

Following Changes are brought to **Part 1 (Tendering Process), Section 3 – Evaluation and Qualification Criteria:**

1. Change Clause 2.4 and 2.5 as follows.

2.4 Key Personnels for Design and construction supervision

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

No.	<u>POSITION</u>	No(s)	Total Work Experience [years]	Experience In Similar Work [years]
1	Project Manager (master's in project management/Engineering or related field) having reasonably good experience in engineering projects management.	1	5	3
Design Team				
2	Drainage Design Engineer (Degree in civil engineering/Environmental engineering or relevant field with good engineering knowledge of design of Storm Water Drainage and Sewerage system)	1	5	3
3	Hydrologist (Degree in Hydrology/Water engineering with good knowledge of distribution, circulation, and physical properties of the earth's underground and surface waters)	1	5	3
4	Surveyor (Diploma in land surveying or related field.	2	5	3
5	EIA Specialist	1	5	3
Construction Supervision Team				
3	Resident Engineer (Civil/) having degree in Civil Engineering or related field) with good background of construction supervision of drainage and sewerage works in islands.	4	3	2
4	Assistant Resident Engineer (Civil/Water/Environmental)	4	3	2

The Bidder shall provide details of the proposed personnel and their experience records in the relevant Information Forms included (PER – 1 & PER-2) in Section 4 (C) (Bidding Forms) – Technical Proposal.

3.5 Key Equipment

The Bidder must demonstrate that it has accessibility for the key equipment listed hereafter: (For each Island)

<u>NO.</u>	Equipment Type	Min. Number Required
1.	Excavators	3 Nos
2.	Trench Shoring Set	1 Set
3.	Dumper Trucks	1 No
4.	Welding Equipment	1 Set
5.	Vibrator	2 Nos
6.	Survey Equipment (Total Station, dumpy level etc.)	1 set.
7.	Concrete Mixer	2 No.
8.	Plate/Roller Compactor	1 No.
9.	Compactor	2 Nos
10.	Electricity generating diesel set	2 Nos
11.	Buttwelding/Electrofusion welding Equipment	2 Sets

The Bidder shall provide further details of proposed items of equipment using the relevant Form in Section 4.



Following Changes are brought to **Part 2 (Employer Requirement)**:

1. Change Section 6 as follows.

- a. Add Design Requirements to Scope of Works
- b. Bill of Quantities or Activity Schedule (Attached Excel and Pdf file)



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1. Design Requirements

Below section provides the requirements for the design phase of the project including, Carryout surveys, investigation, Conduction of EIA, Preparation of Detailed Design.

The design phase of the project will encompass the following works detailed below. The contractor should carry out the works as per the requirements set out and in accordance with the technical guidelines from EPA. Where there is a conflict between the stated requirement and EPA guidelines, the higher requirement should be considered.

Below are the expected outcomes from the design phase of the project.

1. Survey:

The survey should be carried out in accordance with the guidelines set out from Maldives Land Survey Authority (MLSA). The following aspects should be covered in the survey.

- a) Three bench mark should be placed as per Control Survey Guideline of MLSA standards and should be registered with MLSA
- b) The land use plan of the islands
- c) Topographic survey for the entire island at plot levels should be carried
- d) Names and details of roads should be properly marked
- e) Public buildings should be taken with internal layouts to demarcate the exact position of the building and roof areas.
- f) High tide line, low tide line, and vegetation lines should be taken.
- g) Harbor basin and any revetment should be mapped in the drawing
- h) Significant trees, electric distribution boxes, electric light poles should be marked in the survey map.
- i) Where possible type of vegetation should be provided and any trees falling on immediate network coverage area or on facility locations should be properly mapped in the survey.
- j) The levels on all existing roads should be taken at 10m intervals from the center of the road and at all junctions
- k) The levels of all households must be also taken at 2 points (At the entrance to the plot and the ground level at the building's entrance)
- l) Proposed facility locations and alternative locations should be mapped with existing ground levels.



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2. Land Allocation Process

- a) Locations including alternatives for pump station facilities should be identified in consultation with island councils and based on approved land use plans of the island
- b) Locations for Pump stations (PS) /Lift stations (LS) should be selected to maximize the coverage area and to minimize the number of PS/LS.
- c) The area should be restricted to 5m by 5m or lower.
- d) Where there is limited land area, the pump station/lift stations can be located at the center of road junctions.
- e) In locating any PS/LS on roads care should be taken to avoid placement of vent structures near households and to locate the vents next to open lands such as football grounds and cemeteries.
- f) The outfall locations should be selected to minimize infrastructure modification (drilling quay walls, dismantling of revetments, etc...)
- g) LUP should be updated based on survey carried
- h) All survey files, including editable copies should be provided to client with the survey report and land approval request documents.

3. Geotechnical Investigations:

- a) Preliminary Geotechnical survey should be carried and can be restricted to inspection pits or scalar penetrometer tests.
- b) Inspection pits up to a depth of 1.5m with the log of soil conditions should be provided.
- c) Inspection pits at all facility locations should be carried and any requirement for ground improvement should be identified

4. Social survey

- a) As part of the community engagement, meetings with all relevant stakeholders and public should be carried
- b) Meeting minutes for all the community consultation meetings should be provided with survey report.
- c) Locations including alternatives for flood mitigation facilities should be identified in consultation with island councils and based on approved land use plans of the island.



5. Concept Design:

A new concept design should be prepared based on the provided concept for the entire island. However, the civil works as part of the scope will be limited to immediately inhabited areas and to areas where developments are foreseen within the short term. The island specific data provided reflects some of these developments.

The Overall Concept of the System should be based on the Typical Concept layout provided. The final concept design must be submitted to the client for approval.

Drainage System

The Gravity Flood Mitigation System should be provided with the following components
Gravity Network/Catchment:

- Drainage catch pits must be provided at road sides at sufficient intervals to prevent flooding and sufficient slope must be provided for the gravity line to prevent flooding.
 - At starting point of each drainage main section Maintenance shaft (MS) or cleanouts (CO) should be provided.
 - The drainage main should have a minimum cover of 600mm (From ground level to the top/crown of the pipe) at all starting MS
 - The maximum excavation depth for the sewer main is 2.5m.
 - The network should have 600mm catch pits at all junctions or at maximum intervals of 60m to allow for cleaning. The last catch pit or the final catchpit leading up to PS/LS could be provided larger than 600 mm.
 - The gravity network should prevent flooding at all the flood prone areas of the entire island and should facilitate the immediate implementation of selected catchments for the inhabited area of the island. The additional catchments required to cover the entire island should be designed to facilitate the phasing out of the works.
 - The design should incorporate as much as possible methods for recharging the water lens of the island by including where possible, bio filtration planters, bio retention swales, trees, and permeable pavements.
- Pump Stations (PS)/Lift Stations (LS):
- The drainage mains will discharge stormwater into lift Stations (LS)
 - The PS/LS should include, sump, valve chamber, vent structures and control panel
 - PS/LS should be provided for each gravity catchment with TWO submersible pumps controlled based on the level sensors/Float switches.
 - Based on the storm water levels within the PS/ LS sump, the pumps should operate automatically to discharge the storm water into pressure network.
 - Storm water Pumped into pressure network from lift stations located at each catchment should be discharged out or sent to a main outfall pump station to be discharged.
 - The discharge will be directly into sea at the shoreline of the island.
 - The sea outfall should be protected with ballast block and diffusers at the

6. Detailed Design

The detailed design should provide all the hydraulic calculations required for gravity network and PS/LS. Administration building if required should be considered

- a) Preparation of Detailed Design of civil, electrical, mechanical and miscellaneous works of Drainage

System i.e. Drainage Pipes, Aqua cells, Bio retention or filtration mechanisms, Catch pits, Manholes, Cleanouts, Lifting Stations and Drainage Conveyance, Outfall Pumping Stations and Sea Outfall Conveyance System the sea.

- b) Preparation of Construction Drawings of Civil, Electrical, Mechanical and Miscellaneous works of the Drainage System i.e. Drainage Pipes, Aquacells, Bio retention or filtration mechanisms, Manholes, Cleanouts, Lifting Stations and Drainage Conveyance, Sea Outfall Pumping Station and Sea Outfall Conveyance System into Sea etc.
- c) All Electrical drawings should be approved from Maldives Energy Authority.
- d) All the gravity profiles should be provided.
- e) Approval of Survey and Investigations, Concept Designs, EIA, Detailed Design and Construction Drawings from EPA.
- f) Follow International Design Standards/Engineering Practices for the design and construction of sewerage system of the Islands of the Contract Package in case EPA Design Standards / Guidelines/Technical Specifications are missing or silent for the item/component of the sewerage system.
- g) Preparation of Construction Drawings
- h) Final Detailed Design should be submitted to the Client for approval.

7. EIA

Based on the Concept, EIA works should be commenced based on the approved concept and should be carried according the EIA regulation.



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Following Changes are brought to **Part 3 (Contract)**:

2. Change Section 7 and 8 as follows.

Section 7 – General Conditions of Contract

GENERAL CONDITIONS

The Conditions of Contract comprise the “General Conditions”, which form part of the “Conditions of Contract for Plant and Design-Build” First Edition 1999 published by Fédération Internationale des Ingénieurs-Conseils (FIDIC), and the following “Particular Conditions”, which include amendments and additions to such General Conditions.

Copies of FIDIC Conditions of Contract, referred to above, may be obtained from:
FIDIC Secretariat
P.O. Box 86
CH 1000 Lausanne 12
Switzerland
Fax No: +41 21 653 5432

Refer to above FIDIC document which is an integral part of this Contract.



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SECTION 8 – CONTRACT DOCUMENTS

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Agreement

This Agreement made the _____ day of _____ 20_____, between Government of Maldives represented by the Ministry of Environment, Male', Republic of Maldives (hereinafter called "the Employer") of the one part and _____ hereinafter called "the Contractor") of the other part.

Whereas the Employer is desirous that certain Works known as _____ should be executed by the Contractor, and has accepted a Tender by the Contractor for the execution and completion of such Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement,
 - (a) The Letter of Acceptance dated _____
 - (b) The Letter of Tender dated _____
 - (c) The Addenda nos. _____
 - (d) The Conditions of Contract
 - (e) The Employer's Requirements
 - (f) The Completed Schedules, and ;
 - (g) The Contractor's Technical Proposal.
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written in accordance with their respective laws.

For and Signed on behalf of:

Employer:

Contractor:

.....

.....

Name:

Name:

Designation:

Designation:

Address:

Address:



In the presence of:

Employer:

Contractor:

Appendix to Tender

.....
Name:

.....
Name:

Designation:

Designation:

Address:

Address:

	Sub - Clause	
Employer's name and address	1.1.2.2.	Ministry of Environment, Handhuvaree Hingun, Maafannu Male' 20392, Republic of Maldives
Contractor's name and address	1.1.2.3.
Engineer's name and address	1.1.2.4.	Ministry of Environment, Ameenee Magu, Maafannu Male' 20392, Republic of Maldives
Time for Completion of the Works	1.1.3.3	18 Months
Defects Notification Period	1.1.3.7	365 days
Electronic transmission systems	1.3	Electronic Mail and Facsimile
Governing Law	1.4	Law of the Republic of Maldives
Ruling language	1.4	English
Language for communications	1.4	English
Time for access to the Site	2.1	14 days before Commencement Date
Amount of Performance Security	4.2	5% of Agreed Contract price
Period for notifying unforeseeable errors, faults and defects in the Employer's Requirements	5.1	14 days
Normal working hours	6.5	8 hours per day or as suited at site of work
Delay damages for the Works	8.7 & 14.15(b)	0.05% of the Contract Price per day, in the currencies



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		and proportions in which the Contract Price is payable.	
Maximum amount of Delay damages	8.7	10% of the final Contract Price	
Percentage for adjustment of Provisional Sums	13.5(b)	Not Applicable	
Total advance payment	14.2	15% of the Accepted Contract Amount	
Amortization Rate	14.2(b)	20%	
Percentage of Retention	14.3	10%	
Limit of Retention Money	14.3	5% of the Accepted Contract Amount	
Plant and Materials intended for the Works	14.5	Not Applicable	
Minimum amount of Interim Payment Certificate	14.6	2% of the Accepted Contract amount.	
Currency of Payment	14.15	Maldivian Rufiyaa as named in the Letter of Tender	
Periods for submission of insurance:			
(a) Evidence of insurance	18.1	14 days	
(b) Relevant policies	18.1	28 days	
Maximum amount of deductibles for insurance of the Employer's risks	18.2(d)	Nil	
Maximum amount of third party insurance	18.3	MVR 1 Million	
The Dispute Adjudication Board shall be	20.2	Not Applicable	
Appointment (if not agreed) to be made by	20.3	Not Applicable	
Definitions of Sections:			
Description (Sub-Clause 1.1.5.6)	Value: percentage* of Accepted Contract Amount	Time for Completion (Sub-Clause 1.1.3.3)	Delay Damages (Sub-Clause 8.7)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<ul style="list-style-type: none"> • These percentages shall also be applied to each half of the Retention Money under Sub-Clause 14.9 			

Special conditions of Contract

This Appendix forms part of the Agreement.

Item	Sub-Clause	Data
Clause 1		
Country of Origin	1.1.7	<i>Insert this new Sub-Clause after sub-clause 1.1.6</i> The use of Goods and Services from a country under embargo from United Nations is NOT permitted.
Clause 2		
Employer's Financial Arrangements	2.4	<i>This Sub-Clause is not applicable</i>
Clause 3		
Engineer's Duties and Authority	3.1	<i>Insert this at the end of Sub- Clause 3.1 as (d):</i> "The Engineer shall obtain the specific approval of the Employer before ordering any works involving delay or any extra payment by the Employer or to make variation of or in the Works or Contract."
Management Meetings	3.6	<i>Insert this new Sub-Clause 3.6 at the end of Clause 3:</i> The Engineer shall invite the Contractor and other relevant parties to the first Management Meeting where he shall decide upon intervals between future Management Meetings. The purpose of these Management Meetings is to coordinate the Works with the Contractor, (and other parties if deemed necessary) to record progress in relation to agreed program, and to reach and verify agreements. Minutes of each Management Meeting will be prepared by the Engineer and circulated to all parties attending the Management Meeting, prior to the next meeting. Agreements reached at a particular Management Meeting if duly recorded and confirmed at the next meeting will be considered accepted by all parties. Where such agreements require to be confirmed by Instructions from the Engineer in compliance with the Contract, the Engineer shall forthwith issue such Instructions. Agreement reached at meetings shall not be means to override the requirements to follow stipulated procedure and to submit the required quality assurance documents, method statements, shop drawings etc.
Clause 4		
Contractor's Representative	4.3	<i>At the end of the second paragraph of Sub-Clause 4.3:</i> The Contractor's Representative and all these persons shall also be fluent in English Language.
Subcontractors	4.4	Prior consent shall not be required if the value of the subcontract is less than one percent (1%) of the Accepted Contract Amount.
Safety Procedures	4.8(f)	<i>Add the following to Sub-Clause 4.8</i> The Engineer may call a halt to all works if the contractor fails to meet any of the requirements outlined in this clause. Works shall not recommence until such time as the Contractor has remedied their failure to comply with this conditions of this clause. Any costs incurred as a result of the contractor being ordered to halt work under this clause shall be borne by the contractor.
Site Data	4.10	The Contractor shall be responsible for verifying and interpreting the



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Item	Sub-Clause	Data
		technical data transmitted by the Employer.
<i>Unforeseeable Physical Conditions</i>	4.12	<p><i>Substitute the first paragraph of the Sub-Clause and replace with the following:</i></p> <p>“In this Sub-Clause, “physical conditions” means natural physical conditions and man-made and other physical obstructions and pollutants, which the Contractor encounters at the Site when executing the Works, including hydrographic and sub-seabed conditions but excluding climatic conditions. Hard rock (Beach rock) areas or areas where excavation works cannot be carried out using normal methodology of works shall not be considered as unforeseeable under this Clause.”</p> <p><i>Delete sub-paragraph (b) of Sub-Clause 4.12 and substitute with the following:</i></p> <p>(b) Payment for any such Cost, fifty per cent (50%) of which shall be included in the Contract Price (the balance fifty percent of the Cost shall be borne by the Contractor).</p>
<i>Protection of the Environment</i>	4.18	<p><i>add sub paragraph as follows;</i></p> <p>Contractor must comply with Environment Protection and Preservation Act 1993, and prepare any documents deemed necessary by the Environment Impact Assessment Regulations 2007, and receive consent to the document from the Environment Protection Agency before executing contractual Works and temporary works under this Contract. The cost of any EIA if required shall be borne by the Contractor.</p> <p>(a) Comply and ensure that its subcontractors, if any, comply with international environmental and labor standards consistent with applicable law and regulations in the country of implementation of the project, including the fundamental conventions of the International labor organization (ILO) and International Environmental treaties.</p> <p>(b) Adopt any environmental and social risk mitigations measures as defined in the environmental and social management plan or the notice of environmental and social impact issued by the employer</p>
<i>Clause 5</i>		
<i>General Design Obligation</i>	5.1	<p><i>Add the following at the end of the first paragraph of Sub-Clause 5.1</i></p> <p>The Contractor shall be responsible for verifying and interpreting the technical data transmitted by the Employer.</p>
<i>Clause 6</i>		
<i>Engagement of Staff and Labour</i>	6.1	<p><i>Add to this Sub-Clause</i></p> <p>The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labor with appropriate qualification and experience from sources within the Country of Works.</p>
<i>Clause 8</i>		
<i>Commencement of Work</i>	8.1	The contractor shall be mobilized onsite within 24 days of Signing the Contract Agreement.



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Item	Sub-Clause	Data
Clause 14		
<i>The Contract Price</i>	14.1/14.2	Add the following sub-paragraph (e) if any part of the Works is to be paid according to works completed, Engineer shall use the rate specified in the Contractor's priced Schedule.
<i>Plant and Materials intended for the Works</i>	14.5	This Sub-Clause is not applicable.
Clause 17		
<i>Indemnities</i>	17.1	Delete Sub-Clause 17.1 in its entirety and insert the following. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the Employer, the Engineer, and the Owner, and their officers, directors, subsidiaries, affiliates, agents, employees and other subcontractors, from and against all claims, damages, loss and expenses, including but not limited to attorneys' fees, costs and expenses arising out of or resulting from the performance of Contractor's Work, provided that any such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself) including resulting loss of use), caused in whole or in part by any act or omission of Contractor or anyone directly or indirectly employed by Contractor or for anyone for whose acts Contractor may be liable, regardless of whether it is caused in part by an indemnified party. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Contract.
Clause 18		
<i>General Requirements for Insurances</i>	18.1	Add the following at the end of Sub-Clause 18.1: Acceptable to the Employer.
<i>Insurance against Injury to Persons and Damage to Property</i>	18.3	Add the following sentence at the end of the Sub-Clause 18.3 Prior to commencing any excavation or using any heavy equipment in close proximity to third party properties, the Contractor shall at his own expense arrange his insurers to inspect such properties. He shall also prepare pre-operation condition reports of such properties including any photographs, as deemed appropriate, for future reference.
Clause 20		
<i>Contractor's Claims</i>	20.1	The number days referred to in the Clause is amended as follows: 1st Paragraph: 28 days amended to 14 days 2nd Paragraph: 28 days amended to 14 days 5th Paragraph: 42 days amended to 21 days 6th Paragraph: 42 days amended to 21 days



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