



# Invitation for Bids

## NATIONAL BUILDING RESEARCH ORGANISATION (NBRO)

*Ministry of Irrigation and Water Resources &  
Disaster Management*



### Supply of Automated Raingauge System

The Chairman, Procurement Committee of the National Building Research Organisation (NBRO), No. 99/1, Jawatta Road, Colombo 05, invites sealed bids from eligible and qualified bidders for the Supply, Installation, Commissioning and Maintenance of Automated Raingauge System Network & accessories.

Item No.	Description of Goods or related services	Qty.	Bid Security (Rs.)
1	Automated Raingauge system with Accessories	30	<b>350,000.00</b>
2	Protection fence	30	
3	Base Concrete	30	
4	Pave the base concrete at existing Raingauges in Galle, Matara, Hambantota, Kalutara & Moneragala	20	
5	Name board for each Raingauge	205	

Bidding documents in English language may be purchased by interested bidders upon a submission of a written application addressed to the Director General, National Building Research Organisation, 99/1, Jawatta Road, Colombo 05.

Bidding documents will be issued between 9.30 a.m. to 3.00 p.m. during normal working days from 25<sup>th</sup> May to 22<sup>nd</sup> June, 2018 from the Finance Division of NBRO on a payment of non-refundable tender fee of Rs. 3000/= per document. Bids will be closed at 3.00 p.m. on 25<sup>th</sup> June, 2018.

A pre-bid meeting will be held on 07<sup>th</sup> June, 2018 at 10.00 a.m. at the Auditorium of the NBRO.

Chairman  
Procurement Committee,  
National Building Research Organisation,  
99/1, Jawatta Road,  
Colombo 05

2018-05-25

## Specifications

### 1. Automated rain gauge

Item (1)	Required Specification (2)	Yes/No (3) <sup>1</sup>	Offered Specification (4)
1) Automated rain gauge	<b>Make</b>		
	<b>Model</b>		
	<b>Country of Origin</b>		
	<ul style="list-style-type: none"> <li>Stainless steel construction</li> <li>Tipping-bucket type</li> <li>Operating environment: Humidity: 0 to 100%,</li> <li>Temperature: +5°C to +70°C</li> <li>Low friction and non-seizing bucket bearings</li> <li>Smooth surface for minimal retention in the bucket</li> <li>Reed switch output</li> <li>Bubble level and adjustable feet within the unit</li> <li>Stable calibration</li> <li>Current rainfall shall be displayed through a colour LCD.</li> <li>Aperture : <math>\phi 20\text{cm}</math></li> <li>Accuracy: <math>\pm 0.5\text{mm}</math> at 50mm/hr</li> <li>Resolution: 0.5mm (Tipping-bucket size)</li> <li>Transducer: magnet/reed switch</li> <li>Large and small sieve for collecting bucket to filter the debris</li> <li>Automatic reset with remote access facilities</li> </ul>		
i. Data logger	<ul style="list-style-type: none"> <li>Observation interval : 10 minute</li> <li>Data storage : 10 years or more</li> <li>Interface : USB drive /SD card</li> </ul>		
ii. Data transmission	<ul style="list-style-type: none"> <li>Communication method: GSM /GPRS</li> <li>Transmitting retry: unlimited</li> <li>Resending function: Data of less than 3 hours</li> </ul>		
iii. System enclosure	Corrosion free powder coated Aluminum enclosure with sufficient size to store all sensors, battery and other equipment and protected from dust and humidity as per the manufactures recommendation. The box shall be ventilated to prevent excessive heat buildup during day time.		
iv. Supporting pole	100mm hollow GI pipe with metal fittings etc. to fix Storage box shall be included. The enclosure shall be mounted at 1.2m height, the rain-gauge mounted at 1.5m height. After the installation all metal work shall be painted with grey color anti corrosive paint.		
v. Fence and key	galvanized steel wire $\phi 3.2\text{mm} \times 50\text{mm}$ mesh 1,800mm (W) $\times$ 1,800mm (D) $\times$ 1,200mm (H)		
vi. Lightning Arrester & grounding	10 $\Omega$ or less should be common earth		
vii. Lightning protection for	The contractor shall install manufacture recommended lightning protection accessories.		

<b>common power &amp; GSM modem</b>			
<b>viii. Solar battery system</b>	The solar panels shall have sufficient capacity (Min. 40w) to operate the complete system and charge the battery system. The battery system shall have sufficient storage capacity (24A) to interdependently operate the system for 14 days with solar supply disconnected		
<b>ix. Operational life</b>	10 years		
<b>x. Warranty</b>	3 years		

## 2.0 Protection fence, base concrete and Name board

<b>Item (1)</b>	<b>Required Specification (2)</b>	<b>Yes/No (3)</b>	<b>Offered Specification (4)</b>
Protection fence	Refer 4.0 Drawings		
Base concrete	Refer 4.0 Drawings		
Pave the concrete at existing 20 Raingauges	Refer 4.0 Drawings		
Name board for each Raingauge (205)	Stainless steel Grade: 3.06 plate, Thickness: 0.5mm, Size: 290*210mm With 3 language message		

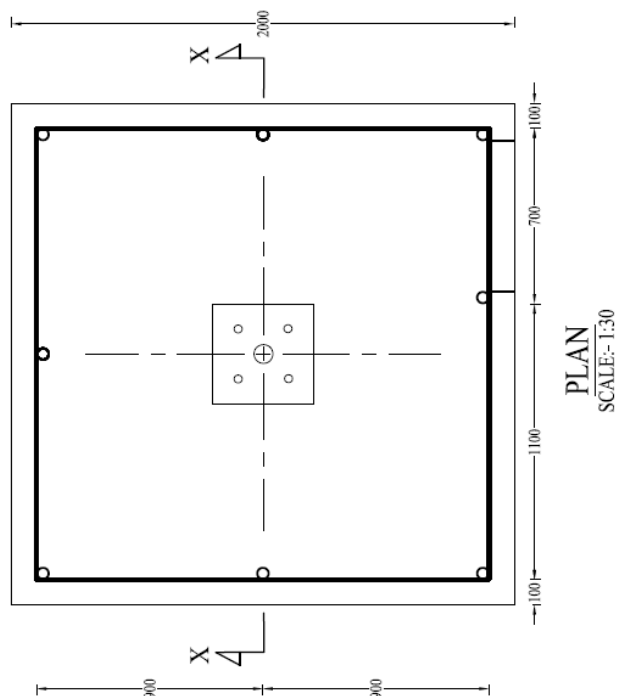
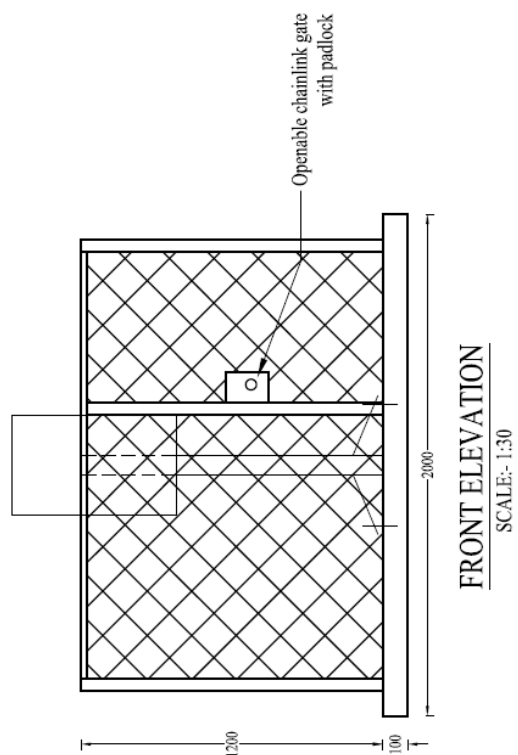
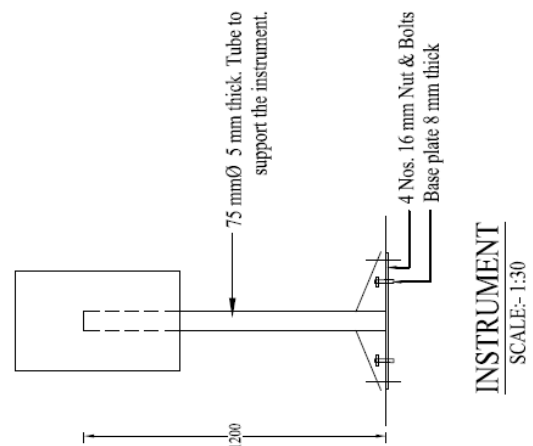
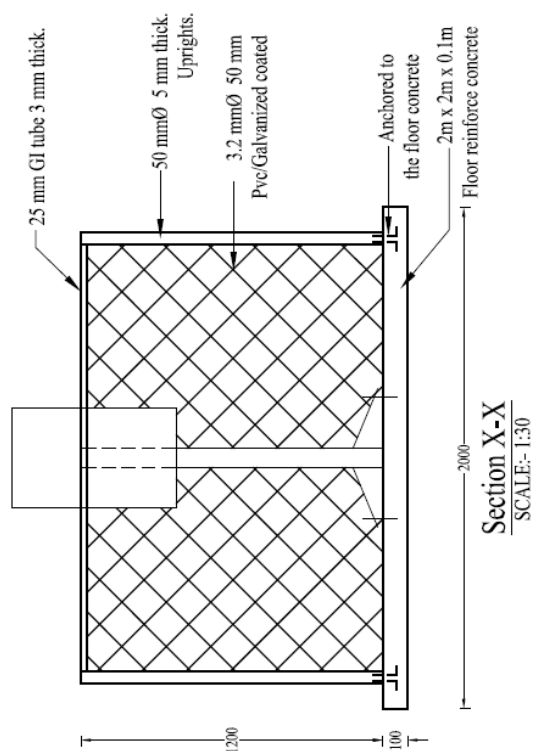


Fig: 1 Net fence and Base Concrete