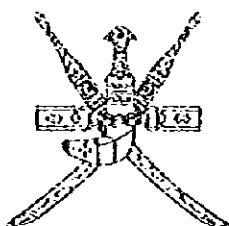


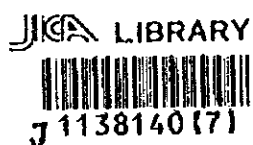
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MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF ROADS



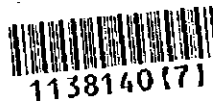
**CONSTRUCTION OF
PEDESTRIAN UNDERPASS
AT
AL QARAT
BATINAH HIGHWAY**

TENDER DOCUMENTS

BILL OF QUANTITIES



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| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 1 - PRELIMINARIES | | | | | |
|---|---|----------|-----------------------|-----------|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. | Bz |
| | SECTION 100 PRELIMINARIES | | | | |
| | 101 Bonds and Insurance | | | | |
| 101.1 | Performance Bond (Clause 10 of Standard Conditions of Contract) | lump sum | | | |
| 101.2 | Insurance of the Works (Clause 21 of Standard Conditions of Contract) | lump sum | | | |
| 101.3 | Damage to Persons and Property (Clause 22 of Standard Condition of Contract) | lump sum | | | |
| 101.4 | Third Party Insurance (Clause 23 of Standard Conditions of Contract) | lump sum | | | |
| 101.5 | Accident or injury to Workmen (Clause 24 of Standard Condition of Contract) | lump sum | | | |
| 1-1 | | | Carried to summary | | 4000.000 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 1 - PRELIMINARIES

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|--|-------|--------------------|--------------------|----|----------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| | 104 Facilities for the Engineer | | | | | | |
| 104.1 | Provision of Engineer's office (Type A, 1 unit x 8) | month | 7 | 250.000 | | 1750.000 | |
| 104.2 | Maintenance of Engineer's office (Type A, 1 unit x 8) | month | 7 | 150.000 | | 1050.000 | |
| 104.3 | Provision of surveying instruments | month | 7 | 300.000 | | 2100.000 | |
| 104.4 | Maintenance of surveying instruments | month | 7 | 150.000 | | 1050.000 | |
| 104.5 | Provision of Engineer's accommodation | | | | | | |
| | (i) Resident Engineer's accommodation (Type B, 2 unit x 7) | month | 14 | 250.000 | | 3500.000 | |
| | (ii) Engineer's accommodation (Type C, 1 units x 8) | month | N/A | 150.000 | | | |
| | (iii) Engineer's accommodation (Type B, 1 unit x 8) | month | N/A | 250.000 | | | |
| | (iv) Dining/Kitchen (Type D, 1 unit x 8) | month | N/A | 250.000 | | | |
| 1-2 | | | | Carried to summary | | 9450.000 | |

**CONSTRUCTION OF PEDESTRIAN UNDERPASS AT
AL QARAT
BILL OF QUANTITIES
BILL 1 - PRELIMINARIES**

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|--|-----------|--------------------|--------------------|----|----------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| 104.6 | Maintenance of Engineer's accommodation | | | | | | |
| | (i) Resident Engineer's accommodation (Type B, 2 unit x 8) | month | 16 | 150.000 | | 2400.000 | |
| | (ii) Engineer's accommodation (Type C, 1 unit x 8) | month | N/A | 250.000 | | | |
| | (iii) Engineer's accommodation (Type B, 1 unit x 8) | month | N/A | 150.000 | | | |
| | (iv) Dining/Kitchen (Type D, 1 unit x 8) | month | N/A | 250.000 | | | |
| 104.9 | Sampling and Testing where no site laboratory is provided | month | 7 | 80.000 | | 560.000 | |
| 104.10 | In situ soil bearing capacity tests | n.r. | 3 | 20.000 | | 60.000 | |
| 104.11 | Sub-soil investigation by specialist Contractor | prov. sum | | 200.000 | | 200.000 | |
| 1-3 | | | | Carried to summary | | 3220.000 | |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 1 - PRELIMINARIES | | | | | |
|---|--|-----------|--------------------|--------------------|-----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount |
| | 105 Assistance for Engineer | | | | |
| 105.1 | Laborers to assist the Engineer (no x months) | man month | N/A | | |
| | 106 Contractor's Compound | | | | |
| 106.1 | Mobilization and demobilization of Contractor's facility | lump sum | | | |
| 106.2 | Maintenance of Contractor's facility | month | 7 | 500.000 | 3500.000 |
| | 107 Maintenance and Protection of Traffic | | | | |
| 107.1 | Maintenance and protection of traffic | lump sum | 8 month | | 10000.000 |
| 107.2 | Extra over item 107.1 for supply and compaction of subbase on diversions where ordered by the Engineer (10 cm. thick) | cu. m. | rate only | 2.000 | |
| 107.3 | Extra over item 107.1 for supply and compaction of bituminous basecourse on diversions where ordered by the Engineer (3 cm. thick) | cu. m. | rate only | 3.000 | |
| 1-4 | | | | Carried to summary | 13500.000 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 1 - PRELIMINARIES

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---|---|----------|--------------------|-----------|--------------------|--------|---------|
| | | | | R.O. | Bz | R.O. | Bz |
| 108 Progress Photographs | | | | | | | |
| 108.1 | Provision of negatives and 5 sets of photographs (14 photos max.) (Mountable-Size 100 x 150 mm.) | month | 7 | | 30.000 | | 210.000 |
| 109 Sign Boards | | | | | | | |
| 109.1 | Provision, erection, moving and maintenance of signboard (Wooden Type) | n.r. | N/A | | 300.000 | | |
| 110 Commemoration Plaque and Opening Ceremony | | | | | | | |
| 110.1 | Supply and erection of commemoration plaque (Optional) | n.r. | N/A | | | | |
| 110.2 | Opening ceremony (Optional) | lump sum | | | | | |
| | | | | 1-5 | Carried to summary | | 210.000 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 1 - PRELIMINARIES

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|--|----------|--------------------|-----------|--------------------|--------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| 115.1 | 115 Compliance with the Tender Documents Allow for all costs and expense for complying with all the conditions and requirements stipulated in the Tender Documents, including all Clause of the Standard Conditions of Contract, which the Tenderer considers have financial implications on his tender and which are not covered separately in the various pay items of the Bill of Quantities | | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | Clause No | lump sum | | | | | |
| | | | | 1-6 | Carried to summary | | |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 2 - EARTHWORKS | | | | | |
|--|---|--------|--------------------|--------------------|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount |
| | 202 Removal of Structures and Obstructions | | | | |
| 202.1 | Removal of Pavement (t=10 cm) | cu.m | 88 | 2.000 | 176.000 |
| 202.2 | Removal of Existing Guardrail | m | 23 | 1.800 | 41.400 |
| 202.3 | Removal of Curb Stone | m | 20 | 1.500 | 30.000 |
| | 206 Excavation and Backfilling for Structures | | | | |
| 206.1 | Structure excavation in soils to a depth of 2m | cu. m. | 1462 | 1.000 | 1462.000 |
| 206.2 | Structure excavation in soils to a depth more than 2m | cu. m. | 975 | 1.700 | 1657.500 |
| 206.3 | Structural excavation in rock to a depth of 2m | cu. m. | rate only | 2.100 | |
| 206.4 | Structural excavation in rock to a depth more than 2m | cu. m. | rate only | 2.600 | |
| 206.5 | Extra over 206.1,2,3,4 for excavation under water | cu. m. | rate only | 2.900 | |
| 2-1 | | | | Carried to summary | 3366.900 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 2 - EARTHWORKS | | | | | | |
|--|---------------------|------|-----------------------|-----------|----|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount |
| | | | | R.O. | Bz | R.O. |
| | SUMMARY Page 2-1 | | | | | 3366.900 |
| | | 2-2 | To Grand Summary | | | 3366.900 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 3 - GRANULAR AND STABILIZED SUBBASE, BASE COURSE, STABILIZED SUBGRADE

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|---|--------|--------------------|-----------|----|--------|---------|
| | | | | R.O. | Bz | R.O. | Bz |
| | 300 GRANULAR AND STABILIZED SUBBASE, BASECOURSE AND STABILIZED SUBGRADE | | | | | | |
| | 302 Granular Subbase | | | | | | |
| 302.1 | Granular subbase (class E) (150 mm thick) | cu. m. | 49 | 2.000 | | | 98.000 |
| | 303 Aggregate Basecourse | | | | | | |
| 303.1 | Aggregate basecourse (class B) (200 mm thick) | cu.m | 65 | 3.300 | | | 214.500 |
| | | 3-1 | Carried to summary | | | | 312.500 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 3 - GRANULAR AND STABILIZED SUBBASE, BASE COURSE, STABILIZED SUBGRADE

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|----------|-------------|------|--------------------|--------------------|----|--------|---------|
| | | | | R.O. | Bz | R.O. | Bz |
| SUMMARY | | | | | | | |
| Page 3-1 | | | | | | | 312.500 |
| | | 3-2 | | Carried to summary | | | 312.500 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 4 - BITUMINOUS PAVEMENT | | | | | | |
|---|--|--------|--------------------|--------------------|---------|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount |
| | | | | R.O. Bz | R.O. Bz | R.O. Bz |
| 400 BITUMINOUS PAVEMENT | | | | | | |
| 401 Bituminous Prime Coat and Tack Coat | | | | | | |
| 401.1 | Bituminous prime coat (MC 70) | kg | 400 | 0.250 | | 100.000 |
| 401.2 | Bituminous tack coat (RC 250) | kg | 100 | 0.300 | | 30.000 |
| 402 Bituminous Basecourse | | | | | | |
| 402.1 | Bituminous basecourse (class B) 80 mm. thick | cu.m | 26 | 22.000 | | 572.000 |
| 402.4 | Increase or decrease in bituminous content from nominal rate | kg | rate only | 0.050 | | |
| 405 Bituminous Wearing Course | | | | | | |
| 405.1 | Bituminous wearing course (class B) (T=4 cm) | cu. m. | 13 | 28.000 | | 364.000 |
| 405.2 | Increase or decrease in bitumen content from nominal rate | kg | rate only | 0.050 | | |
| 4-1 | | | | Carried to summary | | 1066.000 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 4 - BITUMINOUS PAVEMENT

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|-------------|------|--------------------|-----------|--------------------|----------|----------|
| | | | | R.O. | Bz | R.O. | Bz |
| | SUMMARY | | | | | | 1066.000 |
| | Page 4-1 | | | | | | |
| | | | | 4-2 | Carried to summary | 1066.000 | |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 5 - CONCRETE AND CONCRETE STRUCTURE

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|--|--------|--------------------|--------------------|----|-----------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| | 500 CONCRETE AND CONCRETE STRUCTURE | | | | | | |
| | 504 Concrete for Structure | | | | | | |
| 504.1 | Concrete Class 16/20 (OPC cement) Blinding | cu. m. | 46 | 22.000 | | 1012.000 | |
| 504.2 | Concrete Class A 24/20 for pedestrian underpass, canopy and stairs (including all formwork, falsework and finish | cu.m | 513 | 43.000 | | 22059.000 | |
| | 508 Pedestrian Underpass | | | | | | |
| 508.1 | Water Stop | m | 74 | 7.000 | | 518.000 | |
| 5-1 | | | | Carried to summary | | 23589.000 | |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 5 - CONCRETE AND CONCRETE STRUCTURE

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|---|------|--------------------|-----------|--------------------|-----------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| 509.1 | 509 Reinforcing Steel High yield steel bar reinforcement of any diameter | tone | 47 | 285.000 | | 13395.000 | |
| | | | | 5-2 | Carried to summary | 13395.000 | |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 6 - STRUCTURAL STEEL AND OTHER METALWORK | | | | | |
|--|---|------|-----------------------|--------------------|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | Amount |
| | | | | R.O. Bz | R.O. Bz |
| | 600 STRUCTURAL STEEL AND OTHER METALWORK | | | | |
| | 604 Handrail | | | | |
| 604.1 | Pedestrian Underpass Handrails (Mild Steel) (D=50 mm) | m | 45 | 15.000 | 675.000 |
| 604.2 | Galvanized Steel Bar for canopy (D=50 mm) | m | 59 | 11.000 | 649.000 |
| | | | | | |
| | | 6-1 | | Carried to summary | 1324.000 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 8 - DRAINAGE AND SERVICE DUCTS | | | | | |
|--|----------------------------------|-------|-----------------------|--------------------|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. | Bz |
| | 805 Water proofing for structure | | | | |
| 805.1 | Waterproofing membrane | sq.m. | N/A | 1.800 | |
| 805.2 | Mastic asphalt waterproofing | sq.m. | 519 | 8.000 | 4152.000 |
| 805.3 | Bituminous paint | sq.m. | 519 | 0.350 | 181.650 |
| | | | | Carried to summary | |
| | | | | 8-1 | 4333.650 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 8 - DRAINAGE AND SERVICE DUCTS | | | | | |
|--|-------------|------|-----------------------|--------------------|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | Amount |
| | | | | R.O. Bz | R.O. Bz |
| SUMMARY | | | | | 4333.650 |
| Page 8-1 | | | | | |
| | | 8-2 | | Carried to summary | 4333.650 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 14 - HIGHWAY SIGNS AND ROAD MARKING | | | | | |
|---|---------------------------------------|------|-----------------------|--------------------|-------------------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount R.O. Bz |
| | 1400 HIGHWAY SIGNS AND ROAD MARKING | | | | |
| | 1401 Highway Signs | | | | |
| 1401.1 | Highway sign for pedestrian underpass | n.r. | 2 | 55.000 | 110.000 |
| 14-1 | | | | Carried to summary | 110.000 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 14 - HIGHWAY SIGNS AND ROAD MARKING | | | | | | |
|---|-------------|------|-----------------------|-----------|------------------|---------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount |
| | | | | R.O. | Bz | R.O. Bz |
| | SUMMARY | | | | | |
| | Page 14-1 | | | | | 110,000 |
| | | | | 14-2 | To Grand Summary | 110,000 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES BILL 17 - UTILITIES

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|----------------|--|----------|--------------------|-----------|--------------------|--------|----------|
| | | | | R.O. | Bz | R.O. | Bz |
| 1700 UTILITIES | | | | | | | |
| 1701 Utilities | | | | | | | |
| 1701.1 | Remove carefully and relocate low voltage electric poles, telephone poles, including removal of lines, excavation, backfilling and other related works as directed by the Engineer Protect of existing utilities crossing the roadway as shown in Drawing, or as directed by the Engineer | Prov Sum | | | | | 4000.000 |
| | | | | 17-1 | Carried to summary | | 4000.000 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|--|------|-----------------------|----------------------|-------------------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate R.O. Bz | Amount R.O. Bz |
| A. WAGES | | | | | |
| | These include proper wages, all used allowance, medical expense and all other charges provided for by local laws | | | | |
| A.1 | Supervisor | hour | 10 | 4.000 | 40.000 |
| A.2 | Site Surveyor | hour | 100 | 3.500 | 350.000 |
| A.3 | Foreman | hour | 48 | 3.200 | 153.600 |
| A.4 | 1st Class Operator | hour | 48 | 1.100 | 52.800 |
| A.5 | 2nd Class Operator | hour | 10 | 0.950 | 9.500 |
| A.6 | Mechanic | hour | 19 | 1.000 | 19.000 |
| A.7 | Driver | hour | 48 | 1.000 | 48.000 |
| A.8 | Skilled Labour | hour | 100 | 0.650 | 65.000 |
| A.9 | Semi Skilled Labour | hour | 100 | 0.600 | 60.000 |
| 19-1 | | | | Carried to Summary | 797.900 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 19 - DAYWORKS

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|-----------------|------|--------------------|--------------------|----|---------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| A.10 | Ordinary Labour | hour | 100 | 0.550 | | 55.000 | |
| A.11 | Mason | hour | 100 | 0.650 | | 65.000 | |
| A.12 | Painter | hour | 100 | 0.750 | | 75.000 | |
| A.13 | Carpenter | hour | 100 | 0.650 | | 65.000 | |
| A.14 | Steel Fitter | hour | 100 | 0.650 | | 65.000 | |
| A.15 | Electrician | hour | 2 | 0.850 | | 1.700 | |
| | | | 19-2 | Carried to Summary | | 326.700 | |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 19 - DAYWORKS

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|--|------|--------------------|--------------------|--|---------|--|
| | | | | R.O. Bz | | R.O. Bz | |
| | B. OPERATING EQUIPMENT ON SITE | | | | | | |
| | These rate include : fuel and lubricants cost, charges for depreciation interest, repairs, maintenance, spare parts, tyres, insurance, etc. Payment will not be made for mechanics or maintenance time which shall be include in and spread over the rates. | | | | | | |
| B.1 | Motograder from 100 hp up to 120 hp | hour | 5 | 9.500 | | 47.500 | |
| B.2 | Motograder from 120 hp up to 150 hp | hour | N/A | 11.500 | | | |
| B.3 | Tractor from 60 to 100 hp | hour | N/A | 4.000 | | | |
| B.4 | Bulldozer with ripper from 100 hp to 150 hp | hour | 5 | 7.000 | | 35.000 | |
| B.5 | Bulldozer with ripper from 150 hp to 200 hp | hour | N/A | 8.000 | | | |
| B.6 | Bulldozer with ripper from 200 hp to 250 hp | hour | N/A | 18.000 | | | |
| B.7 | Bulldozer with ripper from 250 hp to 300 hp | hour | N/A | 19.500 | | | |
| B.8 | Wheel tractor up to 50 hp | hour | 10 | 4.000 | | 40.000 | |
| | | | | Carried to Summary | | 122.500 | |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|---|------|--------------------|--------------------|---------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount |
| B.9 | Wheel tractor over 50 hp | hour | N/A | 7,000 | |
| B.10 | Motor scraper capacity up to 18 cu.m. | hour | N/A | 19,000 | |
| B.11 | Motor scraper capacity from 18 to 24 cu.m. | hour | N/A | 19,000 | |
| B.12 | Sheeps foot roller, from 5 tonnes to 10 tonnes | hour | N/A | 5,000 | |
| B.13 | Grid roller | hour | N/A | 7,000 | |
| B.14 | Vibratory compactor with prime mover up to 5 tonnes | hour | 4 | 5,000 | 20,000 |
| B.15 | Vibratory compactor with prime mover from 5 to 10 tonnes | hour | 4 | 7,000 | 28,000 |
| B.16 | Pneumatic compactor with prime mover from 30 to 50 tonnes | hour | N/A | 7,000 | |
| B.17 | Pneumatic self-propelled rollers from 15 to 20 tonnes | hour | N/A | 4,500 | |
| B.18 | Tandem roller up to 8 tonnes | hour | 24 | 4,500 | 108,000 |
| B.19 | Tandem roller from 8 to 12 tonnes | hour | N/A | 5,000 | |
| 19-4 | | | | Carried to Summary | 156,000 |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES BILL 19 - DAYWORKS

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|---|------|--------------------|--------------------|----|---------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| B.20 | Triaxle roller from 10 to 15 tonnes | hour | N/A | 5.000 | | | |
| B.21 | Light frog-rammer 0.1 tonne | hour | N/A | 0.500 | | | |
| B.22 | Heavy frog-rammer 0.5 tonne | hour | 20 | 0.700 | | 14.000 | |
| B.23 | Wheel loader 1.2 to 1.6 cu.m. | hour | 20 | 9.500 | | 190.000 | |
| B.24 | Wheel loader 1.6 to 2.0 cu.m. | hour | N/A | 10.000 | | | |
| B.25 | Wheel loader 2.0 to 2.5 cu.m. | hour | N/A | 11.000 | | | |
| B.26 | Excavator up to 0.8 cu.m. | hour | 15 | 5.500 | | 82.500 | |
| B.27 | Excavator from 0.8 to 1.2 cu.m. | hour | N/A | 7.500 | | | |
| B.28 | Bituminous mixing plant with batching apparatus up to 80 t/h. | hour | N/A | 18.000 | | | |
| B.29 | Bituminous mixing plant with batching apparatus from 80 to 150 t/h. | hour | N/A | 23.000 | | | |
| B.30 | Finisher up to 80 t/h. | hour | 10 | 9.000 | | 90.000 | |
| 19-5 | | | | Carried to Summary | | 376.500 | |

CONSTRUCTION OF PEDESTRIAN UNDERPASS AT

AL QARAT

BILL OF QUANTITIES

BILL 19 - DAYWORKS

| Item No | Description | Unit | Estimated Quantity | Unit Rate | | Amount | |
|---------|---|------|--------------------|-----------|----|---------|----|
| | | | | R.O. | Bz | R.O. | Bz |
| B.31 | Finisher from 80 t/h to 120 t/h. | hour | N/A | 10.000 | | | |
| B.32 | Bitumen sprayer up to 6 tonnes | hour | 10 | 5.000 | | 50.000 | |
| B.33 | Tanker truck up to 6 cu.m. | hour | 15 | 5.000 | | 75.000 | |
| B.34 | Dump truck up to 10 tonnes | hour | 17 | 5.500 | | 93.500 | |
| B.35 | Dump truck from 10 to 15 tonnes | hour | N/A | 6.000 | | | |
| B.36 | Screening plant from 80 to 100 t/h. | hour | N/A | 16.000 | | | |
| B.37 | Crushing plant from 40 to 60 t/h. | hour | N/A | 20.000 | | | |
| B.38 | Crushing plant with primary and secondary from 60 to 100 t/h. | hour | N/A | 30.000 | | | |
| B.39 | Air compressor up to 6000 l/m. | hour | 15 | 1.500 | | 22.500 | |
| B.40 | Air compressor over 6000 l/m. | hour | 15 | 2.000 | | 30.000 | |
| B.41 | Mechanical broom | hour | N/A | 4.000 | | | |
| | | 19-6 | Carried to Summary | | | 271.000 | |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|--|------|--------------------|--------------------|-------------------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount R.O. Bz |
| B.42 | Power water pump | hour | N/A | 0.700 | |
| B.43 | Steel cutting machine | hour | 5 | 0.800 | 4.000 |
| B.44 | Steel bending machine | hour | N/A | 1.200 | |
| B.45 | Belt conveyor | hour | N/A | 7.000 | |
| B.46 | Concrete mixer up to 0.5 cu.m. | hour | 10 | 2.000 | 20.000 |
| B.47 | Concrete mixer over 0.5 cu.m. | hour | N/A | 4.000 | |
| B.48 | Automatic concrete batch plant without mixing drum | hour | N/A | 7.500 | |
| B.49 | Transmixer up to 5 cu.m. | hour | N/A | 6.500 | |
| B.50 | Concrete vibrators | hour | 59 | 0.150 | 8.850 |
| B.51 | Crane up to 5 tonnes. | hour | N/A | 4.500 | |
| B.52 | Crane with broom and jib 5 to 10 tonnes | hour | N/A | 8.000 | |
| 19-7 | | | | Carried to Summary | 32.850 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|--|------|--------------------|----------------------|-------------------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate R.O. Bz | Amount R.O. Bz |
| B.53 | Crane with boom and jib over 10 tonnes | hour | N/A | 11.000 | |
| B.54 | Generator 60 kw | hour | 5 | 1.500 | 7.500 |
| B.55 | Generator 75 kw | hour | N/A | 1.800 | |
| B.56 | Drilling equipment | hour | N/A | 0.200 | |
| B.57 | Generator 100 kw | hour | N/A | 3.000 | |
| B.58 | Generator 150 kw | hour | N/A | 4.000 | |
| B.59 | Generator 200 kw | hour | N/A | 5.000 | |
| B.60 | Gravel strewer | hour | N/A | 10.000 | |
| 19-8 | | | | Carried to Summary | 7.500 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|--|-------|--------------------|--------------------|--------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount |
| | C. MATERIALS | | | | |
| | These rates include all the charges for the supply of the materials, loading, transport to site, unloading and stores as well as all the charges provided for in the General and Special Specifications and in the Contract. | | | | |
| C.1 | Aggregate for granular sub-base course in accordance with the General and Special Specifications, in place as specified. | cu.m. | 5 | 1.000 | 5.000 |
| C.2 | Aggregate for granular aggregate base course in accordance with the General and Special Specifications, in place as specified. | cu.m. | 3 | 2.000 | 6.000 |
| C.3 | Aggregate for bituminous base course in accordance with the General and Special Specifications, near the asphalt plant, in bulk | cu.m. | 5 | 2.000 | 10.000 |
| C.4 | Fine aggregate for concrete, in accordance with the General and Special Specifications, in place, in bulk | cu.m. | 3 | 2.000 | 6.000 |
| C.5 | Coarse aggregates for concrete, in accordance with the General and Special specifications, in place, in bulk | cu.m. | 5 | 1.200 | 6.000 |
| 19-9 | | | | Carried to Summary | 33.000 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|--|-------|--------------------|--------------------|---------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount |
| C.6 | Stone for drainage, masonry and slope protection, in accordance with the General and Special Specifications in place | cu.m. | 3 | 2,500 | 7,500 |
| C.7 | Asphalt cement, grade 60-70 on site | ton | 0.1 | 44,000 | 4,400 |
| C.8 | Asphalt cement, grade 50-60 on site | ton | 0.1 | 48,000 | 4,800 |
| C.9 | Emulsified asphalt, grade RS-1 on site | ton | 0.1 | 70,000 | 7,000 |
| C.10 | Cutback asphalt, MC and RC type on site | ton | 0.1 | 75,000 | 7,500 |
| C.11 | Portland cement on site | ton | 0.1 | 25,000 | 2,500 |
| C.12 | Deformed billet steel bars, AASHTO M 31 grade 60 (High Yield) of any diameter | ton | 0.1 | 135,000 | 13,500 |
| C.13 | Deformed billet steel bars AASHTO M 31 grade 40 (Mild) of any diameter | ton | 0.1 | 135,000 | 13,500 |
| C.14 | Highway signs | sq.m. | 3 | 32,000 | 96,000 |
| C.15 | Highway sign supports - 1 post | nr. | 4 | 15,000 | 60,000 |
| 19-10 | | | | Carried to Summary | 216,700 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|--------------------------------|-------|-----------------------|--------------------|-------------------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount R.O. Bz |
| C.16 | Highway sign supports - 2 post | nr. | 2 | 20.000 | 40.000 |
| C.17 | Timber plank, on site | cu.m. | 1 | 105.000 | 105.000 |
| C.18 | Timber props, on site | cu.m. | 1 | 105.000 | 105.000 |
| C.19 | Wire mesh gabions, on site | ton | 0.5 | 320.000 | 160.000 |
| C.20 | Explosive, on site | kg. | N/A | 20.000 | |
| C.21 | Gas oil, on site | litre | 50 | 0.080 | 4.000 |
| C.22 | Gasoline, on site | litre | 250 | 0.120 | 30.000 |
| C.23 | Lubricant | kg. | 3 | 0.300 | 0.900 |
| 19-11 | | | | Carried to Summary | 444.900 |

| CONSTRUCTION OF PEDESTRIAN UNDERPASS AT AL QARAT BILL OF QUANTITIES BILL 19 - DAYWORKS | | | | | |
|---|-------------|-------|-----------------------|------------------|----------|
| Item No | Description | Unit | Estimated Quantity | Unit Rate | |
| | | | | R.O. Bz | Amount |
| | SUMMARY | | | | |
| | Page 19-1 | | | | 797.900 |
| | Page 19-2 | | | | 326.700 |
| | Page 19-3 | | | | 122.500 |
| | Page 19-4 | | | | 156.000 |
| | Page 19-5 | | | | 376.500 |
| | Page 19-6 | | | | 271.000 |
| | Page 19-7 | | | | 32.850 |
| | Page 19-8 | | | | 7.500 |
| | Page 19-9 | | | | 33.000 |
| | Page 19-10 | | | | 216.700 |
| | Page 19-11 | | | | 444.900 |
| | | | | | |
| | | 19-12 | | To Grand Summary | 2785.550 |

BILL OF QUANTITIES**GRAND SUMMARY**

| Bill No | Description | Amount |
|---------|---|------------------|
| | | R.O. |
| 1 | Preliminaries | 30380.000 |
| 2 | Earthworks | 3366.900 |
| 3 | Granular and stabilized subbase, basecourse and stabilized subgrade | 312.500 |
| 4 | Bituminous Pavement | 1066.000 |
| 5 | Concrete and concrete structure | 36984.000 |
| 6 | Structural steel and other metal work | 1324.000 |
| 7 | Paint | N/A |
| 8 | Drainage and service ducts | 4333.650 |
| 9 | Slope protection and stabilization | N/A |
| 10 | Piling | N/A |
| 11 | Bridge bearing, expansion joints, joint seals and fillers | N/A |
| 12 | Sidewalks, paved areas and kerbs | N/A |
| 13 | Safety barriers, delineators and fences | N/A |
| 14 | Highway signs and road marking | 110.000 |
| 15 | Electrical installations | N/A |
| 16 | Landscape and irrigation | N/A |
| 17 | Utilities | 4000.000 |
| 18 | Plant and Equipment | N/A |
| 19 | Dayworks | 2785.550 |
| | Sub-total | 84662.600 |
| | Contingencies (10%) | 8466.260 |
| | TOTAL CONTRACT VALUE (R.O) | 93128.860 |

(IN WORDS, THE TOTAL TENDER VALUE IS RIAL OMANI)

NAME OF TENDERER

DATE

SIGNATURE OF TENDERER

THEORY OF THE EARTH

CHAPTER I. OF THE ORIGIN OF THE EARTH.

THE first question which presents itself to the mind, is, what was the origin of the earth? and the answer to this question is, that it was created by the power of God. The next question is, when was it created? and the answer to this question is, that it was created at the beginning of time. The third question is, how was it created? and the answer to this question is, that it was created by the power of God. The fourth question is, what was the state of the earth at the beginning? and the answer to this question is, that it was a dark and void space. The fifth question is, what was the first light? and the answer to this question is, that it was the light of the sun. The sixth question is, what was the first water? and the answer to this question is, that it was the water of the sea. The seventh question is, what was the first land? and the answer to this question is, that it was the land of the continents. The eighth question is, what was the first life? and the answer to this question is, that it was the life of the plants and animals. The ninth question is, what was the first man? and the answer to this question is, that he was created by the power of God. The tenth question is, what was the first woman? and the answer to this question is, that she was created by the power of God. The eleventh question is, what was the first city? and the answer to this question is, that it was the city of Jerusalem. The twelfth question is, what was the first empire? and the answer to this question is, that it was the empire of the Romans. The thirteenth question is, what was the first religion? and the answer to this question is, that it was the religion of the Jews. The fourteenth question is, what was the first church? and the answer to this question is, that it was the church of the apostles. The fifteenth question is, what was the first council? and the answer to this question is, that it was the council of Nicaea. The sixteenth question is, what was the first pope? and the answer to this question is, that he was the pope of Rome. The seventeenth question is, what was the first king? and the answer to this question is, that he was the king of the Jews. The eighteenth question is, what was the first queen? and the answer to this question is, that she was the queen of the Jews. The nineteenth question is, what was the first prophet? and the answer to this question is, that he was the prophet of the Jews. The twentieth question is, what was the first saint? and the answer to this question is, that he was the saint of the church. The twenty-first question is, what was the first martyr? and the answer to this question is, that he was the martyr of the church. The twenty-second question is, what was the first heretic? and the answer to this question is, that he was the heretic of the church. The twenty-third question is, what was the first schism? and the answer to this question is, that it was the schism of the church. The twenty-fourth question is, what was the first crusade? and the answer to this question is, that it was the crusade of the church. The twenty-fifth question is, what was the first inquisition? and the answer to this question is, that it was the inquisition of the church. The twenty-sixth question is, what was the first reformation? and the answer to this question is, that it was the reformation of the church. The twenty-seventh question is, what was the first revolution? and the answer to this question is, that it was the revolution of the church. The twenty-eighth question is, what was the first war? and the answer to this question is, that it was the war of the church. The twenty-ninth question is, what was the first peace? and the answer to this question is, that it was the peace of the church. The thirtieth question is, what was the first treaty? and the answer to this question is, that it was the treaty of the church. The thirty-first question is, what was the first alliance? and the answer to this question is, that it was the alliance of the church. The thirty-second question is, what was the first league? and the answer to this question is, that it was the league of the church. The thirty-third question is, what was the first confederation? and the answer to this question is, that it was the confederation of the church. The thirty-fourth question is, what was the first union? and the answer to this question is, that it was the union of the church. The thirty-fifth question is, what was the first federation? and the answer to this question is, that it was the federation of the church. The thirty-sixth question is, what was the first association? and the answer to this question is, that it was the association of the church. The thirty-seventh question is, what was the first society? and the answer to this question is, that it was the society of the church. The thirty-eighth question is, what was the first order? and the answer to this question is, that it was the order of the church. The thirty-ninth question is, what was the first institution? and the answer to this question is, that it was the institution of the church. The fortieth question is, what was the first office? and the answer to this question is, that it was the office of the church. The forty-first question is, what was the first position? and the answer to this question is, that it was the position of the church. The forty-second question is, what was the first rank? and the answer to this question is, that it was the rank of the church. The forty-third question is, what was the first grade? and the answer to this question is, that it was the grade of the church. The forty-fourth question is, what was the first class? and the answer to this question is, that it was the class of the church. The forty-fifth question is, what was the first division? and the answer to this question is, that it was the division of the church. The forty-sixth question is, what was the first section? and the answer to this question is, that it was the section of the church. The forty-seventh question is, what was the first part? and the answer to this question is, that it was the part of the church. The forty-eighth question is, what was the first portion? and the answer to this question is, that it was the portion of the church. The forty-ninth question is, what was the first share? and the answer to this question is, that it was the share of the church. The fiftieth question is, what was the first interest? and the answer to this question is, that it was the interest of the church. The fifty-first question is, what was the first stake? and the answer to this question is, that it was the stake of the church. The fifty-second question is, what was the first claim? and the answer to this question is, that it was the claim of the church. The fifty-third question is, what was the first demand? and the answer to this question is, that it was the demand of the church. The fifty-fourth question is, what was the first requirement? and the answer to this question is, that it was the requirement of the church. The fifty-fifth question is, what was the first condition? and the answer to this question is, that it was the condition of the church. The fifty-sixth question is, what was the first stipulation? and the answer to this question is, that it was the stipulation of the church. The fifty-seventh question is, what was the first proviso? and the answer to this question is, that it was the proviso of the church. The fifty-eighth question is, what was the first limitation? and the answer to this question is, that it was the limitation of the church. The fifty-ninth question is, what was the first restriction? and the answer to this question is, that it was the restriction of the church. The sixtieth question is, what was the first prohibition? and the answer to this question is, that it was the prohibition of the church. The sixty-first question is, what was the first ban? and the answer to this question is, that it was the ban of the church. The sixty-second question is, what was the first curse? and the answer to this question is, that it was the curse of the church. The sixty-third question is, what was the first punishment? and the answer to this question is, that it was the punishment of the church. The sixty-fourth question is, what was the first penalty? and the answer to this question is, that it was the penalty of the church. The sixty-fifth question is, what was the first fine? and the answer to this question is, that it was the fine of the church. The sixty-sixth question is, what was the first fee? and the answer to this question is, that it was the fee of the church. The sixty-seventh question is, what was the first tax? and the answer to this question is, that it was the tax of the church. The sixty-eighth question is, what was the first duty? and the answer to this question is, that it was the duty of the church. The sixty-ninth question is, what was the first obligation? and the answer to this question is, that it was the obligation of the church. The seventieth question is, what was the first responsibility? and the answer to this question is, that it was the responsibility of the church. The seventy-first question is, what was the first liability? and the answer to this question is, that it was the liability of the church. The seventy-second question is, what was the first accountability? and the answer to this question is, that it was the accountability of the church. The seventy-third question is, what was the first answerability? and the answer to this question is, that it was the answerability of the church. The seventy-fourth question is, what was the first responsiveness? and the answer to this question is, that it was the responsiveness of the church. The seventy-fifth question is, what was the first reactivity? and the answer to this question is, that it was the reactivity of the church. The seventy-sixth question is, what was the first sensitivity? and the answer to this question is, that it was the sensitivity of the church. The seventy-seventh question is, what was the first awareness? and the answer to this question is, that it was the awareness of the church. The seventy-eighth question is, what was the first knowledge? and the answer to this question is, that it was the knowledge of the church. The seventy-ninth question is, what was the first understanding? and the answer to this question is, that it was the understanding of the church. The eightieth question is, what was the first wisdom? and the answer to this question is, that it was the wisdom of the church. The eighty-first question is, what was the first insight? and the answer to this question is, that it was the insight of the church. The eighty-second question is, what was the first perception? and the answer to this question is, that it was the perception of the church. The eighty-third question is, what was the first cognition? and the answer to this question is, that it was the cognition of the church. The eighty-fourth question is, what was the first intellect? and the answer to this question is, that it was the intellect of the church. The eighty-fifth question is, what was the first mind? and the answer to this question is, that it was the mind of the church. The eighty-sixth question is, what was the first brain? and the answer to this question is, that it was the brain of the church. The eighty-seventh question is, what was the first thought? and the answer to this question is, that it was the thought of the church. The eighty-eighth question is, what was the first idea? and the answer to this question is, that it was the idea of the church. The eighty-ninth question is, what was the first concept? and the answer to this question is, that it was the concept of the church. The ninetieth question is, what was the first notion? and the answer to this question is, that it was the notion of the church. The ninety-first question is, what was the first belief? and the answer to this question is, that it was the belief of the church. The ninety-second question is, what was the first faith? and the answer to this question is, that it was the faith of the church. The ninety-third question is, what was the first trust? and the answer to this question is, that it was the trust of the church. The ninety-fourth question is, what was the first confidence? and the answer to this question is, that it was the confidence of the church. The ninety-fifth question is, what was the first assurance? and the answer to this question is, that it was the assurance of the church. The ninety-sixth question is, what was the first security? and the answer to this question is, that it was the security of the church. The ninety-seventh question is, what was the first safety? and the answer to this question is, that it was the safety of the church. The ninety-eighth question is, what was the first protection? and the answer to this question is, that it was the protection of the church. The ninety-ninth question is, what was the first defense? and the answer to this question is, that it was the defense of the church. The hundredth question is, what was the first shield? and the answer to this question is, that it was the shield of the church.

THE END OF THE FIRST VOLUME OF THE HISTORY OF THE EARTH.

THE SECOND VOLUME OF THE HISTORY OF THE EARTH.

THE THIRD VOLUME OF THE HISTORY OF THE EARTH.

1. The first part of the document is a list of names and titles, followed by a list of dates and times.

