ADDENDUM 6

T30/2015 - CONSTRUCTION OF FISHERY PORT (MARINE & ROAD RELATED WORKS) AT DUQM, SULTANATE OF OMAN

			Add	dendum					
Volume II	Total req	uirement are 5 Units. Volume III, PART 1, Iten			• •				
	PART	I : PRELIMINARIES AN	D GENERAL	REQUIRE	MENTS				
	ITEM	TEM DECORPTION		T IN ITEM	UNIT RATE (OMANI RIALS)			AMOUNT (RO)	
	NO	TIEM DESCRIPTION	QUANTITY	UNII	IN WORDS	IN FIGURES	RO	ΒZ	
	1.2.5.1	Extra one month for Type B accommodations: Two Unit after Contract Construction period.	1	Month					
	Volume II	A6.1.2: Vaccommo	Total requirement are 5 Units. A6.1.2: Volume III, PART 1, Item accommodations. PART 1: PRELIMINARIES AN ITEM DESCRIPTION Extra one month for Type B 1.2.5.1 accommodations: Two	Total requirement are 5 Units. A6.1.2: Volume III, PART 1, Item No 1.2.5.1: A accommodations. PART 1: PRELIMINARIES AND GENERAL ITEM NO ITEM DESCRIPTION QUANTITY Extra one month for Type B 1.2.5.1 accommodations: Two Unit after Contract	A6.1.2: Volume III, PART 1, Item No 1.2.5.1: Add addition accommodations. PART 1: PRELIMINARIES AND GENERAL REQUIRE ITEM ITEM DESCRIPTION QUANTITY UNIT Extra one month for Type B 1.2.5.1 accommodations: Two Unit after Contract	A6.1.2: Volume III, PART 1, Item No 1.2.5.1: Add additional one month accommodations. PART 1: PRELIMINARIES AND GENERAL REQUIREMENTS UNIT RA ITEM ITEM DESCRIPTION QUANTITY UNIT IN WORDS	Total requirement are 5 Units. A6.1.2: Volume III, PART 1, Item No 1.2.5.1: Add additional one month duration for Two accommodations. PART 1: PRELIMINARIES AND GENERAL REQUIREMENTS ITEM NO ITEM DESCRIPTION QUANTITY UNIT RIALS) Extra one month for Type B 1.2.5.1 accommodations: Two Unit after Contract IN Month Unit after Contract	Total requirement are 5 Units. A6.1.2: Volume III, PART 1, Item No 1.2.5.1: Add additional one month duration for Two Unit accommodations. PART 1: PRELIMINARIES AND GENERAL REQUIREMENTS ITEM NO ITEM DESCRIPTION QUANTITY UNIT RIALS) (RIALS) (RI	

Ref No	Volume	Addendum
A6.2	Volume II	Volume II, page No S7/34, Add additional Clause C1.60 v Underwater Inspection/Observation Remote Operation Vessel Camera (ROV). The ROV shall comply to the following specifications:- A6.2.1. Minimum 50 m depth rating.
		A6.2.2. Operative in current speeds up to 1kt.
		A6.2.3. Shall have minimum length of 75 m neutrally buoyant cable.
		A6.2.4. Shall be able to move in all three axes. If the main camera has a pan option (to cover side viewing
		while forward movement), or one or more auxiliary side viewing cameras are provided with the ability
		of remote switching between cameras, the lateral movement requirement can be omitted.
		A6.2.5. Minimum required sensors shall include orientation (compass), depth, and temperature.
		A6.2.6. Shall have a sufficient lighting to provide satisfactory imaging under low light conditions or in deep
		parts of the structure.
		A6.2.7. Shall have at least 1080p HD quality camera with pan and tilt capabilities, or sufficient number of
		cameras with remote/user switching ability while in operation to cover both frontal and side views
		independent of the movement direction of the vehicle.
		A6.2.8. Shall have digital video recording on board with sufficient storage capacity.
		A6.2.9. The real time image of the ROV camera shall be viewable on the user control station screen. The
		screen of the user control station shall be at least 8".
		A6.2.10. Shall have a user serviceable basic maintenance tool set/kit (for regular maintenance or replacement
		of O-rings, grease, seals, basic tools etc.)
		A6.2.11. Shall have a convenient transportation and storage case.
		A6.2.12. Shall have extra battery or AC powering option for long duration operations.

Ref No	Volume	Addendum
A6.3	Volume I and Volume II	A6.3.1. Replace Volume I, I Portion 3, Section 2 page no S2/7, Clause 2.3.11, Slope stabilization of cliff surface fronting Fishery Port Engagement of suitable specialist and professionals (Geotechnical, Rock Mechanics, etc.) to assess the stability of the entire slope from the Fishery Port ground level up to the top of the cliff (about 80m in height). The Specialist engaged shall undertake detailed study and investigations, to assess the slopes stability at these locations. The whole cliff surface fronting the Fishery Port facing Road B shall be re-graded and stabilized where required. Depending on the geological properties and characteristics of the slope, benching of not less than 3 m width is required and the maximum difference in height between each benching shall not exceed 10m. The slope and height requirements specified in Oman Highway Design Standards 2010 shall be fulfilled. No exposed bolting or anchors shall protrude from the rock face, if used. The ends of the bolts or anchors shall be recessed into the rock face and after tensioning and testing covered over with shotcrete to mask their presence. Shotcrete surface shall be of rough finish with colour applied to match the existing rock faces. The relevant authorities shall approve all blasting works. A6.3.2. Replace Clause Volume II, page no S8/190, C20.0 (d) with: Depending on the geological and physical properties of the slope, benching not less than 3m width is required for every maximum 10m difference in heights in line with Oman Highway Design Standards 2010.

Ref No	Volume	Addendum	
A6.4	Volume I	Volume I	Add Schedule Volume I, Section 5, Schedule 12 SCHEDULE – 12: LIST OF DESIGN PROJECTS OF SIMILAR NATURE COMPLETED WITHIN PAST TEN YEARS The Bidder must list below major design works of similar nature of value, which the Bidder has completed within the past ten years, giving the details stated below:
		S/N Name of Client Location Description of Design Services (RO million) Name of the Project Client Location Design Services (RO million) Note: The details of design services & responsibilities should be furnished.	
		Note: The details of design services & responsibilities should be furnished. Bidder shall use additional sheets if required	

Ref	Volume	Addendum
Ref No A6.5	Volume II	Replace Volume II, page no S8/66, Clause C.11.1 General with GENERAL The works covered by these specifications are general area levelling to lines and levels within the work site, preparation of sub-grade, construction of sub-base, for the approach road and further layer of base, asphaltic surfacing and concrete paving kerbs etc. All materials, labour, plant and equipment for facilities required for execution of these works shall be provided by the Contractor and will be subject to the approval of the Engineer. The roads shall comply with Oman Highway Design Standards 2010. Paved shoulder of 2.5m width shall be provided on both sides of the carriageway. A 2m side walk complete with interlocking blocks shall also be provided
		on both sides of the road. Where there is hill cutting, there shall be lined channel at the toe of the slope and retaining structure such as gabion wall or reinforced concrete wall for protection as necessary. If the side of the road is backfilled, the minimum distance from the side walk to the edge of the slope shall not be less than 5m. The slope shall be protected by reinforced concrete structure, reinforced earth, gabion wall, rip rap, etc. as necessary. Crash barrier shall be installed where required. The Contractor shall consult and obtain approval from service providers and relevant authorities for the space required to lay services such as water, electricity, street lighting, telecommunication and data cables, etc. These services corridors shall be provided along the roads. The proposed road connecting Fishery Port to Fishery Industrial Development, Road A, shall be classified as a Secondary -Urban- Mountainous – Design Group C11, as per Oman Highway Design Standards 2010 with an additional climbing lane as necessary. Special consideration shall be given to both vertical & horizontal alignment of the road in order to achieve adequate gradient & turning radius for heavy trucks.

Ref	Volume	Addendum
No		
		Proposed road connecting the two breakwaters, Road B, shall be classified as Access Urban flat/rolling - Design
		Group E3, as per Oman Highway Design Standards 2010. Towards the sea, the minimum width of the unpaved
		shoulder shall not be less than 5m from the side walk. The alignment of the road is fixed and as shown in the
		drawing.
		The Specifications referred to for Road Works in this Tender Document shall comply with
		• Highway Design Standards of The Sultanate of Oman - June 2010 - Volume 1 and Volume 2.
		• Highway Design Standards of The Sultanate of Oman - June 2010 - Volume 3 "Standard Specifications for
		Road and Bridge Construction".
		Any other works necessary to fulfil the requirements of ROP and other authorities/stakeholders with required
		investigation, survey and studies.
		All care shall be taken during execution of the works to avoid any damages which may be caused by the Contractor's mobile equipment and vehicles to the structures and other installations constructed or erected in the areas by the Sub-contractors for mechanical and electrical works.
		Sea water shall not be used for construction of the works.

Ref	Volume	Addendum
No		
A6.6	Volume	Replace Volume I, page no S2/6, Clause 2.3.10 with
	1	2.3.10 Road and Pavement
		The roads shall include the road from the Fishery Port to the Fishery Industrial Development, "Road A "and the
		road connecting the two breakwaters, "Road B". The roads shall comply with Oman Highway Design Standards
		2010.
		Excavation and backfilling, complete road structure such as subgrade, sub-base, base course, wearing course, etc and
		other related works. Bell mouths, drains, interlock paved footpath along both sides of the road. Hydraulically pressed
		precast concrete curbs (all types and sizes) wherever necessary, including hunching, painting. Traffic signs, road
		marking, concrete safety barriers and guardrails as necessary. Slope stabilization with re-grading, shotcrete, rock
		anchors, bolting, etc. as necessary. Shotcrete surface shall be of rough finish with colour applied to match the existing
		rock faces. Depending on the geological properties and characteristics of the slope, benching of not less than 3 m width
		is required and the maximum difference in height between each benching shall not exceed 10m. The slope and height
		requirements specified in Oman Highway Design Standards 2010 shall be complied. Paved shoulder of 2.5m width
		shall be provided on both sides of the carriageway. A 2m side walk complete with interlocking blocks shall also be
		provided on both sides of the road. Where there is hill cutting, there shall be lined channel at the toe of the slope and
		retaining structure such as gabion wall or reinforced concrete wall for protection as necessary. If the side of the road
		is backfilled, the minimum distance from the side walk to the edge of the slope shall not be less than 5m. The slope
		shall be protected by reinforced concrete structure, reinforced earth, gabion wall, rip rap, etc. as necessary. Crash
		barrier shall be provide as required. The Contractor shall consult and obtain approval from service providers and
		relevant authorities for the space required to lay services such as water, electricity, telecommunication and data cables,

Ref	Volume	Addendum
No		etc. These corridors shall be provided along the roads. Laying of the utilities services is not in the scope. Street lighting is a Provisional Sum item in the Bills of Quantities.
		ROAD A: Road A shall be classified as Secondary Urban mountainous - Design Group C11, as per Oman Highway Design Standards 2010. The length of the road shall depend on the route to be selected by the Contractor during Concept Design Stage & to be approved by the Employer and ROP. The difference in levels between Fishery Port and Fishery Industrial Development is about 80 m. The Bidder shall submit the proposed road alignment in the
		Width of climbing lane is 3.65m. Additional climbing lane shall be provided as necessary. Service corridor as specified in the Oman Highway Design Standards 2010 shall be provided. Two paved parking areas of 30m x 20m each for viewing at two different elevations (location to be approved by the Employer). ROAD B: Proposed road connecting the two breakwaters, Road B, shall be classified as Access Urban flat/rolling - Design Group E3, as per Oman Highway Design Standards 2010. Towards the sea, the minimum width of the unpaved
		shoulder shall not be less than 5m from the side walk. The alignment of the road is fixed and as shown in the drawing.

No	Volume	Addendum							
A6.7	Volume	lume Replace Volume III Part 5 with							
	III	Part 5	5: Provisional Sums	<u>is</u>					
		Item	Item Description	Unit	Amount (R	ial Omani)			
		No.	•	Omt	In Words	In Figures			
			PROVISIONAL SUMS:						
			Allow the following provisional sums for works to be executed, to be expended as directed by the Engineer						
			or deducted in whole or in part if not executed						
		5.1	Foundation laying and Opening Ceremony	Item	RO. Six Thousand Only	6,000.00			
		5.2	Witnessing physical model testing 2D and 3D at the laboratory by the Employer's and Engineer's representatives (Contractor's cost, if any, is deemed included in the Contract)	Item	RO. Thirty Thousand Only	30,000.00			
		5.3	Overseas training courses/attachments/seminars (Contractor's cost, if any, is deemed included in the Contract)	Item	RO. Twenty Thousand Only	20,000.00			
		5.4	Design, Supply and Installation of street lighting and related work	Item	RO. Three hundred Thousand Only	300,000.00			
		5.5	10 % addition on Payment made under item 5.4 cover all other aspects of expense overhead and profit.	Sum	RO. Thirty Thousand Only	30,000.00			
		5.6	Specialized testing, hiring of specifised equipment as instructed by Employer.	Item	RO. Twenty Thousand Only	20,000.00			
			Carried to Grand S	Part 5 : Summary	RO. Four Hundred Six Thousand only	406,000.00			

Ref No	Volume			Ad	dendum					
A6.8		Replace Volume III : Summary with								
		CON	NSTRUCTION OF FISHERY PO		RINE & ROAD RELATE QUANTITIES	ED WORKS) AT	DUQM.			
				MAIN S	UMMARY					
		PART Ref	ITEM DESCRIPTION	UNIT	TOTAL PRICE IN WORDS (RIAL OMANI)	TOTAL PRICE IN FIGURES (RO)	REMARKS			
		PART 1	Preliminaries and General Requirements	Sum						
		PART 2	Engineering Verification and Design	Sum						
		PART 3	Survey, Investigation and Testing	Sum						
		PART 4	Procurement, Construction and Completion	Sum						
		PART 5	Provisional Sums	Sum	RO. Four Hundred Six Thousand only	406,000.00				
			10% Contingency on sum of Part 2, Part 3 and Part 4	Sum						
			TOTAL SUMMARY	SUM						

Ref No	Volume	Addendum
A6.9		Add Construction of an access road
		Volume I: Prime Document
		Add Volume I, page no S2/3, Clause 2.1.13
		Design, construction and maintenance of access road from NR 32 to Fishery Industrial Development.
		ADD Volume I, page no S2/7, Clause 2.3.12: DESIGN AND CONSTRUCTION OF ACCESS ROAD
		Design, construction and maintenance of access road from NR 32 as shown. The access road shall be completed during
		the mobilization period. This access road shall be open for unrestricted use by all including other parties' construction
		vehicles at all times throughout the contract period. The Contractor shall maintain, control dust nuisance and repair the
		access road including the affected existing road throughout the contract period.
		Volume II: General Particulars and Requirements, Specifications
		ADD Volume II, page no S8/192, Clause C21: DESIGN AND CONSTRUCTION OF ACCESS ROAD
		The access road shall be constructed by the Contractor and open for unrestricted use by all parties including other parties'
		construction vehicles. This access road shall be completed within the mobilization period and maintained throughout the
		contract period. The access road shall connect to the existing National Road 32. The total length of the track road is about
		15 kilometre and it should allow a relatively smooth ride up to a speed of 50 to 60km/h for all vehicular traffic especially
		the heavy trucks. The width of the track road shall be 12 m with a maximum 2% slope. Each shoulder shall have a
		trapezoidal earth ditch, 1.5 m wide at bottom with side slopes 1 into 1 and depth of 0.5m.

Ref	Volume	Addendum
No		
		The Scope of work comprises the provision of design services, construction, completion and maintenance of the followings:
		(i) Survey the proposed alignment, submit the plan, profile and cross sections in AutoCAD format every 50m showing
		the proposed trapezoidal earth ditches and to be submit as built drawings once construction is completed within the
		mobilization period. The proposed alignment is preliminary and subject to change.
		(ii) Cutting, filling, levelling and compaction as per the approved PGL (Proposed Grade level) including trapezoidal
		earth ditches.
		(iii) Providing, laying, watering & compaction by rollers of Subgrade layer of 250 mm thick, to a achieve a levelled
		track road to the quality of a road Sub Grade as specified in the Oman Highway Design Standard Volume 3 June 2010.
		(iv) Traffic and directional signs, earth speed humps.
		(v) Provision of pipe culverts for wadi flow affected by the track road.
		(vi) Management of traffic during construction and control of dust nuisance.
		(vii) Any other works necessary to fulfil the requirements of SEZAD, ROP and other authorities/stakeholders.
		(viii) Maintenance, control of dust nuisance and repair works of all executed works throughout the contract period.
		The Contractor shall carry out the design in full coordination with relevant parties at site, and design shall be subjected to approval of SEZAD, ROP and other concerned authorities and/or stakeholders. Design and all other costs related to the Project shall be included in the Bill of Quantities.

Ref No	Volume	Addendum									
NO		Volume III: BILL OF QUANTITIES Add Volume III, page no 1.4 Bill of Quantities PART 1: PRELIMINARIES AND GENERAL REQUIR PART 1: PRELIMINARIES AND GENERAL REQUIREMENTS									
		ITEM NO	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT RATE (OMANI RIALS)		AMOUNT (RO)			
						IN WORDS	IN FIGURES	RO	BZ		
		1.9	Construction and Maintenance Access Road								
		1.9.1	Field surveys, design drawings, site and soil investigations as required. Cutting, filling and levelling of ground to prepare subgrade for proposed track road with trapezoidal earth ditches and Disposal of unsuitable materials to official dumping grounds in Duqm. Subgrade preparation and compaction by rollers of the levelled track road to the quality of a road subgrade as per Oman Highway Standards including the earth speed humps. Import of borrow materials as required for the project. Traffic and Directional Signs as directed.		Lump Sum						
		1.9.2	Maintenance of the completed Access road	30	Month						
				,							

Ref	Volume	Addendum									
No											
		Volume IV Drawing :									
		Refers Volume IV SI no 29 Drawing no 2015/FP/RD/03 : ACCESS ROAD TO FISHERY INDUSTRIAL DEVELOPMENT as attached.									
A6.10	Volume	ume Delete Volume IV Sl No 27- Drawing no 2015/FP/FIC/RD/01.									
	IV	Add to Volume IV Sl No 27.a Drawing no - 2015/FP/RD/01: Fishery Port- Road A and Road B									
		Add to Volume IV Sl no 28 Drawing no 2015/FP/RD/02 : TYPICAL SECTION OF ROAD A									
		Add to Volume IV Sl no 29 Drawing no 2015/FP/RD/03 : ACCESS ROAD TO FISHERY INDUSTRIAL									
		DEVELOPMENT									
		Sl.No	TITLE	DRAWING NO	Rev						
		27	CONNECTION POINT A FISHERY INDUSTRIAL	2015/FP/FIC/RD/01	-						
			DEVELOPMENT-(Delete)								
		27.a	FISHERY PORT- ROAD A AND ROAD B	2015/FP/RD/01	-						
		28	TYPICAL SECTION OF ROAD A	2015/FP/RD/02	-						
		29	ACCESS ROAD TO FISHERY INDUSTRIAL DEVELOPMENT	2015/FP/RD/03	-						
		Drawings	s are attached.								