 mm ϕ	650	M				
6.	Draw box p.v.c. min. 80mm ϕ .	3	No.				
	To collection						
		2/31					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
LA-21	<u>TELEPHONE CONDUIT SYSTEM</u>						
1.	Telephone terminal cabinet flush mounted type with 10 pair terminal block.	1	No.				
2.	Telephone outlet box with coverplate	4	No.				
3.	Conduit and Fittings;						
	Conduit p.v.c. heavy duty type						
	a. 19 mm ϕ .	30	M				
	b. 25 mm ϕ .	40	M				
	c. 50 mm ϕ .	20	M				
	To collection						
		2/32					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
<u>BILL NO. 3</u>							
<u>AQUARIUM</u>							
<u>SUB-COLLECTION</u>							
AQ	<u>AQUARIUM</u>						
AQ-1	EARTH EXCAVATION, BACKFILL AND FILL						
AQ-2	CONCRETE						
AQ-3	CONCRETE BLOCK WORK						
AQ-4	MISCELLANEOUS METAL						
AQ-5	MOISTURE AND THERMAL PROTECTION						
AQ-6	DOORS, WINDOWS AND GLASS						
AQ-7	FINISHES						
AQ-8	SPECIALITIES						
AQ-9	FURNISHING						
AQ-10	AIR CONDITIONING SYSTEM						
AQ-11	VENTILATING SYSTEM						
AQ-12	PLUMBING						
AQ-13	SEA WATER SYSTEM						
AQ-14	AIR DISTRIBUTION SYSTEM						
AQ-15	FIRE EXTINGUISHER						
AQ-16	DISTRIBUTION BOARDS						
AQ-17	MOTOR CONTROL EQUIPMENT						
AQ-18	CABLES AND FITTINGS						
AQ-19	LIGHTING FITTINGS						
AQ-20	FIRE ALARM SYSTEM						
AQ-21	TELEPHONE CONDUIT SYSTEM						
<u>SUB-COLLECTION OF BILL NO. 3</u>							
DH							
3/1							

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fil
AQ	<u>AQUARIUM</u>						
AQ-1	<u>EARTH EXCAVATION, BACKFILL AND FILL</u>						
1.	Excavate trench for foundations commencing at reduced level and not exceeding 1.50 meters deep.	542	Cu.m				
2.	Backfill, selected excavated material around foundation.	190	Cu.m				
3.	Selected excavated materials in filling to make up levels under ground slabs, spread, levelled, watered and well compacted in layers not exceeding 15 cm thick as described.	154	Cu.m				
4.	Compaction of subgrade under ground slabs prior to casting concrete thereon to not less than 95 percent maximum density for a depth of 20 cm as determined by modified AASHO T-180 or the latest revision thereof.	1,240	Sw.m				
5.	Remove surplus excavated materials from site:	198	Cu.m				
	To collection						
		3/2					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
AQ-2	<u>CONCRETE</u>						
1.	Reinforced concrete class "A" with sulphate resisting cement;						
	a. in foundations	72	Cu.m				
	b. in grade beams	123	Cu.m				
	c. in ground slab	186	Cu.m				
	d. in sea water tanks	113	Cu.m				
2.	Reinforced concrete class "A" with ordinary portland cement;						
	a. in walls	237	Cu.m				
	b. in beams	127	Cu.m				
	c. in columns	108	Cu.m				
	d. in slabs	268	Cu.m				
	e. in upstand beams, parapet, walls, etc.	74	Cu.m				
	f. in staircases	12	Cu.m				
3.	Plain concrete class "B" with sulphate resisting cement;						
	a. in 60 mm thick layer of blinding	1,857	Sq.m				
4.	Reinforcement;						
	a. deformed hard grade bar reinforcement of various diameter in structures.	110,900	kg				
5.	Extra over concrete for producing a fair faced finish as specified.	725	Sq.m				
6.	Form expansion joints in floor slab, comprising of 20mm thick preformed joint filler.	9	Sq.m				
7.	Plain concrete, class "B", with ordinary portland cement;						
	a. On floor slab, 100mm thick	154	Sq.m				
	b. On floor slab, 200mm thick	141	Sq.m				
8.	Floor reinforcement, woven wire fabric, 100 x 100 - #6/#6	141	Sq.m				
	To collection						
		3/3					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fi.
AQ-3	<u>CONCRETE BLOCK WORK</u>						
1.	Hollow core concrete block, including setting and grouting cement mortar and steel reinforcement;						
	a. 190mm thick wall	171	Sq.m.				
	b. 140mm thick wall	1,293	Sq.m.				
	c. 100mm thick wall	34	Sq.m.				
2.	Concrete reinforced lintel blocks;						
	a. 190 x 390mm	3.4	m.				
	b. 140 x 390mm	22.6	m.				
	c. 140 x 190mm	4	m.				
3.	Concrete reinforced coping blocks;						
	a. 190 x 190mm	27.2	m.				
4.	Precast reinforced concrete gutter cover, including terrazzo tile finish, stainless steel angle edges, stainless steel cont. plate edge with anchor straps and steel angle edge with anchor straps, 530 mmW						
		10.6	m.				
5.	Precast reinforced concrete gutter cover, including steel angle cont. edges with anchor straps, 530 mmW						
		30.8	m.				
	To Collection						
		3/4					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
AQ-4	<u>MISCELLANEOUS METAL</u>						
1.	Roof drain, scupper type, cast iron, including precast concrete curb with cement mortar bed and 114.3mm O.D. cast iron pipe, 400mm ϕ . (Refer to Dwg.A-9-2)	13	No.				
2.	Stainless steel ladder, 22mm ϕ stainless steel pipe, including 50 x 9mm stainless steel cleats anchored to concrete structures. (Refer to Dwg. A-15-7)						
	a. 300mmW x 6,000 mmH	1	No.				
	b. 300mmW x 3,000 mmH	1	No.				
3.	Stainless steel steps, anchored to concrete structures. (Refer to Dwg. A-15-5), 22 mm ϕ x 400 x 350mm	10	No.				
4.	Anti-rat screen consisting of stainless steel angle frame, 1.5 mm ϕ stainless steel netting 20mm spaced anti-rat screen and 30 x 3mm stainless steel filler plate, including stainless steel guide rails with expansion bolts. (Refer to Dwg. A2-3-3D) 450 mmW x 550 mmH	1	No.				
5.	Trench, consisting of 15mm thick baked coal tar finish cast iron grating cover, 16 x 6mm flat bar edge, steel angle cont. and cement mortar steel trowel finish. (Refer to Dwg. A-15-1) 160mm x 100mmD min.	26.6	m.				
6.	Dust collection pit, consisting of 4.5mm thick steel checkered plate cover, steel angle edge, stainless steel basket strainer and cement mortar with steel trowel finish, pointed (Refer to Dwg. A-15-3). 500 x 500 x 650 mmD	1	No.				
	To Collection						
		3/5					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Fils
AQ-5	<u>MOISTURE AND THERMAL PROTECTION</u>						
1.	Roofing, consisting of concrete with steel trowel finish, membrane waterproofing, polyetyrene foam insulation, apply with hot bitumen and concrete paver tile.	1,125	Sq.m.				
2.	Parapet waterproofing consisting of cement mortar with steel trowel finish, 1-layer of gravel surfaced waterproofing and 30 x 10mm steel flat bar, including caulking and concrete cont., 475 mmH.	392	m.				
3.	Roofing, waterproofed cement mortar with steel trowel finish, 30mm thick.	20.3	Sq.m.				
4.	Waterproofed cement mortar with steel trowel finish, 25mm thick, on drain gutter.	77.4	Sq.m.				
5.	Polyethylene film vapor barrier on under slab on grade	760	Sq.m.				
6.	Rockwool insulation, between concrete block and concrete block, 50mm thick.	43	Sq.m.				
	To Collection						
		3/6					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fil.
AQ-6	<u>DOORS, WINDOWS AND GLASS</u>						
1.	Wood external doors;						
	a. 45mm thick	18.04	Sq.m.				
2.	Wood internal doors;						
	a. 35mm thick	20.7	Sq.m.				
3.	Aluminum doors;						
	a. Double acting door	10.4	Sq.m.				
	b. Single acting door	4.4	Sq.m.				
4.	Aluminum windows;						
	a. Fixed window	76.5	Sq.m.				
	b. Fixed windows with steel supporting pipe posts, painted.	51.5	Sq.m.				
	c. Sliding windows	5.8	Sq.m.				
	d. Vertical pivoted windows	2.9	Sq.m.				
5.	Wood opening frame, including wood trim, caulking, painted and necessary fixing materials, for 1,000 x 2,200 mm	2	No.				
	To Collection						
		3/7					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
AQ-7	<u>FINISHES</u> - Cont'd						
	Internal Surfaces:						
5.	Floors;						
	a. Terrazzo tile with cement mortar setting bed, 50mm thick	88.7	Sq.m.				
	b. Mosaic floor tile with cement mortar setting bed, 30mm thick	32.5	Sq.m.				
	c. Ceramic floor tile with cement mortar bed, 50mm thick	509	Sq.m.				
	d. Cement mortar with steel trowel finish, 30mm thick	276	Sq.m.				
	e. Carpet floor, with felt underlayment and cement mortar screened, 45mm thick	77	Sq.m.				
6.	Skirtings;						
	a. Cement mortar with steel trowel finish, 100 x 20mm thick	374	m.				
7.	Walls;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 30mm thick	1,977	Sq.m.				
	b. Ceramic wall tile, with cement mortar setting bed, 25mm thick	108	Sq.m.				
8.	Ceilings;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 12mm thick	6.4	Sq.m.				
	b. Mineral fibre acoustic tile with gypsum wall board underlayer and plastic ceiling moulding, strap, including steel ceiling framing and necessary access panels.	710	Sq.m.				
	c. Asbestos cement board, 6mm thick, including steel ceiling framing and necessary access panels.	32.5	Sq.m.				
9.	Columns;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 20mm thick	114	Sq.m.				
	b. Ceramic wall tile with cement mortar setting bed, 25mm thick	2	Sq.m.				
		3/9					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	F11
AQ-7	<u>FINISHES - Cont'd</u>						
10.	Girders;						
	a. Cement plaster with steel trowel finish, including plastering accessories, 20mm thick	319	Sq.m.				
11.	Terrazzo tile threshold with cement mortar setting bed, 100 mmW	12.6	m.				
12.	Stair tread and riser;						
	a. Terrazzo tile stair tread with cement mortar setting bed, 280mm wide	50.8	m.				
	b. Terrazzo tile stair riser with cement mortar setting bed, 177.7mm high	25.2	m.				
	c. Ditto, 175mm high	25.6	m.				
13.	Open gutter with cement mortar steel trowel finish, including PVC drain pipes, 20mm thick, 200 x 100m	76.7	m.				
14.	External paintings;						
	a. Adrylic enamel paint, solvent type, 3-coats, on cement plaster	1,762	Sq.m.				
	b. Ditto, on fair faced concrete	27.3	Sq.m.				
15.	Internal paintings;						
	a. Acrylic enamel paint, solvent type, 3-coats, on cement mortar skirting	35.1	Sq.m.				
	b. Ditto, on cement plaster wall, columns and girders	1,620	Sq.m.				
	c. Ditto, on mineral acoustic ceiling	710	Sq.m.				
	d. Emulsion paint, synthetic resin type, 1-primer and 2-coats, on cement plaster wall and ceiling	27	Sq.m.				
	e. Ditto, on asbestos cement board ceilings	32.5	Sq.m.				
	To Collection						
		3/10					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fil
AQ-8	<u>SPECIALITIES</u>						
1.	Toilet booth, plywood panel, consisting of doors, hardware and stainless steel top rail. (Refer to Dwg. A-17-8, 9.)	9.4	Sq.m.				
2.	Toilet accessories;						
	a. Mirror, 455mm x 608mm x 5mm thick	5	No.				
	b. Soap dish	3	No.				
	c. Urinal baffle	1	No.				
	d. Toilet paper holder	3	No.				
3.	Wood opening frame, for wall exhaust fan, including paint and necessary fixing materials, 400 x 400mm.	4	No.				
4.	Wood bumper, 90 x 140mm, including 200 mm ϕ anchor bolts and wood spacer	3.2	m.				
5.	Roof flashing for cooling unit, consisting waterproofing riser, wood nailers, cast and caulking (Refer to Dwg. A-10-7.).	60.8	m.				
6.	Aqua-tank, consisting of acrylic panels, epoxy lining, sealing, neoprene rubber, fixing materials, spacer block and all necessary materials, installation to be executed complete by a firm nominated by the Engineer.	1	LS.				
7.	Curtain box, wood, including fixing materials and wood buck, painted (Refer to Dwg. A-18-10.), 150 x 100mm.	5.6	m.				
	To Collection						
		3/11					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fil
AQ-9	<u>FURNISHING</u>						
1.	Kitchen base cabinet, laminated plastic surfaces, ready-made, consisting of laminated plastic and stainless steel counter top, doors, shelves, drawers and stainless steel sink. (Refer to Dwg. A-16-5.), 600 x 900 x 2,480 mm)	1	No.				
2.	Kitchen wall cabinet, laminated plastic surfaces, ready-made, consisting of doors and shelves (Refer to Dwg. A-16-6.), 300 x 750 x 1,800 mm.	1	No.				
3.	Base counter, laminated plastic surfaces, ready-made, consisting of stainless steel counter top and sink, doors, shelves and drawers (Refer to Dwg. A-16-8.), 600 x 900 x 2,400 mm.	1	No.				
4.	Electric range, commercial grade, 530 x 700 mm.	1	No.				
5.	Chalkboard, ready-made, including aluminum frame. (Refer to Dwg. A-17-12.), 3,600 x 1,200 mm.	1	No.				
6.	Projection screen, ready-made, pull-down type, including screen box. (Refer to Dwgs. A-17-11 and A-18-11.), 3,000 x 2,300 mm.	1	No.				
7.	Lecture table, precast concrete with fair faced finish, including caulking, cement mortar, steel anchor bolts and non-shrink grout fill (Refer to Dwg. A-18-9.), 600 x 1,100 x 1,200 mmL.	24	No.				
	To Collection						
		3/12					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
AQ-10	<u>AIR CONDITIONING SYSTEM</u>						
1.	Equipments						
	Outdoor Air Cooled Single Packaged Air Conditioners; Complete; Cooling Cap., Air Flow, & Compressor, Indoor Fan, Outdoor Fan Motor; Including Roof Cube, Thermostat, Unit Air Filter, Weather Cover, Anchor Bolts, Expenditure, Blancing & Operating, Maintenance Instructions, Complete Installation						
	a. RAC-201 73,300Kcal/H x 17,000CMH 30HP x 10HP x (0.1HP x 3)	1	No.				
	b. RAC-202 61,400Kcal/H x 15,000CMH 25HP x 7.5HP x (0.1HP x 2)	1	No.				
	c. RAC-203, .204, 205 37,000Kcal/H x 10,000CMH 20HP x 5HP x (0.1HP x 2)	3	No.				
2.	Duct Work						
A.	Galvanized Steel Sheet Air Ducts; Including Hangers, Supports, Anchors, Joints, Stiffeners, Build'up, Insulating, Painting, Sleeves & Opening Expenses, Expenditure, Complete Insullation						
	a. Exposed in Maint. Rm.						
	(1) Steel Thick 0.5mm	17	M ²				
	(2) Steel Thick 0.6mm	197	M ²				
	(3) Steel Thick 0.8mm	50	M ²				
	(4) Steel Thick 1.0mm	14	M ²				
	b. Concealed in Ceiling						
	(1) Steel Thick 0.5mm	24	M ²				
	(2) Steel Thick 0.6mm	307	M ²				
	(3) Steel Thick 0.8mm	87	M ²				
	(4) Steel Thick 1.0mm	16	M ²				
		3/13					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
AQ-10	<u>AIR CONDITIONING SYSTEM</u> - Cont'd						
B.	Galvanized Steel Sheet Round Air Duct; Including Fittings, Hangers, Supports, Anchors, Insulating, Painting, Sleeves & Opening Expenses, Expenditure, Com- plete Installation						
	a. Exposed in Main. Rm.						
	(1) 200mm Diameter	53	m				
	b. Concealed in Ceiling						
	(1) 225mm Diameter	26	m				
	(2) 200mm Diameter	3	m				
C.	Volume Dampers, Including Manual Quadrant Operator, Complete Installation						
	a. VD 1,300 x 450mm	1	No.				
	b. VD 1,200 x 450mm	1	No.				
	c. VD 1,200 x 400mm	1	No.				
	d. VD 1,000 x 400mm	2	No.				
	e. VD 950 x 400mm	2	No.				
	f. VD 750 x 400mm	4	No.				
	g. VD 550 x 400mm	2	No.				
	h. VD 500 x 400mm	2	No.				
	i. VD 400 x 400mm	2	No.				
	j. VD 400 x 300mm	2	No.				
	k. VD 225mm Diameter	35	No.				
	l. VD 200mm Diameter	48	No.				
D.	Flexible Duct Connections; Including Complete Installation	1	LS				
E.	Sound Absorbent Chambers; Including Hangers, Supports, Anchors, Joints, Stiffeners, Built'up, Sound Insulation, Painting, Expenditure, Complete Installation						
	a. C-1 W2,800 x D1,900 x H600	1	No.				
	W2,800 x D2,000 x H600	1	No.				
	b. C-2 W2,500 x D2,000 x H600	1	No.				
	W2,500 x D2,000 x H600	1	No.				
		3/14					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fil
AQ-10	<u>AIR CONDITIONING SYSTEM -- Cont'd</u>						
	c. C-3 W2,000 x D2,400 x H600 W2,000 x D1,600 x H600	1 1	No. No.				
	d. C-4 W2,000 x D1,400 x H600 W2,000 x D2,600 x H600	1 1	No. No.				
	e. C-5 W2,000 x D1,800 x H600 W2,000 x D1,500 x H600	1 1	No. No.				
F.	Return Chambers; Including Hangers, Supports, Anchors, Joints, Stiffeners, Build'up, Painting, Expenditure, Complete Installation						
	a. W3,500 x H750 x L1,400mm	1	No.				
	b. W 900 x H500 x L1,100mm	2	No.				
	c. W 900 x H500 x L 500mm	6	No.				
G.	Diffuser Box; Including Hangers, Supports, Anchors Joints, Stiffeners, Build'up, Expendi- ture, Complete Installation	1	LS				
H.	Supply Air Diffuser; Including Complete Installation						
	a. CD-1 Neck Diam. 250mm (w/Volume Damper)	3	No.				
	b. CD-2 Neck Diam. 200mm	4	No.				
	c. LD-1 Double 2,500Lmm	2	No.				
	d. LD-1 Double 1,500Lmm	44	No.				
	e. LD-1 Double 1,000Lmm	8	No.				
	f. LD-2 4 Blade, 2,500Lmm	6	No.				
	g. LD-2 4 Blade 1,500Lmm	23	No.				
	h. CD-1 Neck Diam. 150mm	1	No.				
I.	Supply Air Register; Including Shutter, Complete Installation						
	a. VHS 1,000 x 300mm	1	No.				
	b. VHS 700 x 300mm	1	No.				
	c. VHS 600 x 250mm	4	No.				
	d. VHS 500 x 150mm	1	No.				
		3/16					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fi
AQ-11	<u>VENTILATING SYSTEM</u>						
1.	Equipments						
A.	Fresh Air Intake Fans, Complete; Wall Propeller Fan (Pressore Type) Air Flow, Static Pressore Drop, Fan Diameter, Fan Motor Input w/Shutter, Anchor Bolts, Complete Installation						
	a. FAF-201, 202 3,000CMH x 5mmAq x 40cm 200W (1P-240V)	2	No.				
B.	Air Exhaust Fans, Complete, Tubular Propeller Fan, Air Flow, Static Pressore Drop, Fan Diameter, Fan Motor Input w/Supporting Hanger, Anchor Bolts, Complete Installation						
	a. EF-201 1,240CMH x 10mmAq x 30cm x175W (1P-240V)	1	No.				
	b. EF-202 210CMH x 10mmAq x 25cm x 71W (1P-240V)	1	No.				
	c. EF-203 900CMH x 10mmAq x 30cm x 175W (1P-240V)	1	No.				
C.	Air Exhaust Fans, Complete; Wall Propeller Fan, (Pressore Type) Air Flow, Static Pressore Drop, Fan Diameter, Fan Motor Input w/Shutter, Anchor Bolts, Complete Installation						
	a. EF-204-205 3,000CMH x 5mmAq x 40cm x 200W (1P-240V)	2	No.				
2.	Duct Work						
A.	Galvanized Steel Sheet Air Ducts; Including Hangers, Supports, Anchors, Joints, Stiffeners, Built'up, Sleeves & Opening Expenses, Expenditure, Complete Installation						
	a. Steel Thick 0.5mm	17	m ²				
B.	Galvanized Steel Sheet Round Air Duct; Including Fittings, Hangers, Supports, Anchors, Sleeves & Opening Expenses, Expenditure, Complete Installation						
	a. 150mm diameter	6	m				
		3/17					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fil
AQ-11	<u>VENTILATING SYSTEM - Cont'd</u>						
C.	Exhaust Air Register; Including Complete Installation						
	a. SLIT - 900 x 200mm	1	No.				
	b. SLIT - 250 x 250mm	5	No.				
D.	Exhaust Air Grille; Including Complete Installation						
	500 x 400mm	1	No.				
	500 x 250mm	1	No.				
	150mm Diameter	1	No.				
E.	Fresh Air Intake Grille; Including Complete Installation						
	a. 600 x 400mm	1	No.				
F.	Exhaust Air Chambers; Including Hangers, Supports, Anchors, Joints, Stiffeners, Build'up, Painting, Expenditure, Complete Installation						
	a. 500 x 400 x 500mm	1	No.				
	b. 500 x 350 x 500mm	1	No.				
G.	Sound Absorbent Trap; Including Supports, Anchor Bolts, Build'up, Sound Insulation, Painting, Expenditure, Complete Installation						
H.	Weather Cover: Including Anchor Bolts, Build'up, Painting, Expenditure, Complete Installation	1	LS				
I.	Volume Dampers;						
	a. 300 x 250mm	1	No.				
	b. 300 x 200mm	1	No.				
	c. 150mm Diameter	1	No.				
J.	Flexible Duct Connections; Including Complete Installation	1	LS				
	To Collection						
		3/18					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
AQ-12	<u>PLUMBING</u>						
1.	City Water Supply System						
A.	City Water Reservoir "T-1" FRP Panel Tank, Water Cap. 16m ³ Steel Frame Reinforcement and Base, Concrete Foundation Including Complete Installation	1	No.				
B.	City Water Header Tank "T-2" FRP Panel Tank, Water Cap. 3.5m ³ Steel Frame Reinforcement and Base, Concrete Foundation Including Complete Installation	1	No.				
C.	City Water Lift Pump "P-1.2" Multistage Centrifugal Pump Bore 40mm Cap. 90l/min Head 16m Motor 1.5Kw (3φ-415V-50Hz) Common Base, Concrete Foundation Pressure gauge Anchor Bolts, Finish Painting Including Complete Installation	2	No.				
D.	Galvanized Steel Pipe, "Schedule 40" Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation Cleaning, Tests, Sterilization and Painting						
	a. 50mm Diameter	83	m				
	b. 32mm Diameter	18	m				
E.	Gate Valve; Screwed, Brass Body w/Comp. Including Installation						
	a. 50mm Diameter	9	No.				
	b. 32mm Diameter	3	No.				
F.	Check Valve; Screwed, Brass Body w/Comp. Including installation						
	a. 50mm Diameter	2	No.				
G.	Flexible Joint; Including Supports and Installation						
	a. 50mm Diameter	5	No.				
H.	Float Control Valve; Screwed, Brass Body, 50mm Diameter w/Comp. Including Installation	2	No.				
I.	City Water Meter; 50mm Diameter w/Comp. Cast Iron Meter Box Including Installation	1	LS				
		3/19					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
AQ-12	<u>PLUMBING - Cont'd</u>						
2.	Potable Water Supply System						
A.	Galvanized Steel Pipe "Schedule 40" Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning, Tests, Sterilization and Painting						
	a. 100mm Diameter	8	m				
	b. 75mm Diameter	26	m				
	c. 50mm Diameter	99	m				
	d. 32mm Diameter	2	m				
	e. 25mm Diameter	28	m				
	f. 20mm Diameter	210	m				
B.	Gate Valve; Flanged, Castiron Body, w/Comp. Flanges, Bolts, Packing, Including Installation						
	a. 100mm Diameter	1	No.				
	b. 75mm Diameter	1	No.				
C.	Gate Valve; Screwed, Brass Body w/Comp. Including Installation						
	a. 32mm Diameter	1	No.				
	b. 25mm Diameter	1	No.				
	c. 20mm Diameter	5	No.				
D.	Ball Valve; PVC Body w/Comp. Including Installation						
	a. 25mm Diameter	2	No.				
	b. 20mm Diameter	31	No.				
E.	Flexible Joint; Including Supports and Installation						
	a. 100mm Diameter	1	No.				
3.	Hot Water Supply System						
A.	Electric Water Heater Vertical Type Heating Element 1.0Kw-240V Capacity 30L (EWH-3) w/Comp. Thermostat, Thermometer, Safety Valve, Pressure Reducing Valve, Vacuum Relief Valve, Including Complete Installation	1	No.				
		3/20					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
AQ-12	PLUMBING - Cont'd						
B.	Copper Tubing; Type-L, Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning, Tests, Sterilization, Insulation and Painting						
	a. 13mm Diameter	3	m				
4.	Plumbing Fixtures and Fittings						
A.	Water Closet (WC-1); Syphonic Wash-down W.C. Close Coupled 9 Litres Cistern, w/Comp. All Necessary Fittings and Parts Including Complete Installation, Protection, and Adjustment	3	No.				
B.	Water Closet (WC-2); Wash-down Squating Type, 9 Liters Wall Hang Cistern, w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	1	No.				
C.	Urinal; Wall Hang Type w/Comp. Push Button Flush, All Necessary Fittings and Protection and Adjustment	2	No.				
D.	Lavatory; w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	5	No.				
E.	Bidet; w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	2	No.				
F.	Miscellaneous Fixtures and Fittings w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment						
	a. Screen	1	No.				
	b. Faucet; Combination Type 13mm	1	No.				
	c. Fancet; Swinging Type 13mm (PVC Coating)	2	No.				
	d. Hose Bib; 13mm Floor Mount w/Castiron Box	6	No.				
	e. Hose Bib; 13mm Wall Mount	2	No.				
		3/21					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fils
AQ-12	<u>PLUMBING</u> - Cont'd						
5.	Soil, Waste and Vent System						
A.	Polyvinylchloride Soil Pipe; Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 100mm Diameter	45	m				
	b. 75mm Diameter	7	m				
	c. 65mm Diameter	2	m				
	d. 50mm Diameter	10	m				
	e. 40mm Diameter	22	m				
	f. 32mm Diameter	2	m				
B.	Polyvinylchloride Vent Pipe; Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 50mm Diameter	27	m				
C.	Floor Clean-out; Including All Necessary Parts and Installation						
	a. 100mm Diameter	4	No.				
	b. 50mm Diameter	1	No.				
D.	Removable Round Strainer 32mm Diameter Including Installation	1	No.				
E.	Vent Cap.; 50mm Diameter Including Installation	1	No.				
F.	Cath Basin; Reinforced Concrete w/Comp. Cast Iron Grating Cover Including Installation, Cleaning and Tests	1	No.				
	a. 300 x 300 x 300 depth						
	To collection						
		3/22					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
AQ-13	<u>SEA WATER SYSTEM</u>						
1.	Sea Water Supply System						
A.	Polyvinylchloride Pipe Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 200mm Diameter	27	m				
	b. 150mm Diameter	35	m				
	c. 125mm Diameter	28	m				
	d. 100mm Diameter	16	m				
	e. 75mm Diameter	9	m				
	f. 50mm Diameter	13	m				
	g. 40mm Diameter	53	m				
	h. 20mm Diameter	3	m				
B.	Gate Valve; Flanged, PVC Body w/Comp. Flanges, Bolts, Packing, Including Installation						
	a. 200mm Diameter	1	No.				
	b. 75mm Diameter	2	No.				
C.	Ball Valve; Flanged, PVC Body, w/Comp. Flanges, Bolts, Packing, Including Installation						
	a. 50mm Diameter	4	No.				
	b. 40mm Diameter	27	No.				
2.	Drainage System						
A.	Polyvinylchloride Pipe Including Pipe Fitting, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 150mm Diameter	3	No.				
	b. 100mm Diameter	41	No.				
	c. 65mm Diameter	6	No.				
B.	PVC Removable Round Strainer 100mm Diameter, Including Installation	30	No.				
		3/23					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
AQ-13	<u>SEA WATER SYSTEM - Cont'd -</u>						
C.	Gate Valve; 100mm Diameter Flanged, PVC Body, w/Comp. Flanges, Bolts, Packing, Including Installation.	30	No.				
	To collection						

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Filis	Total DH.	Total Filis
AQ-14	<u>AIR DISTRIBUTION SYSTEM</u>						
1.	Rotary Blower; Bore 50mm Cap. 1.2m /min S.P.5,000mmAq Motor 3.7Kw (3φ-415V-50Hz) Common Base Concrete Foundation Safety Valve, Suction Filter, Silencer, Including Complete Installation	2	No.				
2.	Air Distribution Supply System						
A.	Polyvinylchloride Pipe; Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 50mm Diameter	117	m				
	b. 20mm Diameter	69	m				
B.	Ball Valve; Flanged PVC Body, w/Comp. Flanges, Bolts, Packing Including Installation.						
	a. 50mm Diameter	2	No.				
	b. 20mm Diameter	31	No.				
C.	Check Valve; 50mm Diameter Flanged PVC Body, w/Comp. Flanges, Bolts, Packing, Including Installation	2	No.				
D.	Flexible Joint; 50mm Diameter Including Installation	2	No.				
	To collection						
		3/25					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
AQ-15	<u>FIRE EXTINGUISHER</u>						
1.	Carbon Dioxide (CO ₂) Extinguisher w/Comp. Wall Hanger, Including Complete Installation Cap. 5lb.	5	No.				
	To collection						

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
AQ-16	<u>DISTRIBUTION BOARDS</u>						
1.	Distribution Board "EP5"; Surface mounted type, 3-phase, 4-wire, 240/415V, 50hz, 100 amp, bus, main 3P-100AF-30AT moulded case circuit- breaker, branches, 2 ea. of 3P-50AF- 20AT, 2 ea. of 3P-50AF-10AT, and 2 ea. of terminals for cb1 and cb2.	1	No.				
2.	Distribution Board "M"; Surface mounted type, 3-phase, 4-wire, 240/415V, 50hz, 400 amp, bus, with neutral and earthing terminals blocks, 3P-400AF-350AT moulded case circuit- breaker, branches: 1 ea. of 3P-225AF- 150AT, 3P-225AF-125AT, and (3P-100AF- 75AT)X3ea. moulded case earth-leakage circuit-breakers, 2 ea. of 3P-100AF- 50AT, 2 ea. of 1P-100AF-75AT, and 1 ea. of 1P-100AF-50AT moulded case circuit- breaker.	1	No.				
3.	Distribution Board "LPA"; Flush mounted type, 1-phase, 2-wire, 240V, 50hz, 100 amp, bus, with neutral and earthing terminals blocks, main 2P-100AF-75AT moulded case circuit-breaker, branches: 9 ea. of 1P-50AF-10AT and 3 ea. of 1P-50AF-15AT miniature circuit breaker.	1	No.				
4.	Distribution Board "LPB"; As same as D.B. "LPA", except the following: main 2P-100AF-50AT earth-leakage circuit-breaker, branches: 9 ea. of 1P-50AF-10AT and 1 ea. of 15AT miniature circuit-breaker.	1	No.				
5.	Distribution Board "LPC"; As same as D.B. "LPA", except the following: branches: 12 ea. of 1P-50AF-10AT and 2 ea. of 15AT miniature circuit- breaker.	1	No.				
	To collection						
		3/27					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fil
AQ-17	<u>MOTOR CONTROL EQUIPMENT</u>						
1.	Motor starter, wall mounted, across the line voltage starting type, with control transformer 240-110V. and manual start and stop switch for:						
	a. 3-phase 415 volts 1.5kw. motor	2	No.				
	b. 3-phase 415 volts 3.7kw. motor	2	No.				
2.	Manual alternating switch for 2-motors selection with box.	1	No.				
	Remark: The box or enclosure for above item shall be dust-tight type.						
3.	Water level control relay cabinet dust-tight type, containing: low water level cut-off relay, high and low water level control relay, those relays shall be enclosed type pre-wired at the factory, and control transformer to obtain extra-low voltage	1	No.				
4.	Water level control floatless electrode with holder and wires in metal conduit.						
	a. 2 electrodes type.	1	No.				
	b. 3 electrodes type.	1	No.				
	To collection						
		3/28					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
AQ-18	<u>CABLES AND FITTINGS</u>						
1.	Cables p.v.c. insulated 1000V;						
	a. 1.5 sqmm.	3,800	M				
	b. 2.5 sqmm.	1,200	M				
	f. 16 sqmm.	350	M				
	g. 25 sqmm.	120	M				
	h. 35 sqmm.	100	M				
	i. 50 sqmm.	600	M				
	j. 70 sqmm.	100	M				
2.	Conduit p.v.c. heavy duty;						
	a. 19 mm.	1,400	M				
	b. 25 mm.	80	M				
	c. 40 mm.	200	M				
	d. 50 mm.	700	M				
	e. 70 mm.	150	M				
	f. 82 mm.	30	M				
3.	Outlet box p.v.c. with lighting fitting mounting reinforcement.	180	No.				
4.	Socket-outlet with box and cover plate;						
	a. 3-pin, 13 amp. type	21	No.				
	b. ditto, weather-proof type	1	No.				
	d. 3-pin, 5 amp. twist lock type to be fitted on ceiling rose	36	No.				
5.	Wall switch with box and cover plate;						
	a. 1P, 5 amp. type	35	No.				
6.	Motors and control devices connection work with oil-tight flexible conduit and connectors;						
	a. pump motor 1.5 kw.	2	No.				
	b. blower motor 3.7 kw.	2	No.				
	c. ditto, outdoor unit	5	No.				
	d. room thermostat	5	No.				
7.	Solid-state dimmer controller for incandescent lights, 240 V, 1600 W, 50 Hz. with box and plate.	1	No.				
	To collection						
		3/29					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
AQ-19	<u>LIGHTING FITTINGS</u>						
1.	Type "A2" Fluorescent lighting fitting industrial type with reflector surface mounted, for 2-40 watts lamps.	18	No.				
2.	Type "A3" as same as Type "A2" except for 3-40 watts lamps.	3	No.				
3.	Type "A4" as same as Type "A2" except for 1-40 watts lamp and fitting shall be waterproof construction, and removable suspension hangers with drop code socket.	36	No.				
4.	Type "A6" as same as Type "A2" except for 2-20 watts lamps.	4	No.				
5.	Type "B1" Fluorescent strip type fitting for 1-20 watts lamp.	26	No.				
6.	Type "B2" as same as Type "B1" except for 1-40 watts lamp.	7	No.				
7.	Type "D1" Fluorescent lighting fitting for mirror lighting purpose with acrylic plain diffuser completed with enclosed type shaver's socket-outlet, for 1-20 watts lamp.	5	No.				
8.	Type "E1" water-tight wall bracket Incandescent lighting fitting with gasket screwed on opal glass globe, for 1-100 watts lamp.	18	No.				
9.	Type "F1" Incandescent lighting fitting, ceiling flush mounting open bottom down light, for 1-60 watts lamp.	51	No.				
10.	Type "F2" as same as Type "F1" except for 1-80 watts lamp.	19	No.				
11.	Type "I2" Incandescent reflector lamp fitting with angle adjustable lamp holder on swivel base, for 1-100 watts lamp.	4	No.				
12.	Type "H1" Raintight incandescent lighting fitting, surface mounted type with cube shaped opal glass diffuser for 1-60 watts lamp.	12	No.				
13.	Type "L1" Incandescent EXIT light fitting with letters in Arabic and English, and arrow on green plastic panel backed stainless steel stencil, for 2-40 watts lamp, single face wall mounted.	6	No.				
		3/30					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
AQ-19	<p><u>LIGHTING FITTINGS - Cont'd</u></p> <p>Remarks:</p> <p>All lighting fittings shall be for 240 volts 50 Hz system, and control gears shall be high-power factor type, rapid starting for 40 watts fluorescent lamp and trigger or glow starting for smaller wattage fluorescent lamps.</p> <p>To collection</p>						

Item	Description	Quantity	Unit	Unit	Rate	Total	Fil
				DH.	Fils	DH.	Fil
AQ-20	<u>FIRE ALARM SYSTEM</u>						
1.	Metal encased miniature circuit-breaker IP-50AF-10AT with neutral and earthing terminals.	1	No.				
2.	Fire alarm control panel, flush mounted type, 1-phase 240 volts input. consisting of:	1	No.				
	a. 3 window illuminated annunciator panel						
	b. 24 volts d.c. nickel-cadmium batteries having the capacity to serve the system for 10 hours and enable to actuate bells continuously for 30 minutes.						
	c. automatic trickle battery charger for the battery described above.						
	d. relay for future connection to fire station through telephone system, and automatic fire detection system.						
3.	Break-glass manual fire alarm station flush mounted.	3	No.				
4.	Fire alarm bell 150 mmφ 24 volts d.c. box to be flush mounted type.	3	No.				
5.	Cables and conduit fittings;						
	a. wire p.v.c. insulated 1.5 sqmm.	500	M				
	b. conduit p.v.c. heavy duty orange coloured						
	(1) 19 mmφ	70	M				
	To collection						
		3/32					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
<u>BILL NO. 4</u> <u>SEED PRODUCTION BUILDING</u> <u>SUB-COLLECTION</u>							
SP	<u>SEED PRODUCTION BUILDING</u>						
SP-1	EARTH EXCAVATION, BACKFILL AND FILL						
SP-2	CONCRETE						
SP-3	CONCRETE BLOCK WORK						
SP-4	MISCELLANEOUS METAL						
SP-5	MOISTURE AND THERMAL PROTECTION						
SP-6	DOORS, WINDOWS AND GLASS						
SP-7	FINISHES						
SP-8	SPECIALITIES						
SP-9	FURNISHING						
SP-10	AIR CONDITIONING SYSTEM						
SP-11	VENTILATING SYSTEM						
SP-12	PLUMBING						
SP-13	SEA WATER SYSTEM						
SP-14	AIR DISTRIBUTION SYSTEM						
SP-15	FIRE EXTINGUISHER						
SP-16	WALK-IN FREEZER						
SP-17	DISTRIBUTION BOARDS						
SP-18	MOTOR CONTROL EQUIPMENT						
SP-19	CABLES AND FITTINGS						
SP-20	LIGHTING FITTINGS						
<u>SUB-COLLECTION OF BILL NO. 4</u>					DH		
		4/1					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
SP	<u>SEED PRODUCTION BUILDING</u>						
SP-1	<u>EARTH EXCAVATION, BACKFILL AND FILL</u>						
1.	Excavate trench for foundations commencing at reduced level and not exceeding 1.50 meters deep.	364	Cu.m				
2.	Backfill, selected excavated material around foundation	275	Cu.m				
3.	Selected excavated materials in filling to make up levels under ground slabs, spread, levelled, watered and well compacted in layers not exceeding 15 cm thick as described.	520	Cu.m				
4.	Compaction of subgrade under ground slabs prior to casting concrete thereon to not less than 95 percent maximum density for a depth of 20 cm as determined by modified AASHO T-180 or the latest revision thereof.	1,015	Sq.m				
5.	Filling with approved imported material spread levelled and compacted in layers not exceeding 20 cm in making up levels under ground floor slab.	431	Cu.m				
	To collection						
		4/2					

Item	Description	Quantity	Unit	Unit Rate DH. Fils	Total DH. Fil
SP-3	<u>CONCRETE BLOCK WORK</u>				
1.	Hollow core concrete block, including setting and grouting cement mortar and steel reinforcement;				
	a. 190 mm thick wall	146	Sq.m.		
	b. 140 mm thick wall	779	Sq.m.		
	c. 100 mm thick wall	112.5	Sq.m.		
2.	Concrete reinforced lintel blocks;				
	a. 190 x 190 mm	11	m.		
	b. 140 x 190 mm	7.6	m.		
	c. 100 x 190 mm	1.2	m.		
3.	Concrete reinforced sill blocks;				
	a. 190 x 190 mm	20.8	m.		
	b. 100 x 190 mm	0.8	m.		
4.	Concrete screen block, including setting cement mortar, 190mm thick	9.4	Sq.m.		
	To Collection				
		4/4			

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
SP-4	<u>MISCELLANEOUS METAL</u>						
1.	Roof drain, scupper type, cast iron, including precast concrete curb with cement mortar bed and 114.3 mm O.D. cast iron pipe 400 mm ϕ (Refer to Dwg. A-9-2.)	4	No.				
2.	Stainless steel ladder, 22 mm ϕ stainless steel pipe, including 50 x 9mm stainless steel cleats anchored to concrete structures (Refer to Dwg. A-15-7.).						
	a. 300 mmW x 3,480 mmH	1	No.				
	b. 300 mmW x 1,780 mmH	1	No.				
3.	Stainless steel step, anchored to concrete walls. (Refer to Dwg. A-15-5). 22 mm ϕ x 400 x 350mm	44	No.				
4.	Trench, consisting of 15mm thick baked coal tar finish cast iron grating cover, 16 x 6mm flat bar edge, steel angle cont. and cement mortar steel trowel finish (Refer to Dwg. A-15-1.), 60 mm x 100 mmD Min.	5.9	m.				
5.	Dust collection pit, consisting of 4.5mm thick steel checkered plate cover, steel angle edge, stainless steel basket strainer and cement mortar steel trowel finish, painted (Refer to Dwg. A-15-3), 500 x 500 x 650 mm D.	1	No.				
	To Collection						
		4/5					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
SP-5	<u>MOISTURE AND THERMAL PROTECTION</u>						
1.	Roofing, consisting of concrete with steel trowel finish, membrane waterproofing, polystyrene foam insulation apply with hot bitumen and concrete paver tile.	217	Sq.m.				
2.	Parapet waterproofing, consisting of cement mortar with steel trowel finish, 1-layer of gravel surfaced waterproofing and 30 x 10 mm steel flat bar, including caulking and concrete cont.;						
	a. 475 mmH	84.3	m.				
	b. 650 mmH	5.2	m.				
3.	Waterproofed cement mortar with steel trowel finish, 25mm thick;						
	a. On concrete tanks	1,216	Sq.m.				
	b. On internal floor	115	Sq.m.				
4.	Polyethylene film vapor barrier on under slab on grade	216	Sq.m.				
To Collection							
4/6							

Item	Description	Quantity	Unit	Unit DH.	Rate File	Total DH.	Total File
SP-6	<u>DOORS, WINDOWS AND GLASS</u>						
1.	Wood external doors;						
	a. 45 mm thick	19.8	Sq.m.				
2.	Wood internal doors;						
	a. 35 mm thick	11.9	Sq.m.				
3.	Aluminum windows;						
	a. Fixed windows	16	Sq.m.				
	b. Sliding windows	6.4	Sq.m.				
	c. Bottom hinged projected windows	0.32	Sq.m.				
4.	Aluminum doors;						
	a. 45 mm thick	2.2	Sq.m.				
	To Collection						
		4/7					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
SP-7	<u>FINISHES</u>						
	External Surfaces:						
1.	Floors;						
	a. Concrete monolithic finish	84	Sq.m.				
2.	Walls;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 25 mm thick.	91.7	Sq.m.				
3.	Soffits;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 12 mm thick	20	Sq.m.				
4.	Non slip nosing tile with cement mortar setting bed.	39.6	m.				
	Internal Surfaces:						
5.	Floors;						
	a. Terrazzo tile with cement mortar setting bed, 50 mm thick	28	Sq.m.				
	b. Mosaic floor tile with cement mortar setting bed, 30 mm thick	4.1	Sq.m.				
	c. Cement mortar with steel trowel finish, 30 mm thick	142	Sq.m.				
6.	Skirtings;						
	a. Cement mortar with steel trowel finish, 100 mm x 20 mm thick	86	m.				
7.	Walls;						
	a. Ceramic wall tile with cement mortar setting bed, 25 mm thick	32	Sq.m.				
	b. Cement plaster with steel trowel finish including control joint and plastering accessories, 20 mm thick	341	Sq.m.				
	c. 12 mm thick plywood, including wooden furring strips and 30 mm thick insulation.	32	Sq.m.				
		4/8					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fil
SP-8	<u>SPECIALITIES</u>						
1.	Wooden handrail, 40 mm x 90 mm, with 40 mm x 40 mm balusters, including necessity fastenings;						
	a. 800 mmH	28	m.				
	b. 900 mmH	95.5	m.				
2.	Wooden catwalk, consisting of precast concrete foundations, wooden posts, beams and hurdles, including necessity fastenings.	210	Sq.m.				
3.	Wooden trench cover consisting of wooden hurdles, frames and ledgers, including necessity fastenings	31	Sq.m.				
4.	Wooden pergola, consisting of posts, beams, purlins and hurdle, including necessity fastenings (Refer to Dwg. A3-5.).						
	a. 5,000 x 14,500 x 2,000 mmH.	1	No.				
	b. 6,000 x 11,000 x 2,000 mmH	1	No.				
5.	Wooden internal catwalk, consisting of wooden hurdles and frame, including necessity fastenings (Refer to Dwg. A3-4-3.), 400 mmW x 130 mm, 365 mm and 600 mmD.	3.1	m.				
6.	Toilet accessories;						
	a. Mirror, 455mm x 608mm x 5mm thick	1	No.				
	b. Soap dish	1	No.				
	c. Toilet paper holder	1	No.				
7.	Wood opening frame, for wall exhaust fan, including paint and necessary fixing materials, 200 x 200 mm	4	No.				
	To Collection						
		4/10					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
SP-9	<u>FURNISHING</u>						
1.	Sink base cabinet, laminated plastic surfaces, ready-made, consisting of laminated plastic counter top, doors, shelves, drawers and stainless steel sink (Refer to Dwg. A-16-8.), 600 x 900 x 2,400 mmL	2	No.				
2.	Wooden shelves, consisting of plywood shelves, painted, 4-rolls; (Refer to Dwg. A-18-2,3,4 & 5)						
a.	(Refer to Dwg. A-16-10) 400 x 2,200 x 2,400 mm	1	No.				
b.	(Refer to Dwg. A-16-13) 400 x 2,200 x (3,530+600+600+1,710+1,710) mm.	1	No.				
	To Collection						
		4/11					

Item	Description	Quantity	Unit	Unit	Rate	Total	Total
				DH.	Fils	DH.	Fil
SP-10	<u>AIR CONDITIONING SYSTEM</u>						
1.	Equipments						
	Air Cooled Air Conditioner; Ceiling Type Indoor Unit, Outdoor Com- pressor & Condenser Unit, Complete; Cooling Cap, Power Consumption						
	w/ Concrete Foundation, Anchor Bolts, Supporting Frame, Remote Control Switch, Expenditure, Blancing & Operating, Main- tenance Instructions, Complete Installa- tion						
	a. CAC-301-303 Comp. 5HP 9,600Kcal/H x 6.5Kw (3P-415V)	3	No.				
	b. CAC-304 Comp. 2HP 3,200Kcal/H x 2.7Kw (1P-240V)	1	No.				
	c. CAC-305 Comp. 2HP 3,200Kcal/H x 2.7Kw (1P-240V) (w/Supply Air Diffuser & Duct)	1	No.				
2.	Piping Work						
A.	Refrigerant Piping; Including Copper Tubes, Fittings, Hangers, Insulating, Taping, Sleeves & Opening Expenses, Interconnection Wiring, Expenditure, Complete Installation						
	a. Exposed in the Room Piping						
	(1) 19.05, 12.70mm Diameter	4	m				
	(2) 15.88, 6.35mm Diameter	3	m				
	b. Exposed to Weather Piping						
	(1) 19.05, 12.70mm Diameter	20	m				
	(2) 15.88, 6.35mm Diameter	5	m				
B.	Condensate Drain Piping; Including PVC Pipes, Fittings, Hangers, Painting, Sleeves & Opening Expneses, Expenditure, Complete Installation						
	a. Exposed in the Room Piping						
	(1) 32mm Diameter	9	m				
	(2) 25mm Diameter	20	m				
		4/12					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
SP-10	<u>AIR CONDITIONING SYSTEM - Cont'd -</u> b. Exposed to Weather Piping						
	(1) 32mm Diameter	1	m				
	(2) 25mm Diameter	1	m				
	To collection						

Item	Description	Quantity	Unit	Unit DH,	Rate File	Total DH,	Total File
SP-11	<u>VENTILATING SYSTEM</u>						
1.	Equipments						
A.	Air Exhaust Fans, Complete; Wall Propeller Fan, Air Flow, Fan Diameter, Fan Motor Input w/ Shutter, Anchor Bolts, Complete Installation						
	a. EF-201-304 580CMH x 20cm x 30W (1P-240V)	4	No.				
B.	Air Exhaust Fans, Complete; Window Propeller Fan, Air Flow, Fan Diameter, Fan Motor Input w/ Shutter, Complete Installation						
	a. EF-305 490CMH x 20cm x 30W (1P-240V)	1	No.				
C.	Air Circular Fans, Complete; Ceiling Hang Propeller Fan, Air Flow, Fan Diameter, Fan Motor Input w/ Anchor Bolts, Complete Installation						
	a. CF-301-302 227CMH x 140cm x 80W (1P-240V)	2	No.				
D.	Weather Cover Including Anchor Bolts, Build'up, Painting, Expenditure, Complete Installation						
	a. 1 Weather Cover	1	LS				
	To collection						
		4/14					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
SP-12	<u>PLUMBING</u>						
1.	Potable Water Supply System						
A.	Galvanized Steel Pipe "Schedule 40" Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning, Tests, Sterilization and Painting						
	a. 50mm Diameter	177	m.				
	b. 25mm Diameter	26	m.				
	c. 20mm Diameter	30	m.				
B.	Gate Valve; Screwed, Brass Body w/Comp Including Installation						
	a. 50mm Diameter	30	No.				
	b. 25mm Diameter	10	No.				
2.	Plumbing Fixtures and Fittings						
A.	Water Closet (WC-1); Syphonic Wash-down W.C. Close Coupled 9 Litres Cistern w/Comp. All Necessary Fittings and Parts Including Complete Installation, Protection, and Adjustment	1	No.				
B.	Lavatory; w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	1	No.				
C.	Bidet; w/Comp. All Necessary Fittings and Parts, Including Complete Instal- lation, Protection and Adjustment	1	No.				
D.	Service Sink; w/Comp. All Necessary Fittings and Parts, Including Complete Installation, Protection and Adjustment	1	No.				
E.	Miscellaneous Fixtures and Fittings w/Comp. All Necessary Fittings and Parts, Including Complete Installation Protection and Adjustment						
	a. Faucet; Swinging Type 13mm	1	No.				
	b. Faucet; Swinging Type 13mm (PVC Coating)	1	No.				
	c. Hose Bib; Wall Mount 13mm	1	No.				
		4/15					

Item	Description	Quantity	Unit	Unit	Rate	Total	Fil
				DH.	Fils	DH.	Fil
SP-12	<u>PLUMBING</u> - Cont'd						
3.	Soil, Waste, and Vent System						
A.	Polyvinylchloride Soil Pipe Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation Cleaning and Tests						
	a. 100mm Diameter	33	m				
	b. 75mm Diameter	2	m				
	c. 65mm Diameter	5	m				
	d. 50mm Diameter	9	m				
	e. 40mm Diameter	4	m				
B.	Floor Clean-out; 100mm Diameter Including All Necessary Parts, and Installation	2	No.				
C.	Removable Round Strainer 50mm Diameter Including Installation	1	No.				
D.	Polyvinylchloride Vent Pipe Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation Cleaning and Tests						
	a. 50mm Diameter	4	m				
E.	Vent Cap.; 50mm Diameter Including Installation	1	No.				
	To collection						
		4/16					

Item	Description	Quantity	Unit	Unit Rate		Total	
				DH.	Fils	DH.	Fil
SP-13	<u>SEA WATER SYSTEM</u>						
1.	Sea Water Supply System						
A.	Polyvinylchloride Pipe Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 150mm Diameter	86	m				
	b. 125mm Diameter	28	m				
	c. 50mm Diameter	334	m				
	d. 25mm Diameter	11	m				
	e. 20mm Diameter	30	m				
B.	Gate Valve; Flanged, PVC Body, w/Comp. Flanges, Bolts, Packings Including Installation						
	a. 150mm Diameter	6	No.				
	b. 125mm Diameter	5	No.				
	c. 50mm Diameter	1	No.				
	d. 20mm Diameter	2	No.				
C.	Ball Valve; Flanged, PVC Body, w/Comp. Flanges, Bolts, Packings, Including Installation						
	a. 50mm Diameter	45	No.				
	b. 25mm Diameter	10	No.				
	c. 20mm Diameter	12	No.				
2.	Drainage System						
A.	Polyvinylchloride Pipe Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests						
	a. 150mm Diameter	2	m				
	b. 100mm Diameter	124	m				
	c. 75mm Diameter	6	m				
B.	Gate Valve; Flanged, PVC Body w/Comp. Flanges, Bolts, Packings, Including Installation						
	a. 100mm Diameter	5	No.				
	b. 75mm Diameter	10	No.				
		4/17					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
SP-15	<u>FIRE EXTINGUISHER</u>						
1.	Carbon Dioxide (CO ₂) Extinguisher w/Comp. Wall Hanger, Including installation Cap. 5lb.	2	No.				
	To collection						

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil.
SP-16	<u>WALK-IN FREEZER</u>						
1.	Prefabricated Freezer; Room Dimension 1,800 x 3,600 x 2,400mm Room Temperature -25°C w/Comp. Condensing Unit, Cooling Unit, Piping, and Electrical Parts Including Complete Installation, and Tests	1	LS				
	To collection						
		4/21					

Item	Description	Quantity	Unit	Unit Rate DH.	Rate Fils	Total DH.	Total Fils
SP-17	<u>DISTRIBUTION BOARDS</u>						
1.	Distribution Board "EP6" Surface mounted type, 3-phase, 3-wire, 415V, 50HZ.; 100 amp bus, with earthing terminals block, main 3P-100AF-60AT moulded case circuit-breaker, branches: 2 ea. of 3P-100AF-60AT moulded case circuit breaker and 1 ea. of 3P-50AF-30AT miniature circuit-breaker.	1	No.				
2.	Distribution Board "P" Surface mounted type, 3-phase, 4-wire, 240/415V, 50HZ, 100 amp bus, with neutral and earthing terminals blocks, main 4P-100AF-50AT moulded case earth-leakage circuit-breaker, branches: 4 ea. of 3P-50AF-20AT, 1 ea. of 3P-50AF-15AT, and 3 ea. of 3P-50AF-30AT miniature circuit-breaker.	1	No.				
3.	Distribution Board "L" Surface mounted type, 1-phase, 2-wire, 240V, 50HZ, 100 amp bus, main 2P-100AF-60AT moulded case earth-leakage circuit-breaker, branches: 8 ea. of 1P-50AF-10AT and 2 ea. of 1P-50AF-15AT miniature circuit-breaker.	1	No.				
	To collection						
		4/22					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
SP-21	<u>CABLES AND FITTINGS</u>						
1.	Cables p.v.c. insulated 1000V;						
	a. 1.5 sqmm.	940.	M				
	b. 2.5 sqmm.	540.	M				
	c. 16 sqmm.	30	M				
	d. 25 sqmm.	60	M				
2.	Conduit p.v.c. heavy duty;						
	a. 19 mmφ.	420	M				
	b. 25 mmφ.	50	M				
	c. 40 mmφ.	20	M				
	d. 50 mmφ.	30	M				
3.	Outlet box p.v.c. provided with lighting fitting mounting reinforcement.	55	No.				
4.	Socket-outlet 3 pin 13 amp. type with box and cover plate, and male plug.	8	No.				
5.	ditto: weatherproof type.	2	No.				
6.	Socket-outlet 3 pin 5 amp. type with box, cover plate, and male plug.	4	No.				
7.	Wall switch 1P, 5 amp. with box and cover plate.	6	No.				
8.	ditto: 2 way switch.	2	No.				
9.	Wall switch 15 amp. 2 way, with box and cover plate.	4	No.				
10.	Telephone outlet with box and cover plate.	1	No.				
11.	Motors, and control devices connection work with oil-tight flexible conduit and connectors;						
	a. blower motor.	2	No.				
	b. air-conditioning equipment.	5	No.				
	c. walk-in reefer equipment.	1	No.				
	d. room thermostat.	5	No.				
12.	Earthing work	1	LS				
13.	Miscellaneous materials and work.	1	LS				
	To collection						
		4/25					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
	<u>BILL NO. 5</u> <u>FILTRATION BUILDING</u> <u>SUB-COLLECTION</u>						
FR	<u>FILTRATION BUILDING</u>						
FR-1	EARTH EXCAVATION, BACKFILL AND FILL						
FR-2	CONCRETE						
FR-3	MISCELLANEOUS METAL						
FR-4	MOISTURE AND THERMAL PROTECTION						
FR-5	DOORS, WINDOWS AND GLASS						
FR-6	FINISHES						
FR-7	SPECIALITIES						
FR-8	PLUMBING						
FR-9	SEA WATER SYSTEM						
FR-10	FIRE EXTINGUISHER						
FR-11	DISTRIBUTION BOARD						
FR-12	MOTOR CONTROL EQUIPMENT						
FR-13	LIGHTING FITTINGS						
FR-14	CABLES AND FITTINGS						
	<u>SUB-COLLECTION OF BILL NO. 5</u>					DH	
		5/1					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR	<u>FILTRATION BUILDING</u>						
FR-1	<u>EARTH EXCAVATION, BACKFILL AND FILL</u>						
1.	Excavate trench for foundations commencing at reduced level more than 1.50 meter deep.	208	Cu.m				
2.	Backfill, selected excavated material around foundation.	9	Cu.m				
3.	Remove surplus excavated materials from site.	199	Cu.m				
	To collection						
		5/2					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR-2	<u>CONCRETE</u>						
1.	Reinforced concrete class "A" with sulphate resisting cement;						
	a. in foundations	29	Cu.m				
	b. in sea water tanks	165	Cu.m				
2.	Reinforced concrete class "A" with ordinary portland cement;						
	a. in walls	8	Cu.m				
	b. in beams	5	Cu.m				
	c. in slabs	5	Cu.m				
	d. in upstand beams, parapet walls, etc	2	Cu.m				
3.	Plain concrete class "B" with sulphate resisting cement;						
	a. in 60 mm thick layer of blinding	40	Sq.m				
4.	Reinforcement;						
	a. deformed hard grade bar reinforcement of various diameter in structures	18,000	kg				
5.	Extra over concrete for producing a fair faced finish as specified	439	Sq.m				
6.	Plain concrete, class "B" with ordinary Portland cement						
	a. On floor slab, 10 mm thick	24	Sq.m				
	To collection						
		5/3					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR-3	<u>MISCELLANEOUS METAL</u>						
1.	Stainless steel laddor, 22 mm ϕ stainless steel pipe, including 50 x 9 mm stainless steel cleats anchored to concrete structures (Refer to Dwg. A-15-7) 300 mm W x 5,700 mm H	1	No.				
2.	Stainless steel step, anchored to concrete structures (Refer to Dwg. A-15-5) 22 mm ϕ x 400 x 350 mm	78	No.				
3.	Cast iron manhole cover and frame, baked coal tar finish (Refer to Dwg. A-15-9) 648 mm dia.	3	No.				
	To collection						
		5/4					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Fils
FR-4	<u>MOISTURE AND THERMAL PROTECTION</u>						
1.	Roofing, waterproofed cement mortar with steel trowel finish, 30 mm thick	67.5	Sq. m				
2.	Waterproofed cement mortar with steel trowel finish, 25 mm thick;						
	a. On tank floor	147	Sq. m				
	b. On tank wall	504	Sq. m				
	c. On tank ceiling	6	Sq. m				
	To collection						
		5/5					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR-5	<u>DOORS, WINDOWS AND GLASS</u>						
1.	Aluminum doors, w/louvered, 40 mm thick.	4.4	Sq.m				
	To collection						

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
FR-6	<u>FINISHES</u>						
	External surfaces;						
1.	Floors;						
	a. Concrete monolithic finish	7.4	Sq.m.				
2.	Walls;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 25 mm thick	11.2	Sq.m.				
	Internal surfaces;						
3.	Floors;						
	a. Cement mortar with steel trowel finish, 30 mm thick	24	Sq.m.				
4.	Skirtings;						
	a. Cement mortar with steel trowel finish, 100 mm x 20 mm thick	20.1	m.				
5.	Walls;						
	a. Cement plaster with steel trowel finish, including control joint and plastering accessories, 20 mm thick	54.2	Sq.m.				
6.	External painting;						
	a. Acrylic enamel paint solvent type, 3-coats, on cement plaster	11.2	Sq.m.				
	b. Ditto, on fair faced concrete	271	Sq.m.				
	To collection						
		5/7					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR-7	<u>SPECIALITIES</u>						
1.	Wooden hatch cover, consisting of 25 x 150 mm wood board and frame (Refer to Dwg. A4-2-1D) 1,250 x 1,300 mm	2	No.				
	To collection						
		5/8					

Item	Description	Quantity	Unit	Unit Rate	Rate	Total	Total
				DH.	Fils	DH.	Fil
FR-8	<u>PLUMBING</u>						
1.	Potable Water Supply System;						
A.	Galvanized Steel Pipe "Schedule 40" Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning, Tests, Sterilization, and Painting						
	a. 20mm Diameter	3	m				
B.	Hose Bib; Wall Mount 13m/m Including Complete Installation	1	No.				
	To collection						
		5/9					

Item	Description	Quantity	Unit	Unit Rate DH.	Total DH.	Fils
FR-9	<u>SEA WATER SYSTEM</u>					
1.	Equipments					
A.	Filtering Equipment; Full Automatic Gravity Type, Cap. 150m ³ /h w/Comp. Surface, Washing and Pressure Water Pump; Centrifugal Stainless Steel Pump, Bore 80mm Cap. 500l/min Head 25m Motor 5.5Kw (3φ-415V-50Hz) Common Base, Concrete Foundation, Filter Media, All Necessary Piping, Fittings, Valves, Motorised Valves, Electric Wiring, Control Panel, Supports, Hangers, Sleeves, Cleaning, Tests, Pain- tings and Including Complete Installation (Refer to DWG.M4-1, M4-2, M4-3, and M4-4)	1	LS			
B.	Filtered Water Lift Pump; Multi-stage Centrifugal Stainless Steel Pump; Bore 150φ Cap. 2,500l/min Head 15m Motor 11Kw (3φ-415V-50Hz) Common Base, Concrete Foundation, Pressure Gauge, Anchor Bolts, Finish Painting, Including Complete Installation	2	No.			
C.	Recovery Water Lift Pump; Multi-stage Centrifugal Stainless Steel Pump; Bore 150φ Cap. 2,500l/min Head 15m Motor 11Kw (3φ-415V-50Hz), Common Base, Concrete Foundation, Pressure Gauge, Anchor Bolts, Finish Painting, Including Complete Installation	2	No.			
2.	Sea Water Supply System					
A.	Polyvinylchloride Vent Pipe Including Pipe Fittings, Supports, Hangers, Sleeves, Pipe Installation, Cleaning and Tests					
	a. 200mm Diameter	48	m			
B.	Gate Valve; 200mm Diameter Flanged, PVC Body, w/Comp. Flanges, Bolts, Packing, Including Installation	9	No.			
C.	Check Valve; 200mm Diameter Flanged, PVC Body, w/Comp. Flanges, Bolts, Packing, Including Installation	4	No.			
		6	No.			
		5/10				

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR-9	<u>SEA WATER SYSTEM - Cont'd -</u>						
D.	Flexible Joint; 200mm Diameter Flanged, PVC Body, w/Comp. Flanges, Bolts; Packing, Including Installation	6	Nos.				
	To collection						
		5/11					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
FR-10	<u>FIRE EXTINGUISHER</u>						
1.	Carbon Dioxide (CO ₂) Extinguisher w/Comp. Wall Hanger, Including Installation	1	No...				
	Cap. 5lb.						
	To collection						
		5/12					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR-11	<u>DISTRIBUTION BOARD</u>						
1.	<p data-bbox="268 331 651 365">Distribution Board "EP2"</p> <p data-bbox="268 398 866 577">Surface mounted type, 3-phase, 4-wire, 240/415V, 50HZ, 100 amp. bus, with neutral and earthing terminals blocks, main 4P-100AF-100AT moulded case earth-leakage circuit-breaker, branches:</p> <p data-bbox="268 589 683 678">4 ea. of 3P-50AF-50AT, 1 ea. of 3P-50AF-30AT, and 1 ea. of 1P-50AF-10AT miniature circuit-breaker provide one space for 3P-50AF circuit-breaker.</p> <p data-bbox="387 1843 595 1877">To collection</p>	.1	No.				
		5/13					

Item	Description	Quantity	Unit	Unit	Rate	Total	
				DH.	Fils	DH.	Fil
FR-12	<u>MOTOR CONTROL EQUIPMENT</u>						
1.	Wall mounted type, across the line voltage motor starter in dust-tight metal enclosure, with control transformer, hand-off-auto selector switch; for 3-phase 415 volts, 11 kw. pump motor.	4	No.				
2.	Water level control relay cabinet consisting of low limit cut-off relays, high and low water level control relays; individual relay shall be completely enclosed by plastic case and all connections shall be made through sockets prewired at the factory, and cabinet shall be dust-tight type, with 240V-110V, control transformer, and automatic alternating relay.	1	No.				
3.	Level control floatless electrode complete with holder and control wires in metal conduit;						
	a. 2 electrodes type.	2	No.				
	b. 3 electrodes type.	3	No.				
	To collection						
		5/14					

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fils
FR-13	<u>LIGHTING FITTINGS</u>						
1.	Type "A2" Fluorescent lighting fitting industrial type with reflector surface mounted, for 2-40 watts lamps. Control gear shall be high power factor, rapid start type.	2	No.				
	To collection						

Item	Description	Quantity	Unit	Unit DH.	Rate Fils	Total DH.	Total Fil
FR-14	<u>CABLES AND FITTINGS</u>						
1.	Cables p.v.c. insulated 1000V;						
	a. 1.5 sqmm.	40	M				
	b. 2.5 sqmm.	10	M				
	c. 10 sqmm.	150	M				
	6 sqmm.	50	M				
2.	Conduit p.v.c. heavy duty;						
	a. 19 mm ϕ .	50	M				
	b. 25 mm ϕ .	50	M				
3.	Outlet box p.v.c. provided with lighting fitting mounting reinforcement.	2	No.				
4.	Socket-outlet, 3-pin 13 amp. type with box, cover plate, and male plug.	1	No.				
5.	Wall switch single pole 5 amp. with box and cover plate.	1	No.				
6.	Draw box p.v.c. weatherproof type 150 mm sq. 50 mm deep.	1	No.				
7.	Motor connection work with oil-tight flexible conduit and connectors.	4	No.				
8.	Earthing work	1	LS				
9.	Miscellaneous materials and work.	1	LS				
	To collection						
		5/16					