



Ministry of Environment
Republic of Maldives

TERMS OF REFERENCE

INSTALLATION WORKS FOR 06 AUTOMATIC WEATHER STATIONS (GCF Project)

Issued on: 23rd July 2020

Issued By:
GCF Project Management Unit
Water and Sanitation Department
Ministry of Environment

Terms of Reference

Introduction

The outer islands of the Maldives experiences drinking water shortages during dry season. These shortages have had significant adverse human, environmental and social impacts on the outer island communities. In response to this climate challenge, the Government of the Maldives, with the support of the UNDP received financing from Green Climate fund (GCF) is undertaking the “Supporting Vulnerable Communities in the Maldives to Manage Climate Change-Induced Water Shortages” project. The objective of the project is to deliver safe and secure freshwater to 105,000 people in the islands of Maldives in the face of climate change risks. This will be achieved by delivering the following results:

- a. Scaling up an integrated water supply system to provide safe water to vulnerable households;
- b. Introduction of decentralized and cost-effective dry season water supply systems;
- c. Groundwater quality improved to secure freshwater reserves for long term resilience.

The project is one of the first projects to be funded through the Green Climate Fund and is implemented by joint partnership between Ministry of Environment and UNDP. Under this project Ministry of Environment along with Maldives Meteorological Service is expanding its weather network by installing 6 more automatic weather stations. This will feed into strengthening the Meteorological – MMS services on reaching out to the communities actionable early warning information and preparing the water utilities, island councils and the communities to receive and act on such information.

General Objectives of the Assignment

Installation of six automatic weather stations in the islands of Adh. Mahibadhoo, F. Bilhedhoo, S. Hulhumeedhoo, R. Alifushi, R. Dhuvaafaru and Sh. Komandoo. This should include customs clearance of the stations and delivery of the stations from Male’ port to the specific islands.

Specific Objectives

- a. Antennae and the related items of the tower to be cleared from customs and deliver to the islands for installation. The contractor may keep the items at a temporary location set by MoE until delivery to islands. (Antennae packaging picture attached in annex)
- b. Construction of the RCC foundation works as specified in information sheet (Foundation mix to be in the ration of 3:2:1 with 1 cement bag, 2 river sand bags and 3 aggregate bags. River sand used in the foundation should be imported M Sand)
- c. Setting out of the J Bolts and fixing the provided steel plate for antennae base.
- d. Joining the tower portions and erection of the antennae on the foundation.

Specifications of items to be delivered

- a. All the materials will be in 6 pallets with each pallet weighing approximately of 1000kg. (refer to annex for pictures)
- b. The dimensions of each pallet are 3.3m x 2m x 1.05m
- c. The civil works needs to be carried out simultaneously in 3 islands at a time.
- d. Lightening attestors and other required items would be fixed by the client. The junction box and the provision for earthing rods needs to be constructed as per detail design under the contractor’s scope.

- e. All materials for construction of the RCC foundation other than rebar and binding wire is part of the contractor scope. This includes but not limited to cement aggregate, M. Sand, form work materials, DPC and Bitumen.
- f. The joint works of the tower's portions (each tower delivered in 3 parts) and erection of the towers and bolting the towers falls under contractor scope.

Bid Evaluation Criteria

Particulars	Point
Pricing: Minimum quoted price / Quoted price X 80	80%
Duration: Shortest Delivery period / Quoted delivery period X 15	15%
Experience: Each reference is valued at 1 point and will be considered if the submitted reference is similar in nature and carried out within the past 5 years	05%
Total	100%

Documents to be submitted

- a. If a company the company profile
- b. Completion Certificates of similar work carried out if any
- c. If a company, registration copy, if a sole proprietor SP certificate
- d. GST Certificate if registered
- e. BOQ
- f. Work schedule and timeline

List of Annexes

Annex I. Bill of quantities

Annex II. Installation lay-out

Annex III. Reference photos for existing AWS systems

**INSTALLATION OF SIX AUTOMATIC WEATHER STATIONS IN THE ISLAND OF ADH.
MAHIBADHOO, F. BILEHDHOO, S. HULHUMEEDHOO, R. ALIFUSHI, R. DHUVAAFARU AND SH.
KOMANDHOO**

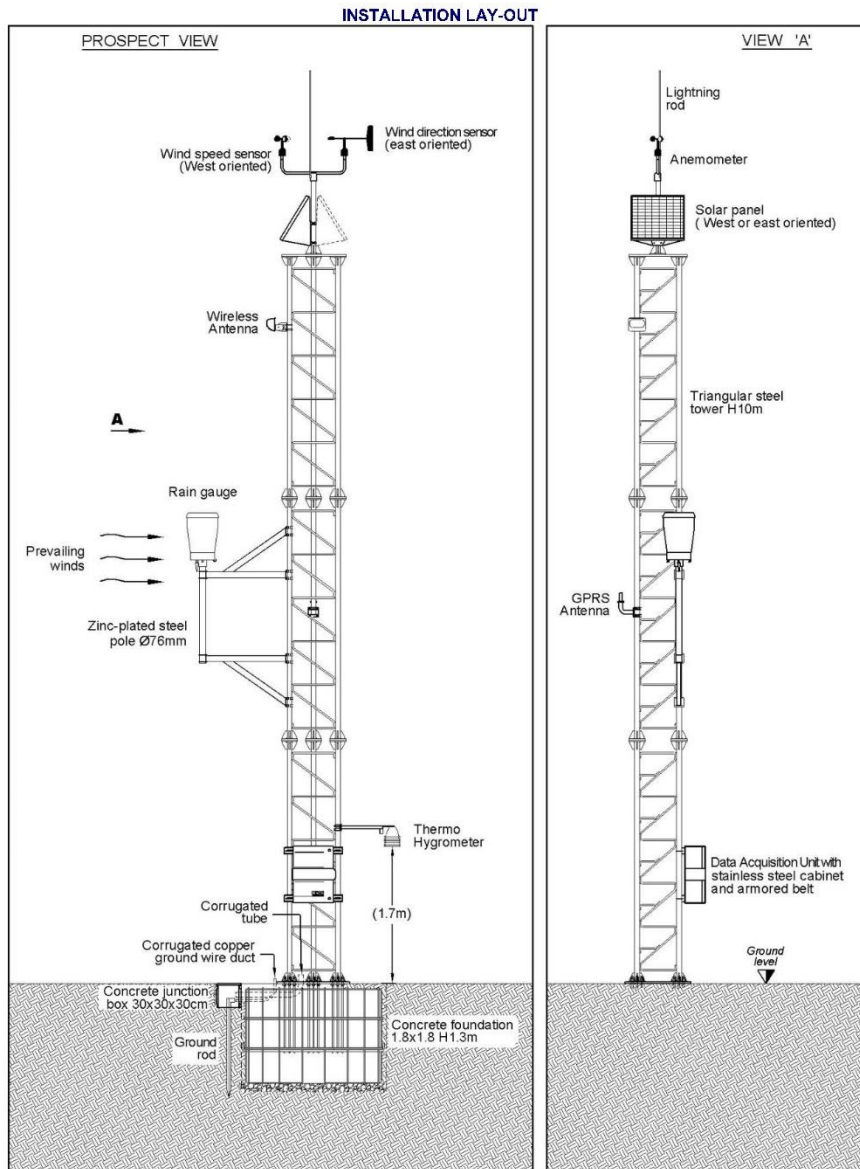
BILL OF QUANTITY

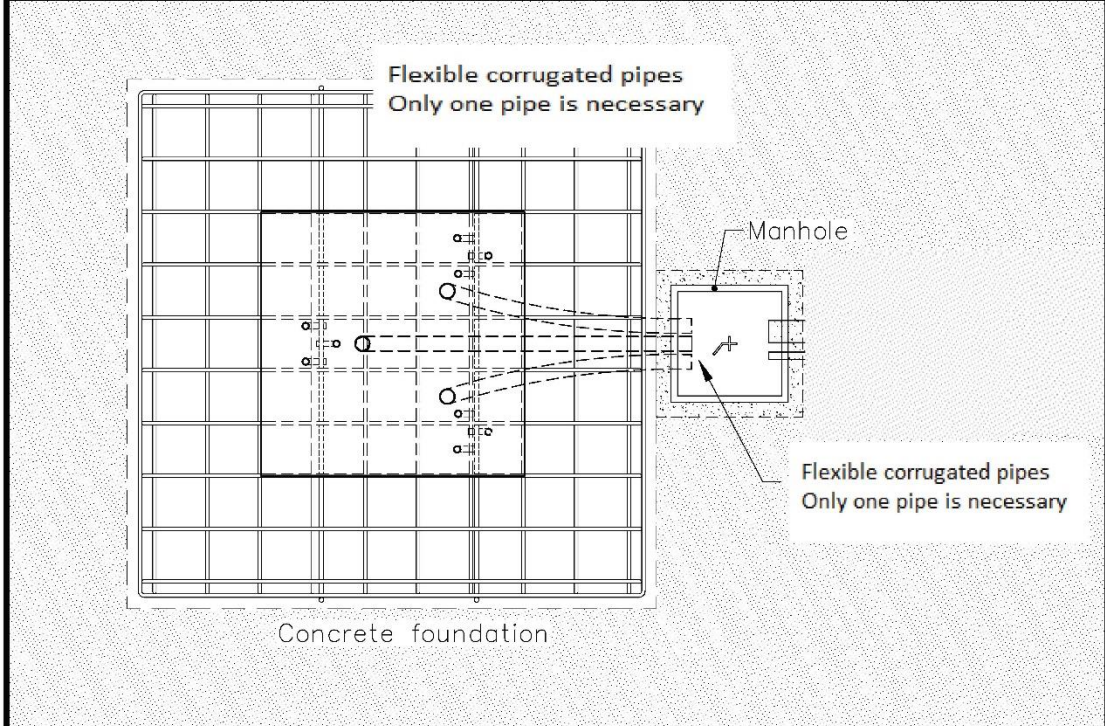
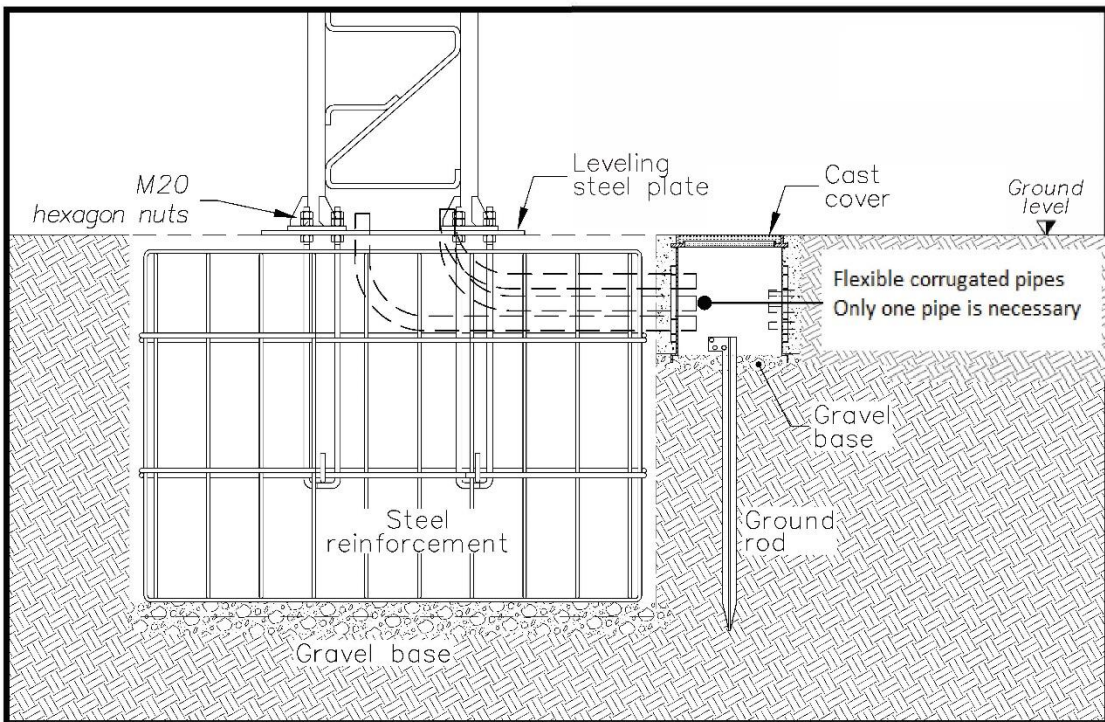
SL.NO	DESCRIPTION	QTY	UNIT	RATE	TOTAL AMOUNT
	<u>Bill No: 01</u> <u>SUMMARY OF WORKS</u>				
A	MOBILISATION AND SUPPLY Supply arrangement of the Antennae and allied equipment's to the respective Islands and mobilisation for civil works. Rates shall include Site management, Clearance fees and charges from CUSTOMS, Transportation and Delivery from ports to the temporary location at WAMCO Male' Site, Transfer arrangements to the site.				
1.0	Adh. Mahidbadhoo system	1.00	LS		-
2.0	F. Bilehdhoo system	1.00	LS		
3.0	S. Hulhumeedhoo system	1.00	LS		
4.0	R. Alifushi system	1.00	LS		
5.0	R. Dhuvaafaru system	1.00	LS		
6.0	Sh. Komandhoo	1.00	LS		
B	CONCRETE WORKS Construction of the RCC foundation as specified in attached drawings. The Rates shall include for Formwork, Shuttering and Reinforcement. The Mix ratio for the RCC is 1:2:3 (Cement: M. Sand: Aggregate)				
1.0	Adh. Mahidbadhoo system	1.00	LS		
2.0	F. Bilehdhoo system	1.00	LS		

3.0	S. Hulhumeedhoo system	1.00	LS		
4.0	R. Alifushi system	1.00	LS		
5.0	R. Dhuvaafaru system	1.00	LS		
6.0	Sh. Komandhoo	1.00	LS		
C	FIXING OF THE BASE PLATE WITH PROVISION OF BOLTS FOR THE ANTENNAE				
	Setting out the base plate and alignment of the Embed bolts within the RCC foundation. The base plate and the J-bolts would be provided with the antennae for each island.				
1.0	Adh. Mahidbadhoo system	1.00	LS		
2.0	F. Bilehdhoo system	1.00	LS		
3.0	S. Hulhumeedhoo system	1.00	LS		
4.0	R. Alifushi system	1.00	LS		
5.0	R. Dhuvaafaru system	1.00	LS		
6.0	Sh. Komandhoo	1.00	LS		
D	INSTALLATION OF THE ANTENNAES				
	Installation of the antennas on the base plates, rates shall include for fixing and alignment of the member with the bolt provisions as per the drawings, tightening the bolts, levelling the member. Rates shall include all equipment and permission charges for the work.				
1.0	Adh. Mahidbadhoo system	1.00	LS		
2.0	F. Bilehdhoo system	1.00	LS		
3.0	S. Hulhumeedhoo system	1.00	LS		
4.0	R. Alifushi system	1.00	LS		
5.0	R. Dhuvaafaru system	1.00	LS		

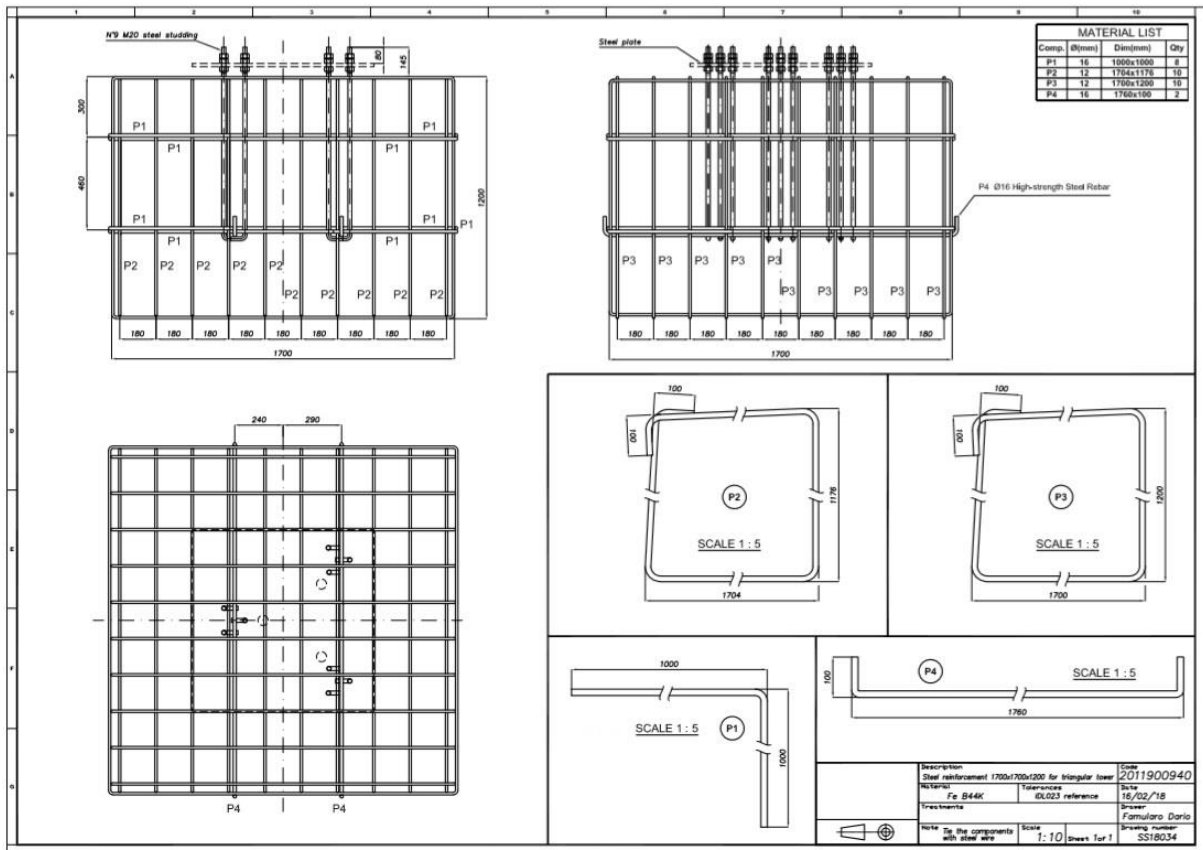
6.0	Sh. Komandhoo	1.00	LS		
	Sub-Total				-
	GST 06%				-
	TOTAL				XXX

Annex II. Installation lay-out





Description			Code
Concrete foundation for triangular tower			2991002010
Note			Drawer
			F. Di Capua
sheet	Scale	Drawing n°	Date
1 di 1	1 : 20		



Annex III. Reference photos for existing AWS systems



