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GOVERNMENT OF PAKISTAN
PORT QASIM AUTHORITY

TENDER AND CONTRACT DOCUMENTS

**FOR CONSTRUCTION OF
LIGHT HOUSE**

VOL. III : BILL OF QUANTITIES

DECEMBER 1975

JAPAN INTERNATIONAL COOPERATION AGENCY

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VOL. III : BILL OF QUANTITIES

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JAPAN INTERNATIONAL COOPERATION AGENCY

国際協力事業団		
受入 月日	'87. 6. 24	117
		72.8
登録 No.	08703	SD

GENERAL INFORMATION
ON BILL OF QUANTITIES

1. VOLUME I, Parts 1 through 5 and VOLUME II, proceeding this Bill of Quantities contain provisions and requirements essential to this Bill of Quantities; and this Bill of Quantities shall be read and interpreted only in conjunction with said documents.
2. Reference is specifically directed to the following clauses of the General Conditions of the CONTRACT, VOLUME I, Part 3.
 - G.C. 12 Sufficiency of the Tender, unit prices
Basic rate of Exchange and currency clause.
 - G.C. 51 Alterations, Additions and Omissions.
 - G.C. 52 Valuation of variations, Daywork and claims.
 - G.C. 55 Quantities Stated in the individual Bill of
Quantities.
 - G.C. 56 Works to be measured.
 - G.C. 57 Method of measurements.
 - G.C. 58 Provisional and Alternative Items and items
for contingencies.
3. Descriptions of items in the Bill of Quantities are for identification purposes only. Refer to drawings and specifications for scope and each item.
4. Items which are not listed under Pay Item shall be considered as incidental or integral with Pay Items listed in the Bill of Quantities.
5. In items, for which only a lump sum price is to be given, the sums are to be inserted only in the columns for "Item Price". The columns for "Schedule Rate" must be left open. They have therefore already been lined out thus _____ in the applicable places of the printed documents.
6. All units herein used are of the metric system, unless otherwise expressly stated.
7. The following abbreviations are used in the Schedule:

Lin. m.	Linear meter
Sq. m.	Square meter
Cu. m.	Cubic meter

kg. Kilogramme

PAK. Rs. Pakistan Rupees

8. For the purpose of this Bill of Quantities, 1 Ton = 1,000 kilogrammes.
9. Quantities of material wasted or disposed of in a manner not called for under the contract; or rejected loads of material, including material rejected after it has been placed by reason of the failure of the Contractor to conform to the provisions of the contract; or material not unloaded from the transporting vehicle; or material placed outside of the lines indicated on the plans or established by the Engineer; or material remaining on hand after completion of the work; will not be paid for. No compensation will be allowed for hauling and disposing of rejected material.

S U M M A R Y

ITEM OF WORKS		COST
PART I	TEMPORARY AND PREPARATORY WORKS	RS.
PART II	LIGHTHOUSE	RS.
PART III	LEADING LIGHTS	RS.
PART IV	LIGHT BEACON	RS.
PART V	LIGHTENING EQUIPMENTS	RS.
GRAND TOTAL.		RS.

BILL OF QUANTITIES

PART I

TEMPORARY AND PREPARATORY WORKS

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>PART I: TEMPORARY AND PREPARATORY WORKS</u> Installation of the construction Site and all working and storage areas and the like, inside or outside the P.Q.A. premises, required for the entire construction work described in the Specifications. The prices below contain the costs for the following and any other performances in respect to the haulage, erection and installation of all items, considered necessary for the satisfactory execution of the Works, whether or not metnion-ed hereunder.						
1.	Preparation of Working Yard All works as listed in part-2, Form of Tender, appendix "M", Works for Test Laboratory and Temporary Facilities and equipments for the Engineer, as specified in the Technical Specification.	Lump Sum	1	-			
2.	Mobilization of Constructional Machines and Plants The haulage and import of all constructional plants and machina-ries as listed in Part-2. Form of Tender appendix "B".	Lump Sum	1	-			
3.	Demobilization of Constructional Machines and Plants. This price includes the costs for the dismantling, removal and transporting away of any Construc-tional plant, Temporary Works and all other items used for the execu-tion of the Works, whether or not specifically mentioned in Item 1 and 2 above.	Lump Sum	1	-			
4.	Soil Investigation Boring and tests as specified in the Technical Specification, Division 2 Section 2B.	Lin.m	600				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>PART II: LIGHTHOUSE</u>						
	<u>DIVISION--I BUILDINGS</u>						
	<u>Section 1: Piling</u>						
1.1	Piling, precast reinforced concrete 400 mm x 400 mm x 12 m	Each	30				
	Sub Total:						
	<u>Section 2: Earth Work</u>						
2.1	Excavation	Cu.m	577.8				
2.2	Backfill with compaction	Cu.m	407.1				
2.3	Disposal of soil (in site)	Cu.m	170.7				
2.4	Compaction of rubble fill under floor slab and foundation	Cu.m	51.7				
2.5	Sand fill	Cu.m	10.2				
2.6	Retaining, sheet pile 2,700 mmH	Lin.m	13.3				
	Sub Total:						
	<u>Section 3: Concrete Work</u>						
3.1	Concrete, leveling, class-C in place top of compacted fill	Cu.m	20.0				
3.2	Light weight concrete	Cu.m	20.9				
3.3	Reinforced concrete, Class-A (Fc = 240 kg/cm ²)	Cu.m	347.7				
3.4	Form	sq.m	677.4				
3.5	Circular form	sq.m	1418.2				
3.6	Reinforcing steel bars deformed 10 mm dia to 25 mm dia	Ton	27.6				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>Section 4: Masonry</u>						
4.1	Mosaic tile (External Wall)	sq.m	655.5				
4.2	Brick masonry	sq.m	16.2				
4.3	Mosaic tile (Floor)	sq.m	9.0				
4.4	Glazed ceramic tile (Wall)	sq.m	23.4				
	Sub Total:						
	<u>Section 5: Miscellaneous Metal</u>						
5.1	Steel pipe	Ton	5.5				
5.2	Shape steel	Ton	1.4				
5.3	Steel plate	Ton	6.0				
5.4	Bolt	Ton	0.1				
5.5	Process and assembly	Ton	13.0				
5.6	Drain P.V.C. pipe 100 ϕ	Lin.m	6.0				
5.7	Roof drain 100 mm ϕ	Each	2				
5.8	Stainless steel ladder rungs 350 mm W x 4,200 mm H Ladder: Stainless steel pipe 27mm ϕ Post : Ditto 34mm	Each	1				
5.9	Steel ladder rungs 350 mm x 3,900 mm Ladder: Bar 19 mm ϕ Post : FB 50 mm x 9 mm	Each	1				
5.10	Stainless steel gangway 350 mm W Stainless steel bar 22 mm ϕ	Each	5				
5.11	Roof hatch cover (stainless steel waterproofed) 600 mm ϕ	Each	1				
5.12	Ditto 500 mm ϕ	Each	5				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
5.13	Stainless steel handrail 800 mm handrail: stainless steel pipe 34 mm ϕ baluster: stainless steel pipe 27 mm ϕ post : stainless steel pipe 34 mm ϕ	Lin.m	25.1				
5.14	Steel handrail 1000 mm handrail: pipe 42.7 mm ϕ baluster: pipe 34 mm ϕ	Lin.m	98.3				
5.15	Coat hook: stainless steel	Each	3				
5.16	Drain: Vinyl Chloride Pipe(P.V.C.) 34 mm ϕ x 400 mm	Each	4				
5.17	Overflow: stainless steel pipe 100 mm ϕ x 1000 mm	Each	3				
5.18	Ceiling suspension System consists of light-weight steel channels, clamps rods, runners and nailers	sq.m	76.6				
5.19	Light-Weight steel wall screen 100 mm	sq.m	9.3				
5.20	Hook for gas cylinder steel bar 16 mm ϕ	Each	12				
5.21	Chain for gas cylinder steel bar	Lin.m	12.0				
5.22	Shelf 400 mm x 600 mm steel plate 0.8 mm thickness	Each	1				
5.23	Partition (Top joint) stainless steel	Lin.m	2.2				
5.24	Screen (For wall) stainless steel	Each	8				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>Section 6: Moisture Protection</u>						
6.1	Water-proofing sheet	sq.m	237.2				
6.2	Caulking (Roof) 10 mm x 10 mm	Lin.m	150.7				
6.3	Expansion joint 20 mm thick	Lin.m	116.5				
6.4	Mortar fill for fittings	Lin.m	104.0				
	Sub Total:						
	<u>Section 7: Doors, Windows and Frames</u>						
7.1	Stainless steel double swing door Type - SD/1 1,600 mm x 2,450mm	Set	1				
7.2	Stainless steel single swing door Type - SD/2 500 mm x 850 mm	Set	2				
7.3	Stainless steel swing window with screen Type - SW/1 500 mm x 1,000 mm	Set	6				
7.4	Ditto, but Type - SW/2 500 mm x 1,000 mm	Set	4				
7.5	Stainless steel fixed sash window Type - SW/3 500 mm x 750 mm	Set	9				
7.6	Stainless steel single casement window Type - SW/4 500 mm x 1,000 mm	Set	1				
7.7	Stainless steel louver Type / STG/1 500 mm x 500 mm	Set	2				
7.8	Steel single swing door Type - SD/3 800 mm x 2,000 mm	Set	5				
7.9	Wooden single swing door Type / WD/1 700 mm x 2,000 mm	Set	1				
7.10	Ditto, but Type - WD/2 600 mm x 1,850 mm	Set	1				
7.11	Ditto, but Type - WD/3 800 mm x 2,000 mm	Set	1				
7.12	Glass and glazing 3 mm thick polished plate glass	sq.m	0.5				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
7.13	Glass and glazing 4.5 mm thick figured glass	sq.m	0.1				
7.14	Ditto, but 6.8 mm thick wired plate glass	sq.m	8.1				
7.15	Ditto, but 10 mm thick tempered glass	sq.m	3.2				
	Sub Total:						
	<u>Section 8: Finishes Exterior</u>						
8.1	Water proof mortar steel trowel (Roof)	sq.m	180.8				
8.2	Ditto, but (Wall)	sq.m	44.3				
8.3	Ditto, but (Eaves)	sq.m	3.8				
8.4	Ditto, but (Coping)	sq.m	44.7				
8.5	Cem mortar steel trowel (Floor)	sq.m	168.3				
8.6	Ditto, but (Ceiling)	sq.m	3.8				
8.7	Leveling mortar steel trowel (Roof)	sq.m	168.8				
8.8	Oil painting finish, to metal surfaces	sq.m	372.8				
8.9	Vent pipe p.v.c. 50 ϕ 400 mm L	Each	32				
8.10	Drain pipe p.v.c. 100 mm ϕ	Each	2				
	Sub Total:						
	<u>Interior</u>						
8.11	Mortar: Steel trowel (Floor)	sq.m	126.3				
8.12	Water proof mortar. Steel (Floor) trowel	sq.m	44.7				
8.13	Leveling mortar: Steel (Floor) trowel	sq.m	33.3				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
8.14	Mortar: Steel trowel 100 mm	Lin.m	118.0				
8.15	Water proof mortar: steel trowel (Wall)	sq.m	67.2				
8.16	Leveling mortar: Steel trowel (Wall)	sq.m	35.1				
8.17	Plaster (Wall)	sq.m	232.0				
8.18	Oil painting finish to wood surfaces	sq.m	15.1				
8.19	Interior vinyl paint finish to mortar surface	sq.m	13.9				
8.20	Interior vinyl paint finish to board surface	sq.m	95.2				
8.21	Interior sprayed vinyl paint finish to concrete surface	sq.m	656.6				
8.22	Asbestos cement board 6 mm thick (Wall)	sq.m	18.6				
8.23	Ditto, but 6 mm thick (Ceiling)	sq.m	76.6				
8.24	Styro foam 25 mm thick	sq.m	122.7				
8.25	Fitting wooden frame 200 mm	Lin.m	7.0				
8.26	Neoprene	Lin.m	60.0				
	Sub Total:						
	<u>Section 9: Specialties</u>						
9.1	Door rubber mat 1,400 mm x 600 mm	Each	1				
	Sub Total:						
	<u>Section 10: Fencing</u>						
10.1	Foundation excavation	Cu.m	14.8				
10.2	Backfill with compaction	Cu.m	13.2				
10.3	Disposal of soil (in site)	Cu.m	1.6				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
10.4	Compaction of rubble fill under floor slab and foundation	Cu.m	0.6				
10.5	Leveling concrete	Cu.m	0.3				
10.6	Reinforced concrete, Class C (Fc = 180 kg/cm ²)	Cu.m	2.8				
10.7	Form	sq.m	55.1				
10.8	Reinforcing steel plain bar 6 mm dia.	Ton	0.13				
10.9	Handrail steel pipe 50 mm ϕ	Lin.m	212.0				
10.10	Oil painting finish to steel pipe	sq.m	33.3				
10.11	Mortar finish	Each	106				
	Sub Total:						
	Section II: Jetty						
11.1	Disposal of soil (in site)	Cu.m	384				
11.2	Armour stone	Cu.m	33				
11.3	Concrete (Fc = 180 kg/cm ²) Class C	Cu.m	55				
11.4	Form	sq.m	310				
11.5	Reinforcing steel bars deformed 13 mm ϕ	Ton	5.0				
11.6	Mooring Bitt Steel pipe 318.5 mm ϕ x 6.9 mm x 500 mm L Anchor bar 22 mm ϕ x 760 mm	Each	3				
11.7	Mooring ring Steel bar 32 mm ϕ x 600 mm	pcs	6				
11.8	Wooden fender 1,500 mm x 3,500 mm	pcs	7				
11.9	Concrete pile L = 13,000 mm L = 10,000 mm L = 7,000 mm	Nos. of pile	8 14 2				
11.10	Galvanized steel water pipes 50 mm dia	Lin.m	110				
11.11	Joints for service and supporting metals for service water pipes	Lump sum	1	-			

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	Sub Total:						
	<u>Section 12: Access Road (1.5 m width)</u>						
12.1	Foundation excavation	Cu.m	910				
12.2	Disposal of soil (in site)	Cu.m	910				
12.3	Compaction 200 mm thick	sq.m	3,036				
12.4	Concrete depositing 100 mm thick	sq.r.	3,036				
	Sub Total:						
	<u>DIVISION-2 ELECTRIC FACILITIES</u>						
	<u>Section 1: Electrical Equipment Work</u>						
1.1	600 V polyvinyl chloride insulated wire 2.0 mm	Lin.m	380				
1.2	600 V bridging polyethylen chloride insulated and polyvinyl chloride Sheathed cable 2 ^c - 3.5 mm	Lin.m	17				
1.3	Ditto, but 3 ^c - 3.5 mm	Lin.m	18				
1.4	600 V polyvinyl chloride sheathed cable (Control cable) 3 ^c - 1.25 mm	Lin.m	50				
1.5	600 V rubber - covered insulated chlorene cabtyre cable 2 ^c - 3.5 mm	Lin.m	5				
1.6	Polyvinyl chloride conduit tube 16 mm	Lin.m	220				
1.7	Ditto, but 22 mm	Lin.m	15				
1.8	Polyvinyl chloride conduit tube with accessories	Lump sum	1				
1.9	Outlet box (PVC)	pcs	26				
1.10	Concrete box (PVC)	pcs	7				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
1.11	Switch box (PVC)	pcs	8				
1.12	Diesel generator 1 ϕ 220 V 4.4 KVA 10.5 HP Single phase	Unit	2				
1.13	Control Switch NFB (No Fuse breaker) 2 P 50 AF/22 AT x 1 inclusive of steel box	pcs	2				
1.14	Ceiling light 1 L - 40 W	Set	7				
1.15	Bracket light 1 L - 20 W	Set	8				
1.16	Socket - Outlet 2P 220 15A	pcs	10				
1.17	Socket - Outlet 3p 220V 20A	pcs	2				
1.18	Toggle switch	pcs	8				
1.19	Flush stainless steel plate	pcs	24				
1.20	Earth bar 10 ϕ - 1,500 mm (bearing lead wire)	sum	2				
1.21	Earth terminal	pcs	2				
1.22	Attachment plug 2P 220 15A	pcs	2				
1.23	Cup contact anemometer and event counter	Set	1				
1.24	Wall exhaust fan No. 1 300 mm ϕ 1 ϕ -220V-50HZ	Unit	1				
1.25	Wall exhaust fan No. 2 200 mm ϕ 1 ϕ -220V-50HZ	Unit	1				
	Sub Total:						
	Section 2: Air Conditioning						
2.1	Room Air Conditioner wall mounted self contained cooling 3150 Kcal/Hr Moisture removal 2.0 liter/Hr 1 ϕ 220V 50HZ 1.6KW	Unit	2				
2.2	Drain pipe and accessories	Lump Sum	1	—			
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paiza	RS.	Paiza
	<u>Section 3: Lightening rod equipment work</u>						
3.1	Conductor (Copper Cable) 2.0 mm x 13	Lin.m	50				
3.2	Connection terminal with box	pcs	1				
3.3	Testing terminal with box	pcs	1				
3.4	Indication plate (BSP)	pcs	1				
3.5	Polyvinyl chloride conduit tube 28 mm	Lin.m	45				
3.6	Copper plate 1.6 mm x 900 mm x 900 mm	pcs	1				
3.7	Earth bar 14 mm ϕ x 1,500 mm	pcs	6				
3.8	Lead terminal of earth bar	pcs	3				
	Sub Total:						
	<u>DIVISION-3 WATER SUPPLY, SANITARY FACILITIES AND GAS PIPINGS</u>						
	<u>Section 1: Water supply equipment</u>						
1.1	Kitchen, stainless steel sink L = 1,600 mm	Set	1				
1.2	Ditto, work table L = 600 mm	Set	1				
1.3	Ditto, gas table L = 600 mm	Set	1				
1.4	Galvanized steel pipe 50 ϕ mm dia.	Lin.m	69				
1.5	Ditto 32 ϕ mm dia	Lin.m	27				
1.6	Ditto 25 ϕ mm dia	Lin.m	2				
1.7	Ditto 20 ϕ mm dia	Lin.m	47				
1.8	Accessories of pipe	Lump Sum	1				
1.9	Sluice valve	Lump Sum	1				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paiza	RS.	Paiza
1.10	Check valve	Lump Sum	1	-			
	Sub Total:						
	<u>Section 2: Water discharge and ventilation equipment work</u>						
2.1	P.V.C. 150 ϕ mm dia	Lin.m	7				
2.2	Ditto 125 ϕ mm dia	Lin.m	16				
2.3	Ditto 100 ϕ mm dia	Lin.m	25				
2.4	Ditto 75 ϕ mm dia	Lin.m	5				
2.5	Ditto 50 ϕ mm dia	Lin.m	36				
2.6	Ditto 40 ϕ mm dia	Lin.m	5				
2.7	Accessories of pipe	Lump Sum	1	-			
2.8	Air purge 50 ϕ mm dia	pcs	3				
2.9	Catch basin	Lump Sum	1	-			
2.10	Drainage catch basin 360 mm x 360 mm	Lump Sum	1	-			
2.11	Discharged water catch basin 360 mm x 360 mm D.W.C.B.	Lump Sum	1	-			
2.12	Pervious cesspool 1,900 ϕ mm x 5,400 mm	Lump Sum	1	-			
	Sub Total:						
	<u>Section 3: Sanitary</u>						
3.1	Water closet No. 1	lot	1				
3.2	Urinal No. 1	lot	1				
3.3	Lavatory No. 1	lot	1				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
3.4	Labatory No. 2	lot	1				
3.5	Metal sheet 457 mm x 127 mm	pcs	2				
3.6	Mirror 363 mm x 455 mm - 5 mm thick	pcs	3				
3.7	Liquid soap holder 350 cc	pcs	1				
3.8	Shower	lot	2				
3.9	Flexible faucet	pcs	2				
3.10	Manhole with cast iron lid	pcs	2				
3.11	Floor drain metal	pcs	1				
3.12	Cleanout hole 80 ϕ mm dia	pcs	1				
3.13	Ditto, but 50 ϕ mm dia	pcs	2				
3.14	Manual water pump 50 ϕ mm dia	unit	1				
3.15	Ditto, but septic tank (For eight persons)	unit	1				
	Sub Total:						
	<u>Section 4: Water level equipment work (Air purge)</u>						
4.1	Copper pipe 6 ϕ mm dia	Lin.m	88				
4.2	Accessories of pipe	Lump Sum	1				
4.3	PVC pipe 40 ϕ mm dia	Lin.m	44				
4.4	Air purge gage with accessories	unit	3				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>DIVISION-4 GAS PIPING</u>						
	<u>Section 1: Acetylene gas piping equipment work</u>						
1.1	Copper pipe 10 ϕ mm dia	Lin.m	33				
1.2	Accessories of pipe	Lump Sum	1	—			
	Sub Total:						
	<u>Section 2: Propane gas piping equipment work</u>						
2.1	Copper pipe 10 ϕ mm dia.	Lin.m	3				
2.2	Accessories of pipe	Lump Sum	1	—			
2.3	Gasket of faucet	pcs	1				
2.4	Pressure regulator	lot	1				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>PART III LEADING LIGHTS</u>						
	<u>DIVISION-1 BUILDING (FRONT LEADING LIGHTS)</u>						
	<u>Section 1: Piling</u>						
1.1	Piling, precast reinforced concrete 400 mm x 12 mm	Nos. of pile	4				
	Sub Total:						
	<u>Section 2: Earth Work</u>						
2.1	Excavation	Cu.m	47.5				
2.2	Backfill with compaction	Cu.m	30.2				
2.3	Disposal of soil (in site)	Cu.m	17.3				
2.4	Compaction of rubble fill under floor slab and foundation	Cu.m	1.5				
2.5	Retaining sheet pile 1,900 mm	Cu.m	20.0				
2.6	Dewatering	Lump Sum	1				
	Sub Total:						
	<u>Section 3: Concrete Work</u>						
3.1	Concrete, leveling, class - C in place top of compacted fill	Cu.m	0.5				
3.2	Light weight concrete	Cu.m	0.2				
3.3	Reinforced concrete, Class A (Fc = 240 kg/cm ²)	Cu.m	43.9				
3.4	Form	sq.m	65.6				
3.5	Circular form	sq.m	61.6				
3.6	Reinforcing steel bars deformed 10 mm ϕ to 22 mm ϕ	Ton	1.50				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>Section 4: Miscellaneous Metal</u>						
4.1	Stainless steel handrail 750 mm H	Lin.m	7.5				
	Handrail: Stainless steel pipe 34 mm ϕ						
	Baluster: Ditto 27 mm ϕ						
	Post : Ditto 34 mm ϕ						
4.2	Stainless steel handrail 600 mm H	Each	2				
	Stainless steel pipe 34 mm ϕ						
4.3	Roof hatch 600 mm ϕ	Each	2				
	Stainless steel waterproofed						
4.4	Hook: Stainless bar 22 mm ϕ	Each	8				
4.5	Hook for gas cylinder	Each	18				
	Steel bar 16 mm ϕ						
4.6	Chain for gas cylinder	Lin.m	22.4				
	Steel bar						
4.7	Stainless steel ladder	Each	1				
	350 mm x 1,300 mm						
	Ladder: Stainless steel pipe 27 mm ϕ						
	Post : Ditto 34 mm ϕ						
4.8	Steel ladder 350 mm x 2,600 mm	Each	1				
	Post : FB 50 mm						
	Ladder: Steel bar 19 mm ϕ						
4.9	Hook: steel bar 19 mm ϕ	Each	1				
	Sub Total:						
	<u>Section 5: Moisture Protection</u>						
5.1	Caulking (roof)	Lin.m	3.8				
	10 mm x 10 mm						
	Sub Total:						
	<u>Section 6: Finishes Exterior</u>						
6.1	Water proof mortar	sq.m	9.4				
	steel trowel (Lantern Deck)						
6.2	Concrete steel trowel (floor)	sq.m	15.4				
6.3	Oilpainting finish, to metal Surfaces	sq.m	3.4				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
6.4	Vinyl paint finish to mortar Surface	sq.m	48.0				
6.5	Vent pipe: pvc 50 mm ϕ	Each	4				
	Sub Total:						
	<u>Interior</u>						
6.6	Water proof mortar steel trowel (floor)	sq.m	8.5				
6.7	Ditto (100 mm H)	Lin.m	14.6				
6.8	Ditto (Coping)	sq.m	0.9				
6.9	Ditto (Wall)	sq.m	23.3				
6.10	Ditto (Ceiling)	sq.m	8.5				
	Sub Total:						
	<u>DIVISION-2 GAS PIPING</u>						
	<u>Section 1: Acetylene gas piping equipment Work</u>						
1.1	Copper pipe 10 ϕ mm dia	Lin.m	5				
1.2	Accessories of pipe	Lump Sum	1				
	Sub Total:						
	<u>DIVISION-3 BUILDING (REAR LEADING LIGHTS</u>						
	<u>Section 1: Piling</u>						
1.1	Piling, reinforced concrete 400 mm x 12 m	Nos. of piling	9				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>Section 2: Earth Work</u>						
2.1	Excavation	Cu.m	178.2				
2.2	Backfill with compaction	Cu.m	114.7				
2.3	Disposal of soil (in site)	Cu.m	63.5				
2.4	Compaction of rubble fill under floor, slab and foundation	Cu.m	8.1				
2.5	Sand fill	Cu.m	10.9				
2.6	Retaining sheet pile 2,200 mm	Lin.m	36.0				
	Sub Total:						
	<u>Section 3: Concrete Work</u>						
3.1	Concrete, leveling, class-C in place top of compacted fill	Cu.m	3.7				
3.2	Light weight concrete	Cu.m	0.9				
3.3	Reinforced concrete, class-A (Fc = 240 kg/cm ²)	Cu.m	95.8				
3.4	Form	sq.m	166.3				
3.5	Circular form	sq.m	337.1				
3.6	Reinforcing steel bars deformed 10 mm ϕ to 19 mm ϕ	ton	6.48				
	Sub Total:						
	<u>Section 4: Masonry</u>						
4.1	Mosaic tile (Wall)	sq.m	234.0				
4.2	Brick masonry	sq.m	0.9				
	Sub Total:						
	<u>Section 5: Miscellaneous Metal</u>						
5.1	Stainless steel handrail 900 mm	Lin.m	10.4				
	Handrail: Stainless steel pipe 34 mm ϕ						
	Baluster: Ditto 27 mm ϕ						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	Post : Ditto 34 mm ϕ						
5.2	Stainless steel handrail 900 mm Stainless steel pipe 34 mm ϕ	Each	2				
5.3	Steel handrail 1.000 mm	Lin.m	9.0				
5.4	Steel ladder 350 mm Post : FB 5.0 mm x 9.0 mm Ladder: Bar 19 mm ϕ 5.600 mm long	Each	2				
5.5	Ditto, but 4.500 mm long	Each	2				
5.6	Ditto, but 4.000 mm long	Each	3				
5.7	Roof hatch 600 mm ϕ Stainless steel water proofed	Each	1				
5.8	Hook for gas cylinder Steel bar 16 mm ϕ	Each	18				
5.9	Chain for gas cylinder Steel bar	Lin.m	20.6				
5.10	Angle for gas cylinder L-50 x 50 x 4 x 2.400 mm	Each	4				
5.11	Steel pipe for gas cylinder 50 mm ϕ x 2.350 mm	Each	1				
5.12	Entrance frame Stainless plate 1.2 mm thick x 100 mm	Lin.m	5.1				
	Sub Total:						
	<u>Section 6: Moisture Protection</u>						
6.1	Water proof sheeting	sq.m	27.7				
6.2	Caulking (roof) 10 mm x 10 mm	Lin.m	42.8				
6.3	Mortar fill for fitting	Lin.m	19.2				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>Section 7: Doors, Windows and Frame</u>						
7.1	Stainless steel single swing door Type - SD/4 800 mm x 1.700 mm	Set	1				
7.2	Stainless steel fixed sash window Type / SDY5 400 mm x 600 mm	Set	6				
7.3	Stainless steel louver 300 mm x 250 mm	Set	2				
7.4	6.8 mm thick wired plate glass	sq.m	1.4				
	Sub Total:						
	<u>Section 8: Finished Exterior</u>						
8.1	Water proof mortar Steel trowel (roof)	sq.m	26.7				
8.2	Ditto, but (coping)	sq.m	5.2				
8.3	Leveling mortar trowel (roof)	sq.m	27.7				
8.4	Mortar steel trowel (floor)	sq.m	2.4				
8.5	Oil painting finish to metal surface	sq.m	34.3				
8.6	Vent pipe pvc 50 ϕ mm dia.	Each	6				
	Sub Total:						
	<u>Interior</u>						
8.7	Water proof mortar steel trowel (floor)	sq.m	21.3				
8.8	Ditto, but (100 mm H)	Lin.m	15.5				
8.9	Ditto, but (coping)	sq.m	1.0				
8.10	Plaster (wall)	sq.m	21.2				
8.11	Plaster (Ceiling)	sq.m	6.0				
8.12	Interior, vinyl point finish to mortar surface	sq.m	0.9				
8.13	Interior sprayed vinyl point finish to concrete surface	sq.m	187.7				

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paiza	RS.	Paiza
8.14	Neoprene	Lin.m	2.2				
	Sub Total:						
	<u>DIVISION-4 GAS PIPING</u>						
	<u>Section 1: Lightening rod equipment Work</u>						
1.1	Point (Steel)	pcs	1				
1.2	Air terminal assembly	Unit	1				
1.3	Conductor (Copper cable) 2.0 mm x 13	Lin.m	40				
1.4	Connection terminal with box	pcs	1				
1.5	Testing terminal with box	pcs	1				
1.6	Indication plate (BSP)	pcs	1				
1.7	Polyvinyl chloride conduit type 28 mm	pcs	30				
1.8	Copper plate 1.6 mm x 900 mm x 900 mm	pcs	1				
1.9	Earth bar 14 mm ϕ x 1.500 mm	pcs	6				
1.10	Lead terminal of earth bar	pcs	3				
	Sub Total:						
	<u>Section 2: Acetylene gas piping equipment work</u>						
2.1	Copper pipe 10 ϕ mm	Lin.m	33				
2.2	Accessories of pipe	Lump Sum	1	—			
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>PART IV LIGHT BEACON</u>						
	<u>DIVISION-1 BUILDINGS</u>						
	<u>Section 1: Buildings</u>						
1.1	Piling, precast reinforced concrete 400 mm x 12 m	Nos. of pile	4				
	Sub Total:						
	<u>Section 2: Earth Work</u>						
2.1	Excavation	Cu.m	68.8				
2.2	Backfill with Compaction	Cu.m	45.5				
2.3	Disposal of soil (insite)	Cu.m	23.3				
2.4	Compaction of rubble fill under floor and foundation	Cu.m	3.9				
2.5	Sand fill	Cu.m	0.2				
2.6	Retaining Sheet pile 2.750 mm	Lin.m	20.0				
	Sub Total:						
	<u>Section 3: Concrete Work</u>						
3.1	Concrete, leveling class - C in place top of compacted fill	Cu.m	1.0				
3.2	Light weight concrete	Cu.m	0.1				
3.3	Reinforced concrete class - A (F = 240 kg/cm ²)	Cu.m	23.7				
3.4	Form	sq.m	46.5				
3.5	Circular form	sq.m	28.1				
3.6	Reinforcing steel bars, deformed 10 mm ϕ to 19 mm ϕ	Ton	1.19				
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>Section 4: Miscellaneous Metal</u>						
4.1	Stainless steel handrail 900 mm	Lin.m	6.1				
	Handrail stainless steel pipe 34 mm ϕ						
	Baluster: Ditto 27 mm ϕ						
	Post: Ditto 34 mm ϕ						
4.2	Stainless steel ladder 4.100 mm x 350 mm	Each	1				
	Ladder: Stainless steel pipe 27 mm ϕ						
	Post: Ditto 34 mm ϕ						
4.3	Stainless steel Hook Stainless steel bar 16 mm ϕ	Each	1				
4.4	Stainless steel chain,	Lin.m	0.7				
4.5	Stainless steel plate 9.0 mm thick x 300 mm	Lin.m	1.9				
	Sub Total:						
	<u>Section 5: Finishes Exterior</u>						
5.1	Mortar steel trowel (Lantern deck)	sq.m	2.6				
5.2	Ditto, but (Coping)	sq.m	1.5				
5.3	Ditto, but (floor)	sq.m	17.9				
5.4	Vinyl point finish to concrete surface	Cu.m	23.7				
	Sub Total:						
	<u>DIVISION-2 GAS PIPING</u>						
	<u>Section 1: Acetylene gas piping equipment work</u>						
1.1	Copper pipe 10 mm ϕ	Lin.m	12				
1.2	Accessories of pipe	Lump Sum	1	—			
1.3	PVC pipe 50 mm ϕ	Lin.m	10				
1.4	Accessories of PVC-Pipe	Lump Sum	1	—			
	Sub Total:						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>PART V LIGHTING EQUIPMENTS, FOR LIGHTHOUSE,</u>						
	<u>LEADING LIGHTS, LIGHTED BEACON</u>						
	<u>DIVISION-1 LIGHTHOUSE</u>						
	<u>Section 1: Normal equipment</u>						
11.1	Lantern	set	1				
11.2	Optical apparatus	set	1				
11.3	Lamp changer	set	1				
11.4	Solar battery	set	1				
11.5	Alkaline battery	set	1				
	Sub Total						
	<u>Section 2: Emergency equipment</u>						
12.1	Lens lamps	set	1				
12.2	Gas cylinder	bottle	15				
12.3	Installation material	set	1				
	Sub Total						
	<u>DIVISION-2 LEADING LIGHTS</u>						
	<u>Section 1: Normal equipment</u>						
21.1	Light projector	set	2				
21.2	Solar battery	set	2				
21.3	Alkaline battery	set	2				
	Sub Total						
	<u>Section 2: Emergency equipment</u>						
22.1	Lantern	set	2				
22.2	Gas cylinder	set	2				
22.3	Installation material	set	2				
	Sub Total						

Item No.	Pay Item	Unit	Quantity (Approx.)	Schedule Rate in PAK. RS		Item Price in PAK. RS	
				RS.	Paisa	RS.	Paisa
	<u>DIVISION-3 LIGHTED BEACON</u>						
3.1	Lantern	set	17				
3.2	Flasher	set	17				
3.3	Gas cylinder	set	68				
3.4	Glass cylinder	pcs	17				
3.5	Installation material	set	17				
3.6	Spare parts	set	1				
	Sub Total						
	<u>DIVISION-4 SUPERVISION AND TRAINING</u>						
		1					

