

SECTION 3 BRIEF DESCRIPTION OF THE SERVICES

3.1 General

- (e) The project site is located in Duqm in the Al Wusta Governorate. The Project is part of the road infrastructure works in the Special Economic Zone in Duqm (SEZD). Other development works include a sea port and a fishing port, airport, and logistics, industrial, tourism, commercial and residential zones. The road network in the Port area is shown in Figure 1.
- (f) The Scope of the Services comprises the preparation of Preliminary Design and Final (Detailed) Design, preparation of construction tender documents and perform Construction Supervision for the following works:
- (i) Road No. 1 construction from the intersection of Road No. 1 and Road No. 2 to the intersection of Road No. 1 and National Road No. 32, including common corridors for utilities, street lighting and drainage systems. (See Figure 2).
 - (ii) Road No. 5 construction from the intersection of Road No. 1 and Road No. 6 to the proposed Liquid Berths at the sea side, including common corridors for utilities, street lighting and drainage systems. (See Figure 2).
 - (iii) Drainage systems from existing Road No. 2, and along proposed Road No. 1. and No. 5. (See Figure 3).
 - (iv) Wadi bridges, culverts and other related structures.
 - (v) Electrical distribution networks.
 - (vi) Telecommunication networks.
 - (vii) Potable water distribution networks.
 - (viii) Sewerage and irrigation systems.
 - (ix) Landscape.
 - (x) Site investigations (topographic surveys, geophysical surveys and soil investigation).
 - (xi) Ground improvement works for road construction.
 - (xii) Any other works necessary to complete the Project.
- (g) The intention of the Client is to tender and construct all categories listed above under a single Construction Contract. Tender documents should be prepared in such a way to allow the most efficient implementation of this objective. However, separate tender documents may be required for some categories of works to obtain information for design or to make it easier to get required approvals from the respected utility agencies.
- (h) The Consulting Engineer shall note that part of Road No. 1 near the intersection with Road No. 2 is partially constructed. The extent of the completed work shall be assessed and incorporated into the design.
- (i) Road No. 1 shall be designed for exceptional vehicles from the Port.

- (j) Besides serving the Port, both Road Nos. 1 and 5, when completed, will prevent wadi flows from entering the basins in the Port. As an interim measure to prevent wadi flows, a temporary earth bund will be constructed by others along the side of Road Nos. 1 and 5, prior to Road Nos. 1 and 5 construction. The bund will also serve as temporary access during the road construction. The Consulting Engineer shall incorporate this in his design and to assess its suitability after the road construction.
- (k) The right of way (ROW) for Road No. 5 is 80 m in width and Road No. 5 is categorized as a dual carriageway with two (2) lanes in each direction. However, the total ROW for Road No. 5 including utilities and reserve area is 200 m.
- (l) Road No. 1 is categorized as a dual carriageway with three (3) lanes in each direction. The total ROW for Road No. 1 including utilities and reserve area is 200m.
- (m) The Consulting Engineer shall note that Road No. 5 will end at the Liquid Berths. There is also a planned pipeline corridor ending at the Liquid Berths (see Figure 2). Close coordination among all parties is needed.
- (n) The Consulting Engineer shall liaise with the third party consultant in designing the intersection between Road No. 1 and National Road 32.
- (o) A number of culvert crossings at the proposed Road 1 and 5 have been constructed. The Consulting Engineer shall verify their adequacy in the anticipated traffic load such as exceptional vehicles.
- (p) When designing the roads the following elements should be considered among other things:
- Inner and outer shoulders
 - Traffic signs, traffic light signals, road markings, pedestrian crossings, safety barriers, protection works etc.
 - Sidewalks
 - Off street parking
 - Street lighting
 - Drainage system (with settlement monitoring system)
 - Irrigation system
 - Landscaping
 - Bus stops, vehicle parking areas and lay-bays
 - Roundabouts and intersections
- (q) Alignment

The proposed road construction works for Road No. 5 is approximately 5

km while that for part of Road No. 1 is 7 km, both distances measured from the intersection of Road No. 1 and Road No. 6.

(r) Roadway Type and Typical Section

The proposed roads will be classified as an Urban Boulevard with Service Roads. This is a modified classification from the Oman Highway Design Manual 2010 that refers to the Route Classification of National-Urban-Flat/Rolling – Design Group A7.

The proposed section shall have two (2) carriageways with two (2) / three (3) lanes (with shoulders) in each direction. Sidewalks with road furnishing and landscaping will complement the pedestrian realm. Dedicated bicycle lanes shall be incorporated into the roadway typical section if space permits. The centre median shall be landscaped and shall include pedestrian barrier/ fence to improve safety. The roads will need to accommodate mass transit facilities like bus stops and taxi lay-bays with safe access for pedestrians. Access from the adjacent properties need to be provided to the service roads.

(s) Junctions and Roundabouts

There are at least two major junctions in the proposed road construction and will be controlled by traffic signals. The junctions and roundabouts are to be aligned with the existing roads. All the proposed traffic signals shall be linked and timing should be coordinated by the Traffic Control Centre. In addition, traffic cameras shall be installed at each junction to monitor traffic and capture offenders that would jump red lights or otherwise violate traffic rules.

(t) Right-of-Way (ROW) and Utilities

The proposed total width of the Right of Way shall be as per the Master Plan and is generally 200 m or more, including space for new utilities such as electrical power lines, street lighting, telecommunication cables and services for water, and reserve area.

The locations of all existing utilities shall be surveyed prior to the design of the roads. Existing utilities in conflict with the proposed road alignment shall be relocated or protected as per standards of the utility companies. Any future planned and/or proposed utilities shall be identified with the respective utility companies and provisions shall be made to accommodate these utilities accordingly to their respective requirements and implementation plans.

(u) Drainage System

The proposed road construction will consist of urban type road sections with curbs at each edge for the carriageways. The conveyance drainage system shall be designed to ensure that the road can operate for all-weather without flooding. The main road shall be slightly elevated above the existing ground to prevent any offsite flows to enter into the carriageways.

Drainage study is included and shall be performed as a part of the Scope of Work to determine the type, size and location of secondary channel crossings and structures to convey stormwater from one side of the road to the major drainage system.

Major drainage systems and structures shall be designed for Road No. 1 and Road No. 5. If necessary, they can be located within the Right of Way corridor, to properly control and discharge the stormwater to the sea. Outfall structure shall be designed for draining of stormwater to the sea.

In addition, this Project also involves the design and construction of major drainage systems and culverts along the existing Road No. 2 towards existing Road No. 1 to the intersection of Road No. 1 and Road No. 6. Stormwater from the drainage systems shall be discharged to the drainage system along Road No. 5. Hydrological studies shall be carried out to identify the catchment areas served by all the proposed drainage systems.

(v) Landscape

Landscape design including hardscape, street furnishing, trees, shrubs and perennial vegetation, and irrigation pipe network shall be part of the project scope.

3.2 Required Services

The Consultancy Services shall consist of the following stages:

- (a) Preliminary design and cost estimates.
- (b) Detailed design and cost estimates.
- (c) Preparation of tender documents and evaluation of tenders.
- (d) Supervision of construction works.
- (e) Project closure, commissioning and handing over.

Note: All cost estimates, or the budget sum shall be kept strictly confidential and shall not be revealed to third (3rd) parties, the public or to the prospective Bidders or any employee of the Client except for the Technical Committee for the Design Review.

SCHEDULE OF REMUNERATION (A-1) (PRELIMINARY DESIGN)

No.	Description	Unit	Estimated Quantity	Rate/Unit (R.O.)		Total Amount (R.O.)
				Words	Figures	
1.	Traffic Study and Modelling	LS	1			
2.	Topographic Survey	LS	1			
3.	Soil and Construction Material Investigation & Tests	LS	1			
4.	Sub-surface Soil & Geophysical Investigations	LS	1			
5.	Preliminary Hydrological Studies	LS	1			
6.	Preliminary Design for all Primary, Secondary, and Local Roads, Utilities and Drainage Systems, and Cost Estimates etc.	LS	1			
7.	Preliminary Design Report	LS	1			
8.	Environmental Impact Assessment Scoping Study	LS	1			
9.	Other costs that are not included in the above items but are necessary to complete the Preliminary Design	LS	1			
10.	Contingency - Fifteen Percent (10%) of subtotal of the items from 1 to 9 above	LS	1			
Sub-Total Remuneration for Preliminary Design Carried to Total (Words/Figures)						

SCHEDULE OF REMUNERATION (A-2) (Final Design)

No.	Description	Unit	Estimated Quantity	Rate/Unit (R.O.)		Total Amount (R.O.)
				Words	Figures	
1.	Additional Topographic Survey, Location and Alignment Staking-out	LS	1			
2.	Additional Sub-surface Soil and Geophysical Investigations	LS	1			
3.	Detailed Hydrological Studies	LS	1			
4.	Final Design for Primary, Secondary, and Local Roads, Utilities and Drainage Systems, and Cost Estimates etc.	LS	1			
5.	Final Design Report	LS	1			
6.	Environmental Impact Assessment Study	LS	1			
7.	Other costs that are not included in the above items but are necessary to complete the Final Design	LS	1			
8.	Contingency - Ten Percent (10%) of subtotal of the items from 1 to 7 above	LS	1			
Sub-Total Remuneration for Final Design Carried to Total (Words/Figures)						

SCHEDULE OF REMUNERATION (A-3) (Tender Documents)

No.	Description	Unit	Estimated Quantity	Rate/Unit (R.O.)		Total Amount (R.O.)
				Words	Figures	
1.	Preparation of Documents for Tender Packages	LS	1			
2.	Analysis of Tenders and Assistance	LS	1			
3.	Other costs that are not included in the above items but are necessary to prepare, call and award of Tenders	LS	1			
4.	Contingency - Ten Percent (10%) of subtotal of the items from 1 to 3 above	LS	1			
Sub-Total Remuneration for Preparation of Tender Documents Carried to Total (Words/Figures)						

SCHEDULE OF REMUNERATION (A-4) (Engineering Design Office at Duqm)

No.	Description	Unit	Estimated Quantity	Rate/Unit (R.O.)		Total Amount (R.O.)
				Words	Figures	
1.	Establishment of Engineering Design Office in Duqm	LS	1			
2.	Monthly Maintenance (inclusive of all costs)	Month	12			
Sub-Total Remuneration for Engineering Design Office at Duqm Carried to Total (Words/Figures)						

SCHEDULE OF REMUNERATION (A)
DESIGN SERVICES & TENDER DOCUMENTS

Description	Amount (R.O.)	
	Words	Figures
(A-1) Sub-Total Remuneration for Preliminary Design		
(A-2) Sub-Total Remuneration for Final Design		
(A-3) Sub-Total Remuneration for Tender Documents		
(A-4) Sub-Total Remuneration for Engineering Design Office at Duqm		
Total Remuneration for Design Services and Engineering Design Office in Duqm		

**SCHEDULE OF REMUNERATION (B)
(CONSTRUCTION SUPERVISION SERVICES)**

Position	No.	Total Man-Month	Rate (R.O./Man-Month)*		Total Amount
			Words	Figures	
Resident Engineer	1	1x24 = 24			R.O.
Civil/Structural Engineer	1	1x24 = 24			
Electrical/Utilities Engineer	1	1x24 = 24			
Material Engineer / Geologist	1	1x24 = 24			
Quantity Surveyor	1	1x24 = 24			
Land Surveyor	1	1x24 = 24			
Site Inspectors (Civil)	2	2x24 = 48			
Materials Inspector	1	1x24 = 24			
Health, Safety, Security and Environmental (HSSE) Officer	1	1x24 = 24			
Administrative Assistant	1	1x24 = 24			
Provision of site vehicles	4	4x24 =96 (Veh-month)			
Total Carried to Remuneration Summary					

The rates shall NOT include for the cost of providing and maintaining the furnished accommodation for the site supervision staff, as it will be provided by the Contractor under the construction contract. The rates per month shall be binding for three (3) years from the date of submission of this Tender. Rates for supervision after the said period of supervision shall be subject to good-faith mutual negotiations, taking into consideration official inflation rate index, market conditions and other significant factors. The deployment of the Construction Supervision staff (increase or decrease the above requirements) shall be solely the rights and at discretion of SEZAD.

REMUNERATION SUMMARY

**CONSULTANCY SERVICES FOR DESIGN AND SUPERVISION OF ROAD
Nos. 5 & 1 AND DRAINAGE SYSTEMS AT DUQM PORT**

**1. Total Sum for the Design Services &
Preparation of Tender Documents
Schedule of Remuneration (A)**

R.O. _____

**2. Total Sum for Supervision Services
Schedule of Remuneration (B)**

R.O. _____

Total Tender Value Carried to the Form of Tender R.O. _____

(In Words, the total of our Tender for the above said Services is Rials Omani

_____)

Name of Consulting Engineer:

Date:

Signature of Consulting Engineer:

Stamp: