

**Government of Jammu & Kashmir,
Project Management Unit
Jhelum & Tawi Flood Recovery Project (World Bank Funded)**

BID [TENDER] NO: REVISED/HMAP

**International Competitive Bidding
(One-Envelope Bidding Process without e-Procurement)**

Name of Work	SUPPLY, INSTALLATION & COMMISSIONING, OPERATION AND MAINTENANCE OF HYDRO METEOREOLOGICAL SYSTEM FOR JAMMU & KASHMIR.
Period of sale of bidding document	04 – 10 - 2019 to 14 – 11 - 2019.
Time and date of pre bid meeting	DATE 17 – 10 - – 2019; TIME 1130 HOURS
Last date and time for receipt of bids	DATE 14 - 11 – 2019; TIME 1600 HOURS
Time and date for opening of bids	DATE 14– 11 – 2019; TIME 1630 HOURS
Place of opening of bids	ERA Commercial Complex, Rambagh Srinagar
Officer inviting bids	Director Technical.

Bidding Document for

SUPPLY, INSTALLATION & COMMISSIONING, OPERATION AND MAINTENANCE OF HYDRO METEOROLOGICAL SYSTEM FOR JAMMU & KASHMIR

ICB No : REVISED/HMAP
Project : Jhelum Tawi Flood Recovery Project
Purchaser : Project Management Unit, JTFRP
Country : India
Issued on : 03 – 10 – 2019.

**Government of Jammu & Kashmir,
Project Management Unit
Jhelum & Tawi Flood Recovery Project (World Bank Funded)**

INVITATIONS FOR BIDS (IFB)

INTERNATIONAL COMPETITIVE BIDDING

**Date: 03 – 10 – 2019 .
Bid No.:REVISED/HMAP**

1. The Government of India has received credit for financing from the World Bank towards the cost of Jhelum & Tawi Flood Recovery Project and intends to apply a part of the funds to cover eligible payments under the contracts for construction of works as detailed below.
2. The Director Technical, Project Management Unit, Jhelum Tawi Flood Recovery Project now invites sealed bids from eligible bidders for **“SUPPLY, INSTALLATION & COMMISSIONING, OPERATION AND MAINTENANCE OF HYDRO METEOROLOGICAL SYSTEM FOR JAMMU & KASHMIR”**.
3. Bidding will be conducted through the International Competitive Bidding procedures as specified in the **World Bank’s Guidelines: Procurement of Goods, Works and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, January 2011 Revised July 2014** (“Procurement Guidelines”), and is open to all eligible bidders as defined in the Procurement Guidelines. In addition, please refer to paragraphs 1.6 and 1.7 setting forth the World Bank’s policy on conflict of interest.
4. Interested eligible bidders may obtain further information from Project Management Unit, Jhelum Tawi Flood Recovery Project; Email id : dirpmujk@gmail.com, dirpnc@gmail.com; Tel : 0194-2437320, 0191 – 2475521, 9419025185 and inspect the bidding documents during office hours [0930 to 1700 hours] at the address given below:-
5. A complete set of bidding documents in English may be purchased by interested eligible bidders upon the submission of a written application to the address below and upon payment of a nonrefundable fee of **INR 10,000/- (Indian Rupees Ten Thousand)**. The method of payment will be Demand Draft in favour of Chief Accounts Officer, PMU, JTFRP. The document will be sent by post, courier services, or in person (*In case the bidding document is downloaded from website, payment should accompany the bid submission*).

6. Bids must be delivered to the address below:-

PMU JTFRP Office, ERA Commercial Complex, Rambagh Srinagar, J&K. on or before 1600 hours of 14-11-2019. Electronic bidding will not be permitted. Late bids will be rejected. **Bids will be publicly opened on the same day immediately after the bid submission** in presence of the bidders' designated representatives and anyone who choose to attend at the address below Project Management Unit, JTFRP, ERA Complex Rambagh Srinagar1630 on 14-11-2019. In the event of the date specified for bid submission and opening being declared as a closed holiday for the purchaser's office, the due date for submission and opening of bids will be the following working day at the appointed time.

7. All bids must be accompanied by a "*Bid Security*" of **INR 12.5 million (Twelve million and five hundred thousand Indian Rupees)** or an equivalent amount in a freely convertible currency in case of a Bid Security.

8. The address(es) referred to above is(are):

- Name & Designation of Officer : Iftikhar Ahmed Kakroo.
- Official Address :
PMU JTFRP office, ERA Commercial Complex, Rambagh Srinagar,
J&K, India - 190009.
- Email : dirpmujk@gmail.com, dirpnc@gmail.com.
- Telephone: 0194-2437320, 0191 – 2475521.
- Website: www.jtfrp.in

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PART 1 – Bidding Procedures

Section I. Instructions to Bidders

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Section I. Instructions to Bidders

A. General

1. **Scope of Bid**
 - 1.1 In connection with the Invitation for Bids, **specified in the Bid Data Sheet (BDS)**, the Purchaser, **as specified in the BDS**, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section VII, Schedule of Requirements. The name, identification and number of lots (contracts) of this International Competitive Bidding (ICB) procurement are **specified in the BDS**.
 - 1.2 Throughout these Bidding Documents:
 - (a) the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex) with proof of receipt;
 - (b) if the context so requires, “singular” means “plural” and vice versa; and
 - (c) “day” means calendar day.
2. **Source of Funds**
 - 2.1 The Borrower or Recipient (hereinafter called “Borrower”) **specified in the BDS** has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) in an amount **specified in BDS**, toward the project named **in BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.
 - 2.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the Loan (or other financing) account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).
3. **Corrupt and Fraudulent Practices**
 - 3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section VI.

- 3.2 In further pursuance of this policy, Bidders shall permit and shall cause its agents (where declared or not), sub-contractors, sub-consultants, service providers or suppliers and to permit the Bank to inspect all accounts, records and other documents relating to the submission of the application, bid submission (in case prequalified), and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. Eligible Bidders

- 4.1 A Bidder may be a firm that is a private entity, a government-owned entity - subject to ITB 4.5 - or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the members of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution. **Unless specified in the BDS,** there is no limit on the number of members in a JV.
- 4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:
- (a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or
 - (b) receives or has received any direct or indirect subsidy from another Bidder; or
 - (c) has the same legal representative as another Bidder; or
 - (d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
 - (e) participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same sub-contractor in more than one bid; or
 - (f) any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the

works that are the subject of the bid; or

- (g) any of its affiliates has been hired (or is proposed to be hired) by the Purchaser or Borrower for the Contract implementation; or
 - (h) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
 - (i) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the procurement process and execution of the contract.
- 4.3 ABidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.7. ABidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed sub-contractors or sub-consultants for any part of the Contract including related Services.
- 4.4 ABidder that has been sanctioned by the Bank in accordance with the above ITB 3.1, including in accordance with the Bank's Guidelines on Preventing and Combating Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants ("Anti-Corruption Guidelines"), shall be ineligible to be prequalified for, bid for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address **specified in the BDS.**

- 4.5 Bidders that are Government-owned enterprises or institutions in the Purchaser's Country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the Purchaser. To be eligible, a government-owned enterprise or institution shall establish to the Bank's satisfaction, through all relevant documents, including its Charter and other information the Bank may request, that it: (i) is a legal entity separate from the government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the ability to exercise influence or control over the enterprise or institution.
- 4.6 A Bidder shall not be under suspension from bidding by the Purchaser as the result of the operation of a Bid-Securing Declaration.
- 4.7 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country, or any payments to any country, person, or entity in that country.
- 4.8 A Bidder shall provide such evidence of eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.

5. Eligible Goods and Related Services

- 5.1 All the Goods and Related Services to be supplied under the Contract and financed by the Bank may have their origin in any country in accordance with Section V, Eligible Countries.
- 5.2 For purposes of this Clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, installation, training, and initial maintenance.
- 5.3 The term "origin" means the country where the goods have been

mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of Bidding Document

6. Sections of Bidding Document

- 6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1 Bidding Procedures

- Section I. Instructions to Bidders (ITB)
- Section II. Bidding Data Sheet (BDS)
- Section III. Evaluation and Qualification Criteria
- Section IV. Bidding Forms
- Section V. Eligible Countries
- Section VI. Bank Policy-Corrupt and Fraudulent Practices

PART 2 Supply Requirements

- Section VII. Schedule of Requirements

PART 3 Contract

- Section VIII. General Conditions of Contract (GCC)
- Section IX. Special Conditions of Contract (SCC)
- Section X. Contract Forms

- 6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Document.
- 6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the document, responses to requests for clarification, the Minutes of the pre-Bid meeting (if any), or Addenda to the Bidding Document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.

- 7. Clarification of Bidding Documents**
- 7.1 A Bidder requiring any clarification of the Bidding Document shall contact the Purchaser in writing at the Purchaser's address **specified in the BDS**. The Purchaser will respond in writing to any request for clarification, provided that such request is received prior to the deadline for submission of bids within a period **specified in the BDS**. The Purchaser shall forward copies of its response to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so **specified in the BDS**, the Purchaser shall also promptly publish its response at the web page **identified in the BDS**. Should the clarification result in changes to the essential elements of the Bidding Documents, the Purchaser shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2.
- 8. Amendment of Bidding Document**
- 8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addenda.
- 8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents from the Purchaser in accordance with ITB 6.3. The Purchaser shall also promptly publish the addendum on the Purchaser's web page in accordance with ITB 7.1.
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2.

C. Preparation of Bids

- 9. Cost of Bidding**
- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 10. Language of Bid**
- 10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the language **specified in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.
- 11. Documents Comprising the**
- 11.1 The Bid shall comprise the following:

Bid

- (a) Letter of Bid in accordance with ITB 12;
- (b) completed schedules, in accordance with ITB 12 and 14;
- (c) Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1;
- (d) Alternative bids, if permissible, in accordance with ITB 13;
- (e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2;
- (f) documentary evidence in accordance with ITB 17 establishing the Bidder's qualifications to perform the contract if its bid is accepted;
- (g) documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to bid;
- (h) documentary evidence in accordance with ITB 16, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
- (i) documentary evidence in accordance with ITB 16 and 30, that the Goods and Related Services conform to the Bidding Documents; and
- (j) any other document **required in the BDS**.

11.2 In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.

11.3 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

**12. Letter of Bid
and Price
Schedules**

12.1. The Letter of Bid and Price Schedules shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.2. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

13.1. Unless otherwise **specified in the BDS**, alternative bids shall not be considered.

14. Bid Prices and Discounts

- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Price Schedules shall conform to the requirements specified below.
- 14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.
- 14.3 The price to be quoted in the Letter of Bid in accordance with ITB 12.1 shall be the total price of the bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid, in accordance with ITB 12.1.
- 14.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, **unless otherwise specified in the BDSA** bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 29. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.
- 14.6 If so specified in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Unless otherwise **specified in the BDS**, prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer discounts for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4 provided the bids for all lots (contracts) are opened at the same time.
- 14.7 The terms EXW, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, **as specified in the BDS**.
- 14.8 Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms. The dis-aggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country,

in accordance with Section V, Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V, Eligible Countries. Prices shall be entered in the following manner:

- (a) For Goods manufactured in the Purchaser's Country:
 - (i) the price of the Goods quoted EXW (ex-works, ex-factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods;
 - (ii) any Purchaser's Country sales tax and other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and
 - (iii) the price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) **specified in the BDS.**
- (b) For Goods manufactured outside the Purchaser's Country, to be imported:
 - (i) the price of the Goods, quoted CIP named place of destination, in the Purchaser's Country, as **specified in the BDS;**
 - (ii) the price for inland transportation, insurance, and other local services required to convey the Goods from the named place of destination to their final destination (Project Site) **specified in the BDS;**
- (c) For Goods manufactured outside the Purchaser's Country, already imported:
 - (i) the price of the Goods, including the original import value of the Goods; plus any mark-up (or rebate); plus any other related local cost, and custom duties and other import taxes already paid or to be paid on the Goods already imported;
 - (ii) the custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported;
 - (iii) the price of the Goods, obtained as the difference

between (i) and (ii) above;

(iv) any Purchaser's Country sales and other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and

(v) the price for inland transportation, insurance, and other local services required to convey the Goods from the named place of destination to their final destination (Project Site) **specified in the BDS.**

(d) for Related Services, other than inland transportation and other services required to convey the Goods to their final destination, whenever such Related Services are specified in the Schedule of Requirements:

(i) the price of each item comprising the Related Services (inclusive of any applicable taxes).

15. Currencies of Bid and Payment

15.1 The currency(ies) of the bid and the currency(ies) of payments shall be **as specified in the BDS.** The Bidder shall quote in the currency of the Purchaser's Country the portion of the bid price that corresponds to expenditures incurred in the currency of the Purchaser's country, unless otherwise **specified in the BDS.**

15.2 The Bidder may express the bid price in any currency. If the Bidder wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly but shall use no more than three foreign currencies in addition to the currency of the Purchaser's Country.

16. Documents Establishing the Eligibility and Conformity of the Goods and Related Services

16.1 To establish the eligibility of the Goods and Related Services in accordance with ITB 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.

16.2 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.

16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII,

Schedule of Requirements.

- 16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.
- 16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.
- 17. Documents Establishing the Eligibility and Qualifications of the Bidder**
- 17.1 To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid, included in Section IV, Bidding Forms.
- 17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction:
- (a) that, if **required in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's Country;
 - (b) that, if **required in the BDS**, in case of a Bidder not doing business within the Purchaser's Country, the Bidder is or will be (if awarded the contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
 - (c) that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.
- 18. Period of Validity of Bids**
- 18.1. Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall

be rejected by the Purchaser as nonresponsive.

- 18.2. In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB 18.3.
- 18.3. If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:
 - (a) In the case of fixed price contracts, the Contract price shall be the bid price adjusted by the factor **specified in the BDS**.
 - (b) In the case of adjustable price contracts, no adjustment shall be made.
 - (c) In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

- 19.1. The Bidder shall furnish as part of its bid, either a Bid-Securing Declaration or a bid security, as **specified in the BDS**, in original form and, in the case of a bid security, in the amount and currency **specified in the BDS**.
- 19.2. A Bid Securing Declaration shall use the form included in Section IV, Bidding Forms.
- 19.3. If a bid security is specified pursuant to ITB 19.1, the bid security shall be a demand guarantee in any of the following forms at the Bidder's option:
 - (a) an unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company);
 - (b) an irrevocable letter of credit;
 - (c) a cashier's or certified check; or
 - (d) another security **specified in the BDS**,
from a reputable source from an eligible country. If the

- unconditional guarantee is issued by a financial institution located outside the Purchaser's Country, the issuing financial institution shall have a correspondent financial institution located in the Purchaser's Country to make it enforceable. In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Purchaser prior to bid submission. The bid security shall be valid for twenty-eight (28) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.
- 19.4. If a Bid Security is specified pursuant to ITB 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.
- 19.5. If a Bid Security is specified pursuant to ITB 19.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB 42.
- 19.6. The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.
- 19.7. The Bid Security may be forfeited or the Bid Securing Declaration executed:
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder; or
 - (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB41; or
 - (ii) furnish a performance security in accordance with ITB 42.
- 19.8. The bid security or Bid- Securing Declaration of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the bid security or Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.
- 19.9. If a bid security is **not required in the BDS**, pursuant to ITB 19.1, and
- (a) if a Bidder withdraws its bid during the period of bid

validity specified by the Bidder on the Letter of Bid, or

- (b) if the successful Bidder fails to: sign the Contract in accordance with ITB41; or furnish a performance security in accordance with ITB 42;

the Borrower may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a contract by the Purchaser for a period of time **as stated in the BDS**.

20. Format and Signing of Bid

- 20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it "ORIGINAL." Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE." In addition, the Bidder shall submit copies of the bid, in the number **specified in the BDS** and clearly mark them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.
- 20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation **as specified in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialed by the person signing the bid.
- 20.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.
- 20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

D. Submission and Opening of Bids

21. Sealing and Marking of Bids

- 21.1. The Bidder shall enclose the original and all copies of the bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY." These envelopes containing the original and the copies shall then be enclosed in one single envelope.
- 21.2. The inner and outer envelopes shall:
 - (a) bear the name and address of the Bidder;
 - (b) be addressed to the Purchaser in accordance with ITB 22.1;

- (c) bear the specific identification of this bidding process indicated in ITB1.1; and
 - (d) bear a warning not to open before the time and date for bid opening.
- 21.3. If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid.
- 22. Deadline for Submission of Bids**
 - 22.1. Bids must be received by the Purchaser at the address and no later than the date and time **specified in the BDS**. When **so specified in the BDS**, bidders shall have the option of submitting their bids electronically. Bidders submitting bids electronically shall follow the electronic bid submission procedures **specified in the BDS**.
 - 22.2. The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 23. Late Bids**
 - 23.1. The Purchaser shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
- 24. Withdrawal, Substitution, and Modification of Bids**
 - 24.1. A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization (the power of attorney) in accordance with ITB 20.2, (except that withdrawal notices do not require copies). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:
 - (a) prepared and submitted in accordance with ITB 20 and 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” or “MODIFICATION;” and
 - (b) received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB 22.
 - 24.2. Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

- 24.3. No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

25. Bid Opening

- 25.1. Except as in the cases specified in ITB 23 and 24, the Purchaser shall publicly open and read out in accordance with ITB 25.3 all bids received by the deadline at the date, time and places **specified in the BDS** in the presence of Bidders' designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 22.1, shall be as **specified in the BDS**.
- 25.2. First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. If the withdrawal envelope does not contain a copy of the "power of attorney" confirming the signature as a person duly authorized to sign on behalf of the Bidder, the corresponding bid will be opened. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only bids that are opened and read out at Bid opening shall be considered further.
- 25.3. All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Prices, per lot (contract) if applicable, including any discounts and alternative bids; the presence or absence of a Bid Security, if required; and any other details as the Purchaser may consider appropriate. Only discounts and alternative bids read out at Bid opening shall be considered for evaluation. The Letter of Bid and the Price Schedules are to be initialed by representatives of the Purchaser attending bid opening in the manner **specified in the BDS**. The Purchaser shall neither discuss the merits of any bid nor reject any bid (except for late bids, in accordance with ITB 23.1).

- 25.4. The Purchaser shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot (contract) if applicable, including any discounts, and alternative bids; and the presence or absence of a Bid Security, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

- 26. Confidentiality**
- 26.1 Information relating to the evaluation of bids and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with the bidding process until information on Contract Award is communicated to all Bidders in accordance with ITB 40.
- 26.2 Any effort by a Bidder to influence the Purchaser in the evaluation or contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.
- 27. Clarification of Bids**
- 27.1 To assist in the examination, evaluation, comparison of the bids, and qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB 31.
- 27.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.

- 28. Deviations, Reservations, and Omissions**
- 28.1 During the evaluation of bids, the following definitions apply:
- (a) “Deviation” is a departure from the requirements specified in the Bidding Documents;
 - (b) “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
 - (c) “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Documents.
- 29. Determination of Responsiveness**
- 29.1 The Purchaser’s determination of a bid’s responsiveness is to be based on the contents of the bid itself, as defined in ITB 11.
- 29.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
- (a) if accepted, would
 - (i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
 - (ii) limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser’s rights or the Bidder’s obligations under the Contract; or
 - (b) if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
- 29.3 The Purchaser shall examine the technical aspects of the bid submitted in accordance with ITB 16 and ITB 17, in particular, to confirm that all requirements of Section VII, Schedule of Requirements have been met without any material deviation or reservation, or omission.
- 29.4 If a bid is not substantially responsive to the requirements of Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 30. Nonconformities, Errors and Omissions**
- 30.1 Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities in the Bid.
- 30.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or

documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

30.3 Provided that a bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component.

31. Correction of Arithmetical Errors

31.1 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

- (a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
- (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 31.1, shall result in the rejection of the Bid.

32. Conversion to Single Currency

32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted in a single currency as **specified in the BDS**.

33. Margin of Preference

33.1 **Unless otherwise specified in the BDS**, a margin of preference shall not apply.

34. Evaluation of Bids

34.1 The Purchaser shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

34.2 To evaluate a Bid, the Purchaser shall consider the following:

- (a) evaluation will be done for Items or Lots (contracts), as **specified in the BDS**; and the Bid Price as quoted in accordance with clause 14;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB 31.1;
 - (c) price adjustment due to discounts offered in accordance with ITB 14.4;
 - (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;
 - (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 30.3; and
 - (f) the additional evaluation factors are specified in Section III, Evaluation and Qualification Criteria.
- 34.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 34.4 If these Bidding Documents allow Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Letter of Bid Form, is specified in Section III, Evaluation and Qualification Criteria.
- 34.5 The Purchaser's evaluation of a bid will exclude and not take into account:
- (a) in the case of Goods manufactured in the Purchaser's Country, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;
 - (b) in the case of Goods manufactured outside the Purchaser's Country, already imported or to be imported, customs duties and other import taxes levied on the imported Good, sales and other similar taxes, which will be payable on the Goods if the contract is awarded to the Bidder;
 - (c) any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 34.6 The Purchaser's evaluation of a bid may require the consideration of other factors, in addition to the Bid Price quoted in accordance with ITB 14. These factors may be related to the characteristics, performance, and terms and conditions of

purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of bids, unless otherwise **specified in the BDS** from amongst those set out in Section III, Evaluation and Qualification Criteria. The criteria and methodologies to be used shall be as specified in ITB 34.2 (f).

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| 35. Comparison of Bids | 35.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids established in accordance with ITB 34.2 to determine the lowest evaluated bid. The comparison shall be on the basis of CIP (place of final destination) prices for imported goods and EXW prices, plus cost of inland transportation and insurance to place of destination, for goods manufactured within the Borrower's country, together with prices for any required installation, training, commissioning and other services. The evaluation of prices shall not take into account custom duties and other taxes levied on imported goods quoted CIP and sales and similar taxes levied in connection with the sale or delivery of goods. |
| 36. Qualification of the Bidder | <p>36.1 The Purchaser shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid meets the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.</p> <p>36.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.</p> <p>36.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's qualifications to perform satisfactorily.</p> |
| 37. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids | 37.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders. |

F. Award of Contract

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| 38. Award Criteria | 38.1 Subject to ITB 37.1, the Purchaser shall award the Contract to the Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be |
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qualified to perform the Contract satisfactorily.

**39. Purchaser's
Right to Vary
Quantities at
Time of Award**

39.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages **specified in the BDS**, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.

**40. Notification of
Award**

40.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of Acceptance") shall specify the sum that the Purchaser will pay the Supplier in consideration of the supply of Goods (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price"). At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding and shall publish in *UNDB online* the results identifying the bid and lot (contract) numbers and the following information:

- (i) name of each Bidder who submitted a Bid;
- (ii) bid prices as read out at Bid Opening;
- (iii) name and evaluated prices of each Bid that was evaluated;
- (iv) name of bidders whose bids were rejected and the reasons for their rejection; and
- (v) name of the successful Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded.

40.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

40.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 40.1, requests in writing the grounds on which its bid was not selected.

**41. Signing of
Contract**

41.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.

41.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.

41.3 Notwithstanding ITB 41.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its bid, always provided however, that the Bidder can demonstrate to the satisfaction of the Purchaser and of the Bank that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract.

**42. Performance
Security**

42.1 Within twenty-eight (28) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC 18, using for that purpose the Performance Security Form included in Section X, Contract Forms, or another Form acceptable to the Purchaser. If the Performance Security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Purchaser. A foreign institution providing a bond shall have a correspondent financial institution located in the Purchaser's Country.

42.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose bid is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

Section II. Bid Data Sheet (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Clause Reference	A. General
ITB 1.1	The reference number of the Invitation for Bids is: JTFRP/PMU/HMAP/PACKAGE/01.
ITB 1.1	The Purchaser is: Chief Executive Officer, Jhelum & Tawi Flood Recovery Project. The name and Reference number of the IFB is: SUPPLY, INSTALLATION & COMMISSIONING, OPERATION AND MAINTENANCE OF HYDRO METEOREOLOGICAL SYSTEM FOR JAMMU & KASHMIR
ITB 2.1	The Borrower is: Government of India / Government of J&K.
ITB 2.1	Loan or Financing Agreement amount: US\$ 250 Million
ITB 2.1	The name of the Project is: Jhelum & Tawi Flood Recovery Project (JTFRP).
ITB 4.1	Maximum number of members in the JV shall be: <i>One Lead member plus three other members</i>
ITB 4.2(f)	In ITB 4.2(f) replace the word ‘works’ with ‘goods’.
ITB 4.4	A list of debarred firms and individuals is available on the Bank’s external website: http://www.worldbank.org/debarr .
	B. Contents of Bidding Documents
ITB 7.1	For <u>Clarification of bid purposes</u> only, the Purchaser’s address is: Director Technical PMU Jhelum & Tawi Flood Recovery Project. Srinagar Office: 2nd Floor, ERA Commercial Complex, Rambagh, Srinagar – 190009. 0194-2437320 dirpmujk@gmail.com, dirpnc@gmail.com Requests for clarification should be received by the Purchaser no later than: <i>[15 days prior to bid submission end date].</i>
ITB 7.1	Web page: www.jtfrp.in

	C. Preparation of Bids
ITB 10.1	The language of the bid is: English. All correspondence exchange shall be in English language. Language for translation of supporting documents and printed literature is English.
ITB 11.1 (j)	The Bidder shall submit the following additional documents in its bid: 1. Certification of incorporation of the bidder. 2. Technical schedules of goods as required by technical specifications. 3. A detailed description of the Goods essential technical and performance characteristics. 4. A clause-by-clause commentary on the Purchaser's technical specifications demonstrating substantial responsiveness of the Goods and Services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications. 5. For purposes of the commentary to be furnished pursuant to Paragraph 6 above, the Bidder shall note that standards for workmanship, material and goods, and references to brand names or catalogue numbers designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications 6. Non-manufacturer bidders will submit the manufacturer's authorization Form as per Proforma in Section IV. 7. The following details shall also be provided by Indian Bidders: a) Name, address, PAN and ward/circle where they are being assessed of the Directors of the Bidding Company. b) Company's PAN and Income Tax Return Acknowledgement and ward/circle where it is being assessed,(in case the bidder is manufacturer) c) Registration details of the company under GST and other laws as may be applicable and also GST Return Acknowledgement/Tax clearance certificate - The bidders from outside India shall provide the corresponding

	details of Income Tax registration, Social Security Number, details regarding Registration under GST or sale of goods (as may be applicable) etc 8. The bidder shall disclose instance of previous past performance that may have resulted into adverse actions taken against the bidder during the last five years. 9. The bidder should furnish the information on past supplies and satisfactory performance in the Proforma given in the bid document. 10. Bidders shall invariably furnish documentary evidence (End User's certificate) in support of the satisfactory operation of the goods as specified above. 11. The bidder shall furnish data to support that he has the financial and production capacity to perform the contract and complete the supplies within the stipulated delivery period. 12. Further, bidder should be in continuous business of manufacturing / supplying and after sale services of products similar to that specified in the 'Schedule of requirement' during the last 5 years prior to bid opening. 13. The documentary evidence of the Bidder's eligibility to bid shall establish to the Purchaser's satisfaction that the Bidder, at the time of submission of its bid, is from an eligible country as defined under the bid. 14. The legal status, place of registration and principal place of business of the company or firm or partnership, etc.; 15. Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past five years and details of current contracts in hand and other commitments (suggested Proforma given in bid). 16. The Bidder should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the manufacture and supply of the required equipment within the specified time of completion after the meeting all their current commitments. 17. The bidder should clearly confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the purchaser or his representative for inspection. 18. Reports on financial standing of the bidder such as profit and loss statements, balance sheets and auditor's report for the past five FY, bankers certificate, etc.
ITB 13.1	Alternative Bids <i>shall not be</i> considered.
ITB 14.5	The prices quoted by the Bidder <i>shall not</i> be subject to adjustment during the performance of the Contract.

ITB 14.7	The Incoterms edition is: Incoterms 2010.
ITB 14.8 (b) (i) and (c) (v)	Place of Destination: Jammu & Kashmir regions of J&K, India.
ITB 14.8 (a) (iii);(b)(ii) and (c)(v)	“Final destination (Project Site)”: <i>Jammu and Kashmir,(Different Locations).</i>
ITB 14.9	Add the following as sub-clause 14.9 “14.9. Tax/duty exemptions Bidders may like to ascertain availability of tax/duty exemption benefits available in India to the contracts financed under World Bank loan/credits. They are solely responsible for obtaining such benefits which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the purchaser will not compensate the bidder. Where the bidder has quoted taking into account such benefits, it must give all information required for issue of necessary Certificates in terms of Government of India’s relevant notifications along with its bid as per form stipulated in Section IV. If the bidder has considered the tax/duty exemption in its bid, the bidder shall confirm and certify that the Purchaser will not be required to undertake any responsibilities of the Government of India Scheme or the said exemptions being available during the contract execution, except issuing the required certificate. The bids which do not conform to the above provisions or any condition by the bidder which makes the bid subject to availability of tax/ duty exemption or compensation on withdrawal of any variations to the said exemptions will be treated as non-responsive and liable to rejection”
ITB 15.1	Replace ITB 15.1 with the following: “15.1. The bidder may quote the prices in any fully convertible currency, singly or in combination of upto three (03) foreign currencies. The financial bid should state local costs in purchaser’s country currency (Indian Rupees)
ITB 16.4	Period of time the Goods are expected to be functioning (for the purpose of spare parts): 5 year
ITB 17.2 (a)	Manufacturer’s authorization is: required as per Proforma in Section IV.
ITB 17.2 (b)	After sales service is required .After sales service wherever required,shall be provided by the Supplier or alternatively by its Agent in case of a foreign bidder.

ITB 17.2 (d)	Add the following as Clause 17.2 (d) “17.2 (d) Supplies for any particular item in each schedule of the bid should be from one manufacturer only for the entire quantity required. Bids from agents offering supplies from different manufacturers for the same item of the schedule in the bid other than alternative bids will be treated as non-responsive.”
ITB 18.1	The bid validity period shall be 120 days.
ITB 18.3 (a)	Not Applicable
ITB 19.1	A Bid Security shall be required. A Bid-Securing Declaration “shall not be” required. The amount and currency of the bid security shall be INR 12.5 million (Twelve million and five hundred thousand Indian Rupees) Or an equivalent amount in freely convertible foreign currency. Bid security shall not be in the form of a Bid Bond.
ITB 19.3 (d)	The bid security shall be in the form of Letter of Credit, Bank guarantee or Fixed Deposit Receipt (FDR) of a scheduled commercial bank, issued in favour of Chief Accounts Officer, Project Management Unit, Jhelum Tawi Flood Recovery Project, Srinagar. The last sentence of ITB 19.3 is modified as “The bid security shall be valid for forty-five (45) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.”
ITB 20.1	In addition to the original of the bid, the number of copies is: [two]
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of: a) <i>Legally valid Power of Attorney is required to demonstrate the authority of the signatory to sign the Bid; and</i> b) <i>In the case of Bids submitted by an existing or intended JV, if permitted as per ITB 4.1, the authorization shall be evidenced by a Power of Attorney signed by legally authorized signatories of all the members [insert the name and description of the documentation required to demonstrate the authority of the signatory to sign the bid].</i>
	D. Submission and Opening of Bids
ITB 21.2 (c)	The inner and outer envelopes shall bear the following additional identification marks: Bid for SUPPLY, INSTALLATION &

	COMMISSIONING, OPERATION AND MAINTENANCE OF HYDRO METEOROLOGICAL SYSTEM FOR JAMMU & KASHMIR.
ITB 22.1	For <u>bid submission purposes</u> only, the Purchaser's address is: Director Technical PMU, Jhelum & Tawi Flood Recovery Project. Srinagar Office: 2nd Floor, ERA Commercial Complex, Rambagh, Srinagar – 190009. 0194-2437320 dirpmujk@gmail.com, dirpnc@gmail.com The deadline for the submission of bids is: 14 – 11 – 2019. Time: 1600 hours. Bidders shall not have the option of submitting their bids electronically. Email, Telex, Cable or Facsimile bids will be rejected. “In the event of the specified date for the submission of bids, being declared a holiday for the Purchaser, the bids will be received upto the appointed time on the next working day.”
ITB 25.1	The bid opening shall take place at: Director Technical PMU, Jhelum & Tawi Flood Recovery Project. Srinagar Office: 2nd Floor, ERA Commercial Complex, Rambagh, Srinagar – 190001. 0194-2437320 dirpmujk@gmail.com Date: 14 – 11 – 2019 Time: 16300 hours Add at the end of ITB Clause 25.1 the following: “In the event of the specified date of the bid opening being declared a holiday for the Purchaser, the bids shall be opened at the appointed time and location on the next working day.”
E. Evaluation and Comparison of Bids	
ITB 30.3	The adjustment shall be based on the highest price of the item or component as quoted in other substantially responsive Bids, subject to a maximum of the estimated price of the item. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Purchaser shall use its best estimate.

ITB 32.1	The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: Indian Rupees. The source of exchange rate shall be: BC selling market exchange rates established by the State Bank of India. The date for the exchange rate shall be: the deadline for submission of bids
ITB 33.1	Domestic Preference : Not Applicable
ITB 34.2(a)	<i>Bids will be evaluated for complete package. Bidder should quote for the complete requirement for goods and services specified as stated in ITB clause 14.6 failing which such bids will be treated as non-responsive.</i>
ITB 34.4	Not Applicable
ITB 34.6	Not Applicable
ITB 36.2	Add at the end of ITB Clause 36.2 the following: “The determination shall not take into consideration the qualifications of other firms such as the Bidder’s subsidiaries, parent entities, affiliates, sub-contractors (other than specialized sub-contractors if permitted in the bidding document), or any other firm(s) different from the Bidder.”
	F. Award of Contract
ITB 39.1	The maximum percentage by which quantities may be increased is: 50% The maximum percentage by which quantities may be decreased is: 25%
ITB 40.1	Replace the last sentence of first paragraph of ITB 40.1 with the following: “At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding and shall publish in a National website (GOI website- http://tenders.gov.in) or GoI Central Public Procurement Portal https://eprocure.gov.in/cppp/) or on the Purchaser’s website with free access if available, or in at least one newspaper of national circulation in the Purchaser’s Country, or in the official gazette, and in <i>UNDB online</i> the results identifying the bid and lot (contract) numbers and the following information:”
ITB 42.1	Replace ITB 42.1 with the following: 42.1. Within twenty-eight (28) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, subject to ITB 34.6, using for that purpose the Performance Security Form included in Section X, Contract Forms, or another Form acceptable to the Purchaser. A foreign institution providing a security shall have a correspondent financial institution located in the Purchaser’s Country.”

Section III.Evaluation and Qualification Criteria

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1. Margin of Preference (ITB 33).....(Not Applicable in this bidding Process)

If the Bidding Data Sheet so specifies, the Purchaser will grant a margin of preference to goods manufactured in the Purchaser's country for the purpose of bid comparison, in accordance with the procedures outlined in subsequent paragraphs.

Bids will be classified in one of three groups, as follows:

- (a) **Group A:** Bids offering goods manufactured in the Purchaser's Country, for which (i) labor, raw materials, and components from within the Purchaser's Country account for more than thirty (30) percent of the EXW price; and (ii) the production facility in which they will be manufactured or assembled has been engaged in manufacturing or assembling such goods at least since the date of bid submission.
- (b) **Group B:** All other bids offering Goods manufactured in the Purchaser's Country.
- (c) **Group C:** Bids offering Goods manufactured outside the Purchaser's Country that have been already imported or that will be imported.

To facilitate this classification by the Purchaser, the Bidder shall complete whichever version of the Price Schedule furnished in the Bidding Documents is appropriate provided, however, that the completion of an incorrect version of the Price Schedule by the Bidder shall not result in rejection of its bid, but merely in the Purchaser's reclassification of the bid into its appropriate bid group.

The Purchaser will first review the bids to confirm the appropriateness of, and to modify as necessary, the bid group classification to which bidders assigned their bids in preparing their Bid Forms and Price Schedules. *(Bidders may note that bids offering goods from within the country of the Purchaser [Group A and B bids] should indicate prices entirely EXW (ex works, ex-factory, or off-the-shelf as applicable). Bids offering supplies partly as EXW and partly as CIP/ CIF will be treated as Group C bid only).*

All evaluated bids in each group will then be compared to determine the lowest evaluated bid of each group. Such lowest evaluated bids shall be compared with each other and if as a result of this comparison a bid from Group A or Group B is the lowest, it shall be selected for the award.

If as a result of the preceding comparison, the lowest evaluated bid is a bid from Group C, all bids from Group C shall be further compared with the lowest evaluated bid from Group A after adding to the evaluated price of goods offered in each bid from Group C, for the purpose of this further comparison only, an amount equal to 15% (fifteen percent) of the respective CIP bid price for goods to be imported and already imported goods. Both prices shall include unconditional discounts and be corrected for arithmetical errors. If the bid from Group A is the lowest, it shall be selected for award. If not, the lowest evaluated bid from Group C shall be selected for the award.

2. Evaluation(ITB 34)

2.1. Evaluation Criteria (ITB 34.6)

The Purchaser's evaluation of a bid may take into account, in addition to the Bid Price quoted in accordance with ITB Clause 14.8, one or more of the following factors as specified in ITB34.2(f) and in BDS referring to ITB34.6, using the following criteria and methodologies.

- (a) Delivery schedule. (as per Incoterms specified in the BDS)

The Goods specified in the List of Goods are required to be delivered within the acceptable time range (after the earliest and before the final date, both dates inclusive) specified in Section VII, Schedule of Requirements. No credit will be given to deliveries before the earliest date, and bids offering delivery after the final date shall be treated as nonresponsive. Within this acceptable period, an adjustment, as specified in BDS 34.6, will be added, for evaluation purposes only, to the bid price of bids offering deliveries later than the "Earliest Delivery Date" specified in Section VII, Schedule of Requirements.

- (b) Deviation in payment schedule.

- (i) *The SCC stipulates the payment schedule specified by the Purchaser. If a bid deviates from the schedule and if such deviation is considered acceptable to the Purchaser, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared with those stipulated in the SCC, at the rate per annum specified in BDS 34.6.*

- (c) Cost of major replacement components, mandatory spare parts, and service.

- (i) *The Purchaser will draw up a list of high-usage and high-value items of components and spare parts, along with estimated quantities of usage in the initial period of operation namely two years or the period specified in the BDS 16.4. The total cost of these items and quantities will be computed from spare parts unit prices submitted by the Bidder and added to the bid price, for evaluation purposes only.*

- (d) Availability in the Purchaser's Country of spare parts and after sales services for equipment offered in the bid.

An adjustment equal to the cost to the Purchaser of establishing the minimum service facilities and parts inventories, as outlined in BDS 34.6, if quoted separately, shall be added to the bid price, for evaluation purposes only.

- (e) Projected operating and maintenance costs.

Operating and maintenance costs. An adjustment to take into account the operating and maintenance costs of the Goods will be added to the bid price, for evaluation purposes only, if specified in BDS 34.6. The adjustment will be evaluated in accordance with the methodology specified in the BDS34.6.

- (f) Performance and productivity of the equipment.
 - (i) An adjustment to take into account the productivity of the goods offered in the bid will be added to the bid price, for evaluation purposes only, if specified in BDS 34.6. The adjustment will be evaluated based on the cost per unit of the actual productivity of goods offered in the bid with respect to minimum required values, using the methodology specified in BDS 34.6.

2.2. Multiple Contracts (ITB 34.4)

Not Applicable

2.3. Alternative Bids (ITB 13.1)

Not Permitted

3. Qualification(ITB 36)

3.1 Post qualification Requirements (ITB 36.1)

After determining the lowest-evaluated bid in accordance with ITB 35.1, the Purchaser shall carry out the post qualification of the Bidder in accordance with ITB 36, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications.

- (a) If Bidder is Manufacturer:

- (i) Financial Capability

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

Average annual sales turnover of INR 115.00 Crores in last five financial years (as certified by Chartered Accountant).

- (ii) Experience and Technical Capacity

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

The bidder must have supplied satisfactorily similar equipment of the type specified in each schedule to the extent of **AT LEAST INR 70.00 Crores AS A SINGLE ORDER**, in **ANY ONE OF THE LAST FIVE YEARS** and should be in use satisfactorily with no adverse report for **AT LEAST TWO YEARS** preceding the date of bid opening.

(iii) Documentary Evidence

The Bidder shall furnish documentary evidence to demonstrate that the Goods it offers meet the requirement as specified in the bid document.

(iv) Past Supplies

The Bidder must furnish details of supplies made by him in the last five years in Proforma attached in Section IV.

(b) If Bidder is not manufacturer:

If a Bidder is not a manufacturer, but is offering the Goods on behalf of the Manufacturer under Manufacturer's Authorization Form (Section IV, Bidding Forms), the Manufacturer shall also demonstrate the above qualifications (i), (ii), (iii).

(c) If Bidder is a Joint Venture:

- (i) Responsibilities in respect of supply of the lead firm as well as each of the Joint Venture members shall be clearly indicated in the JV agreement;
- (ii) The Joint Venture agreement shall not be cancelled or amended unilaterally without consent of the Purchaser and a statement to this effect should appear in the JV agreement;
- (iii) The member in charge should be responsible for supply of at least upto **(40%)** of the total requirement. Each of the other members shall be responsible for not less than **(25%)** of the total requirement. In order for a Joint Venture or consortium to qualify, each of its members must meet the criteria listed in Para (a) above in proportion to the quantity to be supplied by each member for individual lot and the combination must meet the qualification in full. Failure to comply with this requirement will result in rejection of the joint venture's bid;
- (iv) Reports on the financial standing of each member including profit and loss statements, balance sheets and auditor's reports for the past 5 years shall be furnished along with the bid; and
- (v) A firm can submit only one bid in the same bidding process, either individually as a bidder or as a partner of a Joint Venture. A bidder who submits or participates in more than one bid will cause all the bids in which the bidder has participated to be disqualified.

Section IV. Bidding Forms

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Letter of Bid

[The Bidder must prepare the Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and address.]

Note: All italicized text is for use in preparing these forms and shall be deleted from the final products.

The Bidder shall fill in this Form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: ***[insert date (as day, month and year) of Bid Submission]***

ICB No.: ***[insert number of bidding process]***

Invitation for Bid No.: ***[insert identification]***

Alternative No.: ***[insert identification No if this is a Bid for an alternative]***

To: ***[insert complete name of Purchaser]***

1. We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB 8) ***____ [insert the number and issuing date of each Addenda];***
2. We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
3. We havenot been suspended nor declared ineligible by the Purchaser based on execution of a Bid Securing Declaration in the Purchaser's country in accordance with ITB 4.6;
4. We offer to supplyin conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods: ***[insert a brief description of the Goods and Related Services];***
5. The total price of our Bid, excluding any discounts offered in item (6) below is:

In case of only one lot, total price of the Bid ***[insert the total price of the bid in words and figures, indicating the various amounts and the respective currencies];***

In case of multiple lots, total price of each lot ***[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies];***

In case of multiple lots, total price of all lots (sum of all lots) ***[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies];***

6. The discounts offered and the methodology for their application are:

- (i) The discounts offered are: **[Specify in detail each discount offered and the specific item of the Schedule of Requirements to which it applies]**
- (ii) The exact method of calculations to determine the net price after application of discounts is shown below: **[Specify in detail the method that shall be used to apply the discounts]**;
7. Our bid shall be valid for a period of **[specify the number of calendar days]** days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
 8. If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
 9. We are not participating, as a Bidder or as a sub-contractor or as a Joint Venture member, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB 13;
 10. We, along with any of our sub-contractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by a member of the World Bank Group or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Purchaser's country laws or official regulations or pursuant to a decision of the United Nations Security Council;
 11. We are not a government owned entity/ We are a government owned entity but meet the requirements of ITB 4.5 **[select the appropriate option and delete the other]**;
 12. We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: **[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]**

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate "none.")

13. We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;

14. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
15. We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption; and
16. We, the JV consisting of M/s,M/s, and M/s shall be liable jointly and severely for the execution of the contract in accordance with the stipulated terms and conditions. [*delete if the Bidder is not a JV*]

Name of the Bidder* **[insert complete name of person signing the Bid]**

Name of the person duly authorized to sign the Bid on behalf of the Bidder** **[insert complete name of person duly authorized to sign the Bid]**

Title of the person signing the Bid **[insert complete title of the person signing the Bid]**

Signature of the person named above **[insert signature of person whose name and capacity are shown above]**

Date signed **[insert date of signing]** day of **[insert month]**, **[insert year]**

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules.

Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*

ICB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

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1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. In case of JV, legal name of each member: <i>[insert legal name of each member in JV]</i>
3. Bidder's actual or intended country of registration: <i>[insert actual or intended country of registration]</i>
4. Bidder's year of registration: <i>[insert Bidder's year of registration]</i>
5. Bidder's Legal Address in country of registration: <i>[insert Bidder's legal address in country of registration]</i>
6. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.3. ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1. <i>(JVs should confirm to the requirements indicated in para 4 (c) of Section III – Evaluation Criteria)</i> ☐ In case of Government-owned enterprise or institution, in accordance with ITB 4.5 documents establishing: • Legal and financial autonomy • Operation under commercial law • Establishing that the Bidder is not dependent agency of the Purchaser

8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Bidder's JV Members Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture].

Date: *[insert date (as day, month and year) of Bid Submission]*

ICB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

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1. Bidder's Legal Name: <i>[insert Bidder's legal name]</i>
2. Bidder's JV Member's Legal Name: <i>[insert JV's Member legal name]</i>
3. Bidder's JV Member's country of registration: <i>[insert JV's Member country of registration]</i>
4. Bidder's JV Member's year of registration: <i>[insert JV's Member year of registration]</i>
5. Bidder's JV Member's legal address in country of registration: <i>[insert JV's Member legal address in country of registration]</i>
6. Bidder's JV Member's authorized representative information Name: <i>[insert name of JV's Member authorized representative]</i> Address: <i>[insert address of JV's Member authorized representative]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers of JV's Member authorized representative]</i> Email Address: <i>[insert email address of JV's Member authorized representative]</i>
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.3. ☐ In case of a Government-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and absence of dependent status, in accordance with ITB 4.5.
8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

Price Schedule: Goods Manufactured Outside the Purchaser's Country, to be Imported

(Group C bids, goods to be imported) Currencies in accordance with ITB 15							Date: _____ ICB No: _____ Alternative No: _____ Page N° _____ of _____	
1	2	3	4	5	6	7	8	9
Line Item N°	Description of Goods	Country of Origin	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price CIP[insert place of destination] in accordance with ITB 14.8(b)(i)	CIP Price per line item (Col. 5x6)	Price per line item for inland transportation and other services required in the Purchaser's country to convey the Goods to their final destination specified in BDS	Total Price per Line item (Col. 7+8)
1	Automatic Rain Gauge with VSAT		29 No's					
2	Automatic Snow Gauge with VSAT		22 No's					
3	Automatic Water Level Radar with VSAT		85 No's					
4	Water Velocity Radar Sensor		88 No's					
5	Acoustic Doppler Current Profiler		08 No's					
6	VSAT only		13 No's					
7	Data Logger		85 No's					
8	Server		08 No's					
9	Laptop		20 No's					

10	Workstation		20 No's					
11	UPS 5KVA		24 No's					
12	Stevenson Screen		04 No's					
13	Current Meter (Handheld)		20 No's					
14	DWLR Piezometric		20 No's					
15	Sediment Analysis Equipment (Sonde) (water quality equipment)		42 No's					
16	Boat with OBM		12 No's					
17	Gauge Plates for AWLR sites in Jammu region		26 No's					
18	Laser Printer cum Scanner (A4)		20 No's					
19	Colour Laser Printer A3 (Copier)		10 No's					
20	Plotter + Scanner		04 No's					
21	Video Conferencing Equipment		02 No's					
22	ARCGIS Desktop Advance 10.7 or latest with all extensions.		08 No's					
23	Handheld GPS		10 No's					
24	DGPS (Pair)		08 No's					
25	Total Station		08 No's					
26	Auto Level		10 No's					

27	Cable Way		08 No's					
28	Prefabricated Rain Shelter (2Mx2M)		95 No's					
29	Prefabricated Guard Rooms (4.5M x 6M), 2 room		08 No's					
30	10 KVA diesel generator		02 No's					
							Total Price	

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[Insert Date]*

Note: (a) The bidder shall give list of spares for 5 years operation (or as required for the period specified in the evaluation criteria) separately indicating description, quantity, unit price and total price in the above format, for those items whose scope of supply includes spare parts as per technical specification.
 (b) The bidder shall also include prices as per other Incoterms of delivery if so requested by the Purchaser

Price Schedule: Goods Manufactured in the Purchaser's Country

(Group A and B bids)

Purchaser's Country INDIA				Currencies in accordance with ITB15				Date: _____ ICB No: _____ Alternative No: _____ Page No. _____ of _____	
1	2	3	4	5	6	7	8	9	10
Line Item N°	Description of Goods	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price EXW	Total EXW price per line item [including Excise Duty if any] (Col. 4×5)	Price per line item for inland transportation and other services required in the Purchaser's Country to convey the Goods to their final destination	Cost of local labor, raw materials and components from with origin in the Purchaser's Country % of Col. 5 (Not to be filled)	GST payable per line item if Contract is awarded (in accordance with ITB 14.8(a)(ii))	Total Price per line item (Col. 6+7)
1	Automatic Rain Gauge with VSAT		29 No's				-		
2	Automatic Snow Gauge with VSAT		22 No's						
3	Automatic Water Level Radar with VSAT		85 No's						
4	Water Velocity Radar Sensor		88 No's						
5	Acoustic Doppler Current Profiler		08 No's						
6	VSAT only		13 No's						

7	Data Logger		85 No's						
8	Server		08 No's						
9	Laptop		20 No's						
10	Workstation		20 No's						
11	UPS 5KVA		24 No's						
12	Stevenson Screen		04 No's						
13	Current Meter (Handheld)		20 No's						
14	DWLR Piezometric		20 No's						
15	Sediment Analysis Equipment (Sonde) (water quality equipment)		42 No's						
16	Boat with OBM		12 No's						
17	Gauge Plates for AWLR sites in Jammu region		26 No's						
18	Laser Printer cum Scanner (A4)		20 No's						
19	Colour Laser Printer A3 (Copier)		10 No's						
20	Plotter + Scanner		04 No's						
21	Video Conferencing Equipment		02 No's						
22	ARCGIS Desktop Advance 10.7 or latest with all extensions.		08 No's						
23	Handheld GPS		10 No's						

24	DGPS (Pair)		08 No's						
25	Total Station		08 No's						
26	Auto Level		10 No's						
27	Cable Way		08 No's						
28	Prefabricated Rain Shelter (2Mx2M)		95 No's						
29	Prefabricated Guard Rooms (4.5M x 6M), 2 room		08 No's						
30	10 KVA diesel generator		02 No's						
								Total Price	
Name of Bidder[insert complete name of Bidder]Signature of Bidder [signature of person signing the Bid]Date [insert date]									

Note: (a) The bidder shall give list of spares for 5 years operation (or as required for the period specified in the evaluation criteria) separately indicating description, quantity, unit price and total price in the above format, for those items whose scope of supply includes spare parts as per technical specification.

(c) Column 8, need not to be filled.

Price and Completion Schedule – Related Services

Currencies in accordance with ITB15						Date: _____
						ICB No: _____
						Alternative No: _____
						Page N° _____ of _____
1	2	3	4	5	6	7
Service N°	Description of Services (excludes inland transportation and other services required in the Purchaser's country to convey the goods to their final destination)	Country of Origin	Delivery Date at place of Final destination	Quantity and physical unit	Unit price	Total Price per Service (Col. 5*6 or estimate)
1.	<i>Installation of the system including civil works with satisfactory testing, performance and supervision of the on-site assembly and/or startup of the supplied goods including data centre equipment.</i>			Complete as per requirement		
2.	<i>Website and mobile application creation, operation and maintenance</i>			Complete as per requirement		
3.	<i>Annual Maintenance (AMC) for the Equipments supplied.</i>			3 years		
4.	<i>Operational cost of the equipments at all stations alongwith data centre.</i>			5 years		
5.	<i>Determination of plan-metric coordinates of all sites, reduced levels of river gauge sites, development of rating curves at river gauge sites and determination of conversion factor to convert snow gauge measurement to snow depth.</i>			L.S		

6.	<i>Training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.</i>			L.S		
7.	<i>Creation Of new maps, Digitization of Existing maps & datum conversion</i>			L.S		
8.	<i>Comprehensive Insurance of the remote station components for 5 years.</i>			L.S		
9.	<i>Data Storage on NIC Cloud</i>			L.S		
10.	<i>Provisional Sum (shall be paid as per actual work done and after prior approval of purchaser)</i>			L.S	INR 1000.00 Lacs	
				Total Bid Price		

Name of Bidder[insert complete name of Bidder]Signature of Bidder [signature of person signing the Bid]Date [insert date]

Note: A Provisional Sum of INR 100 Million is reserved for the miscellaneous works not included in the BOQ. The bidder shall not quote for the Provisional Sum in BOQ. Any expense out of the Provisional Sum shall be subject to prior approval of the project manager both in terms of quantity and scope of work.

Form of Bid Security

(Bank Guarantee)

[The bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated. Insert Bank's Name, and Address of Issuing Branch or Office]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary:*[Purchaser to insert its name and address]*

IFB No.:*[Purchaser to insert reference number for the Invitation for Bids]*

Alternative No.: *[Insert identification No if this is a Bid for an alternative]*

Date:*[Insert date of issue]*

BID GUARANTEE No.:*[Insert guarantee reference number]*

Guarantor:*[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ *[insert name of the Bidder, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof]* (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its bid (hereinafter called "the Bid") for the execution of _____ *[insert name of Contract]* under Invitation for Bids No. _____ ("the IFB").

Furthermore, we understand that, according to the Beneficiary's conditions, bids must be supported by a bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ *[insert amount in figures expressed in the currency of the Purchaser's Country or the equivalent amount in an international freely convertible currency]*, (_____ *[insert amount in words]*) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

- (a) has withdrawn its Bid during the period of bid validity set forth in the Applicant's Letter of Bid ("the Bid Validity Period"), or any extension thereto provided by the Applicant; or
- (b) having been notified of the acceptance of its Bid by the Beneficiary during the Bid Validity Period or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the performance security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee will expire: (a) if the Applicant is the successful bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the performance security issued to the Beneficiary in relation to such contract agreement; or (b) if the Applicant is not the successful bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the bidding process; or (ii) forty-five days after the end of the Bid Validity Period.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.

[Signature(s)]

Note: All italicized text is for use in preparing this form and shall be deleted from the final product.

Note:

- (i) *The Bid Security of a JV must define as "bidder" all JV members and list them in the following manner:*

'a joint venture consisting of ".....", ".....", ".....".

- (ii) *If the institution issuing the security is located outside the Purchaser's country, it shall have a correspondent financial institution located in the purchaser's country, to make it enforceable.*

Manufacturer's Authorization

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the BDS.]

Date: *[insert date (as day, month and year) of Bid Submission]*

IFB No.: *[insert reference number of the Invitation for Bids]*

ICB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

No company or firm or individual other than M/s. _____ are authorized to bid, and conclude the contract for the above goods manufactured by us against this specific IFB. *[This para should be deleted for simple items where manufacturers normally sell the product through different stockists].*

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of: *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Declaration Regarding Tax/Duty Exemption for Materials

(Name of the Project)

Bid No.

Description of item to be supplied

(Information for issue of certificate for claiming Tax/Duty exemption. Government Order/Circular Number under which tax/duty Exemption is being sought:)

(Bidder's Name and Address):

**To
(Name of Purchaser)**

.....

Dear Sir:

1. We confirm that we are solely responsible for obtaining tax/duty benefit which we have considered in our bid and in case of failure to receive such benefits for reasons whatsoever, the Purchaser will not compensate us.
2. We are furnishing below the information required by the Purchaser for issue of necessary certificate in terms of the Government of India's relevant Notifications.

- | | | | |
|-----|-------|--|--|
| (A) | (i) | Value of import content of supply to be made by the Bidder: (Breakup of list of items to be imported with value attached) | *Rs. _____
(exchange rate on US\$ = Rs. _____) |
| (B) | (i) | Name of the sub-contractor, if any, and whose name is to be included in the main Contract: | _____
_____ |
| | (ii) | Description, quantity and value of the goods to be supplied by the above sub-contractor: | Description _____
Quantity _____
Value (Rs.) _____ |
| | (iii) | Value of import content of supply to be made by the sub-contractor: (Breakup of list of items to be imported with value attached.) | Rs. _____
(exchange rate on US\$ = Rs. _____) |

(The requirements listed above are as per Current notifications. These may be modified,

as necessary, in terms of the rules in force)

(Signature) _____

(Printed Name) _____

(Designation) _____

(Common Seal) _____

** Please attach details item-wise with cost, if there are more than one items.*

PERFORMA FOR PERFORMANCE STATEMENT

[Please see ITB Clause 36.2 and Section III-
Evaluation and Qualification Criteria]

Proforma for Performance Statement (for a period of last three/five years)

Bid No. _____ Date of opening _____ Time _____ Hours

Name of the Firm _____

<u>Order placed by (full address of Purchaser)</u>	<u>Order No. and date</u>	<u>Description and quantity of ordered equipment</u>	<u>Value of order</u>	<u>Date of completion of delivery</u>		<u>Remarks indicating reasons for late delivery, if any</u>	<u>Has the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee)</u>
				As per contract	Actual		
1	2	3	4	5	6	7	8

Signature and seal of the Bidder _____

Section V.Eligible Countries

Eligibility for the Provision of Goods, Works and Non-Consulting Services in Bank-Financed Procurement

In reference to ITB 4.7 and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this bidding process:

Under ITB 4.7(a) and 5.1: None

Under ITB 4.7(b) and 5.1: None

Section VI. Bank Policy - Corrupt and Fraudulent Practices

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011.

“Fraud and Corruption:

1.16 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.¹ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;²
 - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;³
 - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;⁴
 - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;⁵
 - (v) "obstructive practice" is:

¹ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

² For the purpose of this sub-paragraph, “*another party*” refers to a public official acting in relation to the procurement process or contract execution. In this context, “*public official*” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ For the purpose of this sub-paragraph, “*party*” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

⁴ For the purpose of this sub-paragraph, “*parties*” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions.

⁵ For the purpose of this sub-paragraph, “*party*” refers to a participant in the procurement process or contract execution.

- (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will declare misprocurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,⁶ including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated⁷;
- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to

⁶ A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

⁷ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

PART 2 – Supply Requirements

Section VII. Schedule of Requirements

Contents

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LIST OF GOODS AND DELIVERY SCHEDULE

1.List of Goods and Delivery Schedule

Line Item No.	Description of Goods	Quantity	Physical unit	Final (Project Site) Destination as specified in BDS	Delivery(as per Incoterms) Date		
					Earliest Delivery Date	Latest Delivery Date	Bidder's offered Delivery date [to be provided by the bidder]
1	2	3	4	5	6	7	8
1	HMAP Equipment as per specifications stipulated in the bid document.	As per price schedule	As per price schedule	Kashmir & Jammu Regions (Different locations as per attachment 1	30 days	120 days	<i>[Bidder to insert the number of days following the date of effectiveness the Contract]</i>

2. List of Related Services and Completion Schedule

Service	Description of Service	Quantity	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services
1.	<i>Installation of the system including civil works with satisfactory testing, performance and supervision of the on-site assembly and/or startup of the supplied goods including data centre equipment.</i>	Complete as per requirement		Jammu and Kashmir Regions of J&K (Different locations as per attachment 1)	540 days from the date of issue of Notice to Proceed + 3 years AMC period.
2.	<i>Website and mobile application creation, operation and maintenance</i>	Complete as per requirement			
3.	<i>Annual Maintenance (AMC) for the Equipments supplied.</i>	3	years		
4.	<i>Operational cost of the equipments at all stations alongwith data centre.</i>	5	years		
5.	<i>Determination of plan-metric coordinates of all sites, reduced levels of river gauge sites, development of rating curves at river gauge sites and determination of conversion factor to convert snow gauge measurement to snow depth.</i>	L.S			
6.	<i>Training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.</i>	L.S			
7.	<i>Creation Of new maps, Digitization of Existing maps & datum conversion</i>	L.S			
8	<i>Comprehensive Insurance of the remote station components for 5 years.</i>	L.S			
9	<i>Data Storage on NIC Cloud</i>	L.S			

2. List of Related Services and Completion Schedule

Service	Description of Service	Quantity	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services
1.	<i>Installation of the system including civil works with satisfactory testing, performance and supervision of the on-site assembly and/or startup of the supplied goods including data centre equipment.</i>	Complete as per requirement		Jammu and Kashmir Regions of J&K (Different locations as per attachment 1)	540 days from the date of issue of Notice to Proceed +3 years AMC period.
2.	<i>Website and mobile application creation, operation and maintenance</i>	Complete as per requirement			
3.	<i>Annual Maintenance (AMC) for the Equipment supplied.</i>	3	years		
4.	<i>Determination of plan-metric coordinates of all sites, reduced levels of river gauge sites, development of rating curves at river gauge sites and determination of conversion factor to convert snow gauge measurement to snow depth.</i>	L.S			
5.	<i>Training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.</i>	L.S			
6.	<i>Creation Of new maps, Digitization of Existing maps & datum conversion</i>	L.S			
7	<i>Comprehensive Insurance of the remote station components for 5 years.</i>	L.S			
8	<i>Data Storage on NIC Cloud</i>	L.S			

3. Technical Specifications

Hydro Meteorological Action Plan

Kashmir Valley and parts of Jammu region are faced with persistent threat of flooding. As a consequence of 2014 floods in the State Government of J&K through Department of Economic Affairs, Ministry of Finance has taken a credit of 250million USD for the restoration of critical infrastructure, roads, restoration of urban flood management infrastructure, restoration and strengthening of livelihoods and the strengthening of disaster management capacity of the State.

Component V—the most critical components of the project—has the objective of strengthening the disaster management capacity which inter-alia includes the river morphology studies, multi-hazard risk assessment, hydro meteorological infrastructure upgradation and the setting up of EOC/DSS.

The River Morphology Studies and Multi Hazard Risk Assessment have already been assigned to consultancy firms and the work is in progress. One of the important components of these consultancy works is the Integrated Operational Forecasting System (IOFS). This system will give sufficient time for the evacuation in case of floods using the Hydro-Meteorological data if supported by appropriate hydro- meteorological infrastructure. Unfortunately State has not been able to upgrade Hydro-Meteorological infrastructure required for reliable forecasting. Recently, ten number of Automatic Water Level Recorders (AWLR) have been installed by I&FC Department at some critical locations in River Jhelum and in its tributaries where from the real time data is continuously being obtained which has enhanced the capacity of understanding the behaviour of the catchment during floods to some extent and subsequently helped in issuing the necessary advisories accordingly. However the overall Hydro-Meteorological information is highly inadequate for reliable forecasting.

Hydro Meteorological equipment includes the Automatic Water Level Recorders (AWLR), Automatic Rain Gauges (ARG), Automatic Snow Gauges (ASG), Acoustic Doppler Current Profiler (ADCP), Water Velocity Radar Sensor (WVRS), Water Quality Equipment and Sediment Analysis equipment. This equipment has the primary function of recording the precipitation, the water levels/sediment load of major rivers and their tributaries. The data recorded has to be seamlessly communicated to the control room using V-

SAT communication and the data will be received through server which will be placed in the control room of Irrigation and Flood Control Department (IFCD). The control room will need super cooling for housing servers and proper furniture and furnishing for computers and technical personnel.

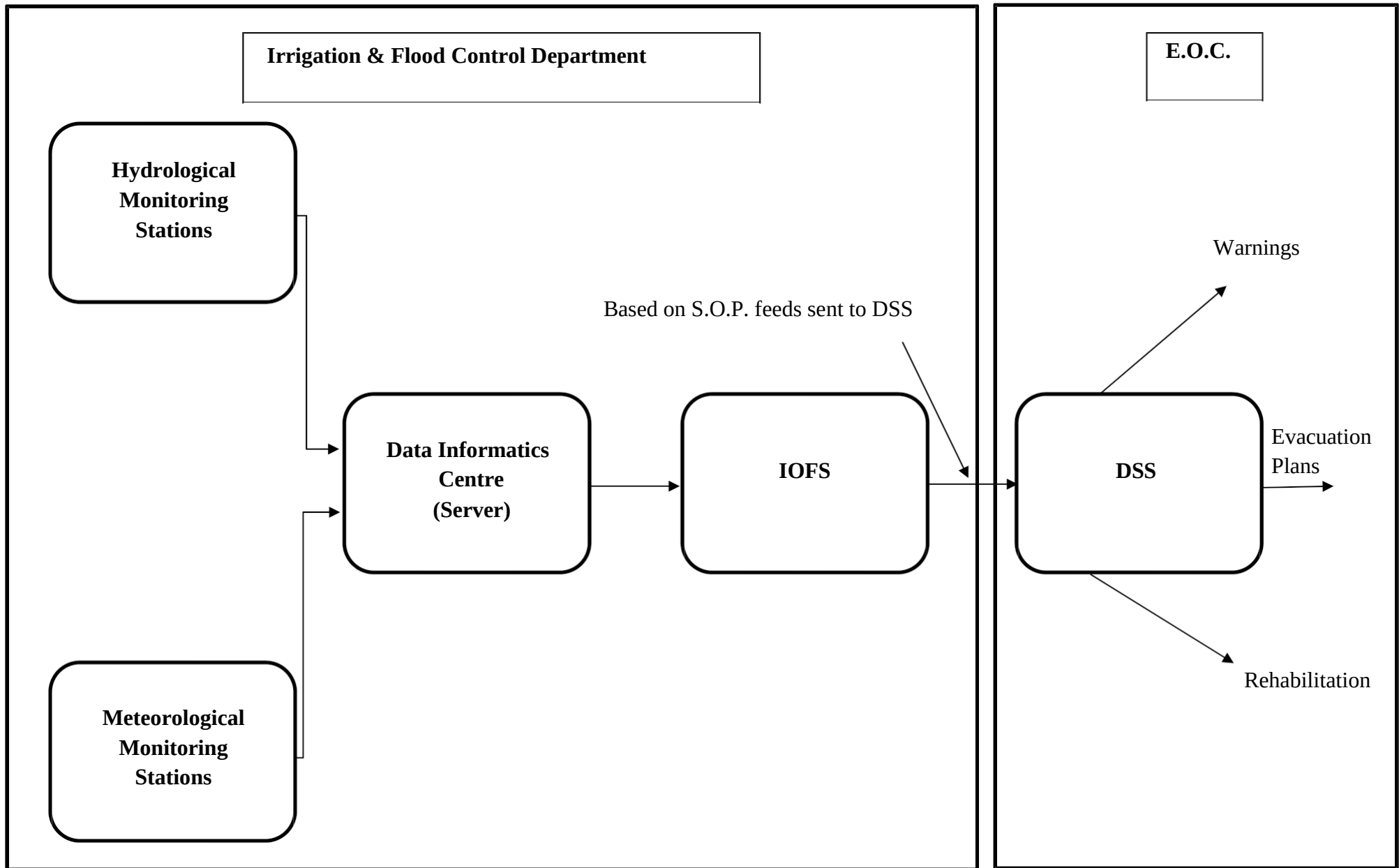
The processing of the data including the forecasting using the hydrodynamic and hydrological modelling has to be carried out in the control room. The processing will require the software as well as hardware for the conversion of hydrological data in to the inundation levels using the hardware and software that will be available at the control room of IFCD. The equipment required will be work stations, laptops, plotters/scanners, laser printers and software ArcGIS and video conferencing facilities. Two other software—HEC-RAS and HEC-HMS—are freely available and will be used for hydrological and hydrodynamic modelling. This equipment procurement will be Package II for the project and the equipment will be housed in the control room of IFCD.

The equipment for the Hydro Meteorological equipment will be located on mini water sheds of the basins which have been worked out through comprehensive consultation with the consultants hired by PMU-JTFRP and the stakeholder departments. However, the server and IT equipment will be housed in the control room of IFCD. The IFCD of both divisions plan to earmark sufficient space in the existing Chief Office building for housing the IT equipment and the server as a temporary measure till permanent Data Informatics Centre is established.

In the long term the Hydro-Meteorological data collection and modelling and the Integrated Operational Forecasting System need to be institutionalized in the IFCD in both Jammu as well as Kashmir Divisions. The project is focussed on the procurement of the Hydro-Meteorological equipment to be installed with the communications systems, the server for the receipt of the data and the ancillary IT/computer equipment for the processing of the data and the development of the hydrological and hydrodynamic models. This also includes the equipment for super-cooling and furniture required for the usage of the equipment.

It also includes the operation and maintenance of the equipment. Training of the technical personnel of the IFCD in using the equipment procured is also included in the scope of work.

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JHELUM BASIN

INTRODUCTION

Kashmir valley is surrounded by mountains from all sides, with Pir Panchal Range from one side and Lower Himalayas from other side. River Jhelum is the only river flowing through the valley with number of tributaries joining it in its course. The flood water from higher contours flows down to plains and the lack of steep slope in the plains leads to severe drainage congestion resulting in submergence of low lying areas. Due to steep grade of tributaries the silt load is high and same gets deposited in the plains below especially in the wetlands like Wullar Lake, thus reducing their flood retention capacity.

Therefore monitoring, modelling and forecasting of flood processes along with studies on flood hazards, studies on siltation and sedimentation of different wetlands (reservoirs) for the preparation of Comprehensive Disaster Management Plans, setting up of real time hydro-meteorological data base systems and assessment of surface water resources for the preparation of Comprehensive Water Resource Management Plans are the need of the hour which can be addressed through the implementation of National Hydrological Project-III in the State.

IRRIGATION & FLOOD CONTROL DEPARTMENT, KASHMIR

Irrigation and Flood Control Department is one of the oldest department of Jammu & Kashmir state, and its activities have mainly been classified into design and investigation, construction and maintenance of Major-Medium, Minor Irrigation projects and Flood Management projects besides Inland Water Transport. The Department has to maintain the flood mitigation infrastructure in the valley to safe guard the life and property of the people from the miseries of floods, which have been hitting the masses since times immemorial.

The Irrigation and Flood Control Department of Kashmir among other responsibilities is also entrusted with the task of monitoring and sharing of hydrological data of water resources of valley of Kashmir through its organizational set up. Whereby four P&D Sub-Divisions monitor/record/measure the hydrological data round the year

and subsequently pass on to the Data Collection, Sub Division, Srinagar. The Data Collection, Sub Division ensures -

- The daily gauges of the flood monitoring sites of Sangam, Rammunshi Bagh and Asham at 9.00 A.M which are conveyed via SMS, WhatsApp, Facebook and Android app to all stake holders.
- The gauges of the above mentioned sites in consolidated format on weekly basis are submitted to
 - a. The Chief Engineer, I&FC Department, Kashmir.
 - b. The Disaster Management Cell, Srinagar.
 - c. The Superintending Engineer, Hydraulic Circle, Srinagar.
- The Gauges and Discharge on various sites of River Jhelum and its tributaries (*as shown in table below*) are submitted on monthly basis to -
 - a. The Ministry of Water Resources, Government of India, New Delhi.
 - b. The Indus Water Treaty Cell, Jammu.
 - c. The Chief Engineer, I&FC Department, Kashmir.

The Central Ministry at their level share the data with their counterparts across the border to meet the commitments accruing out of the international agreement on water sharing between India and Pakistan as per the Indus Water Treaty of 1960.

EXISTING FLOOD FORECASTING & MONITORING SYSTEM, AND FLOOD INFORMATION DISSEMINATION

Any emerging flood situation is assessed on the basis of weather forecast Advisories issued by the Indian Metrological Department. Accordingly, an emergency control room is set up in the Chief Engineer's office where from necessary instructions/directions to all the stake holders are issued with regard to the anticipated flood levels, likely inundation of areas, hot spots etc. As & when the water levels crosses the alarm levels at the flood monitoring sites of Sangam, Ram Munshibagh or Asham, the flood Control Room is established at Police Control Room, Srinagar and by then all concerned perform their designated duties as per the flood duty charts at their respective beats, sectors and zones. The department communicates hourly

gauges, discharges, rainfall and necessary advisories via print media, electronic media, Whatsapp, Facebook, Android App and SMS.

The Monitoring mechanism is mostly manual based, however, at five essential sites, automatic water level recorders have been installed by the department at **Sangam** (*on River Jhelum*), **Ram Munshibagh** (*on River Jhelum*), **Khudwani** (*on Vishow Nallah*), **Batkoot** (*on Lidder Nallah*) and **Wachi** (*on Rambhara Nallah*).

Abstract of Gauge and Gauge & Discharge sites on River Jhelum & its Tributaries

S.No.	Type of Site	River Jhelum			Tributaries		
		Existing		Total	Existing		Total
		Functional	Non-Functional		Functional	Non-Functional	
1	Gauge	13	14	27	27	12	39
2	G&D	10	2	12	50	7	57
	Total	23	16	39	77	19	96
Total Number of Sites (River & Tributaries) =					135		

Abstract of Rain & Snow Gauges of Jhelum Basin

S.No.	Type of Site	Existing		Total
		Functional	Non-Functional	
1	Rain Gauge	7	7	14
2	Snow Gauge	0	13	13
	Total	7	20	27

Abstract of Proposed Gauge & Discharge sites on River Jhelum & its Tributaries

	AWLR	ADCP	WVRS	VSAT only	Guard Room	Rain Shelter
	VSAT Based					
River Jhelum	11	4	8	4	8	7
Tributaries	48	-	60	9	-	62
Total	59	4	68	13	8	69

Abstract of Proposed Rain & Snow Gauges

	Qty
Automatic Rain Gauge Stations	13
Automatic Snow Gauge Stations	13

RIVER BASINS OF JAMMU REGION

INTRODUCTION

Jammu & Kashmir state is located in the northern part of the Indian subcontinent in the vicinity of the Karakoram and Western Himalayan mountain ranges. The state is bounded by Pakistan, Afghanistan and China from west to east. There is a sharp rise in altitude from 300 to 8600m MSL within the state's four degree of latitude. The foothills of the Himalaya, rising to about 600–2100 m form the outer and inner zones. The Pir Panjal Range constitutes the first (southernmost) mountain rampart associated with the Himalaya in the state and is the westernmost of the Lesser Himalayas. The climate is characterized by annual precipitation of about 750 mm, derived partially from the summer monsoon and partially from western disturbances during winter. The monsoonal rainfall varies from 39.6 mm in Ladakh to 184.3 mm in Srinagar and 860.5 mm in Jammu. This State is also gifted with ample water resources such as lakes, rivers, and glaciers besides groundwater. The main rivers that flow through the State, viz. Jhelum, Chenab, Indus and Tawi, are of Himalayan origin. There are 1230 water bodies in the State.

The following are the major river basins in the Jammu region of J& K:

RIVER BASINS IN THE JAMMU REGION

Chenab River Basin

The river Chenab (or Chandra-Bhaga) is formed after the two streams Chandra and Bhaga merge with each other. Chandra and Bhaga originate from the south-west and north-west faces of Barelacha pass respectively in the Himalayan canton of Lahaul and Spiti valley in Himachal Pradesh. The Chandra initially flowing southeast for about 88 km sweeps round the base of the mid-Himalayas and joins the Bhaga at Tandi, after traversing a total length of about 125 km. The course of Bhaga upto the confluence is 80 km only, having a steep slope with an average fall of about 24 metres per kilometer. Thereafter the united stream, known as Chenab or Chandra-Bhaga, flows in a north-westerly course for about 46 km where it receives its first major tributary, Miyar Nalla on the right

bank. Then it flows for another 90 km, generally in a northerly direction in Himachal Pradesh, when it crosses the Pangi valley before entering Padder area of Doda district in Jammu & Kashmir State. The river flows in a northwest direction in this reach for a distance of 56 km, when it is joined on the right by its biggest tributary, the Marusudar at Bhandalkot. Further Downstream, the river flows in a southerly direction for a distance of 34 km upto Thathri and then takes a westward course. In this reach, about 17 km downstream of Thathri, Neeru Nallah joins the Chenab on its left bank. The river Chenab thereafter flows generally in a northwest direction for another 41 km till it receives a tributary Bichleri on the right bank. Afterwards, the river traverses in a westerly direction for a distance of about

50 km. In this reach a number of small streams join in, namely Chaini, Talsuen, and Ans on the right bank and Yabu Nallah, Mandial and Painthal Khad on the left bank. Downstream of Ans river confluence the river changes its direction and flows in a southerly course for about 45 km upto Akhnoor, where-after it enters into Sialkot district of Pakistan. Total length of the river from confluence of Chandra & Bhaga to Akhnoor is about 504 km. Ranbir and Partap canal takes off from it near Akhnoor as a result of which thousands of Kanals of agricultural land in Jammu is irrigated. Salal, Dulhasiti, Sawalkot and Baghilar Hydel power projects are located on this river.

The main tributaries in its passage upto Kishtwar are the Thiroat, the Sohal, the Bhut nallah, the Liddrari and the Marusudar. The Marusudar is the biggest tributary of the Chenab and meets the Chenab at Bhandalkot. Between Kishtwar and Akhnoor, it receives the waters of the Kalnai, the Neeru, the Raghi, the Bichleri and the Ans. The Tawi and Manawar Tawi join Chenab in Pakistan.

In India, the watershed of the Chenab basin covers part of two States viz. Himachal Pradesh and Jammu and Kashmir. Upper Chenab catchment lies in Lahoul area and Pangi Tehsil of Chamba District of Himachal Pradesh. In J&K State, the Chenab basin covers the Districts of Kishtwar, Doda, Ramban, Udhampur, Jammu and Rajouri. The catchment of the Chenab is elongated and narrow. The catchment area of the Chenab upto international border is 29,050

Sq. Km. out of which an area of about 6,242 Sq. Km. is under perpetual snow. The catchment area of the river Chenab upto Akhnoor, the lower most gauge discharge site in India is 21,808 Sq. Km. A brief description of some of the important tributaries of Chenab River is given below:

The Miyar Nalla

The Miyar Nalla rises in Himalayas near Lopen jot at about 5100m. After traversing of about 35 km in south-east direction, it takes a big loop and turn towards south west direction. After flowing about 60 km it joins the Chenab on its right bank opposite Udaipur. Its total course upto the confluence with Chenab River is between high mountains on either side.

The Bhut Nalla

The Bhut Nalla is formed by two major streams near Matsel one flowing from north-west and the other from south-east. From Matsel it flows in south west direction. After traversing a distance of about 25 km, it joins the Chenab on its right bank downstream of Gulabgarh. The total course of the river is through high mountains on either side.

The Marusudar

The Marusudar is the biggest right bank tributary of the Chenab River. It originates from an elevation of about 5175 m. In the beginning two streams namely Batkot and Gumbar merge to form Warwan River, which is known as the Marusudar in the lower reaches. The Marusudar flows almost the north to south direction. Its catchment is almost fan shaped. The upper reaches are covered with glaciers and the permanent snow line is considered generally to be around 4700m. The entire reach of the Marusudar is through mountainous terrain with steep slopes and sharp bends.

The Ans

The river is formed by two major streams. One flowing from west to east and the other from south west. The Ans after flowing for a distance of about 20 km in almost southerly direction joins the Chenab in its right bank, up stream of Salal H.E. project.

The Niru

The Niru originates near Bhaderwah. It flows in a north-west direction and after traversing a distance of about 30 km it joins the Chenab on its left bank

near Doda. In this reach, the Niru takes a few sharp bends and also joined by two-three small nallas.

The Tawi River

The River Tawi, which passes through the heart of the Jammu city, is one of the major left bank tributaries of the river Chenab. It originates from outer Himalaya ranges at the Kailash Kund Spring at Soej hills in Bhaderwah at an elevation of about 4300m. Initially it flows in westerly direction for about 16km and then takes a turn towards north west direction and flows for a distance of 27 km upto Sudhmahadev. There after it flows in westerly direction for about 5 km upto Chenani and further down in a westerly course upto Udhampur after which it takes a southerly course for about 24 km. The river finally joins the Chenab a little downstream of the international border in Pakistan. The total length of the river is about 141 km. The river generally flows through steep hills on either side except the lower reach of about 35 km.

The Ravi River

The Ravi River drains a total catchment area of 14442 sq km in India after flowing for a length of 720 km. A major tributary that joins Ravi is Siawa near Basholi in the J & K State. Ujh River is another major tributary of Ravi and its source is located in the Kailash Mountains at an elevation of 4298 m close to Bhaderwah Mountains of the State. After flowing for 100 km stretch, it joins Ravi at Nainkot in Pakistan. The major multipurpose project built on this river is Ranjit Sagar Dam at Theirin village. The left bank of Ravi is in Punjab and the right bank is in J&K State.

The Tributaries of Jhelum River Flowing in Poonch District

Poonch River, a tributary of river Jhelum, is the major drainage system in the district that rises from snow covered ranges. Poonch River and its tributaries control the drainage in major part (about 75 %) of the district. The general flow of the Poonch River is westerly; the general trend of the river towards west obtained only after the confluence of Suran and Mandi River near Chandak, at Poonch town another important tributary from the north, the Betar joins the Poonch River. The Suran river is the main river of the Poonch district. It is

made up of number of streams flowing from the PirPanjal and is joined by the subsequent streams from the Ratanpir. The main stream is Parnai which flows parallel to the Ratanpir and it takes its source at the bifurcation of Ratanpir from the main Pir Panjal. In the Parnai valley, in the higher reaches, there are number of lakes situated in Panjal volcanics, south- east of Girjan valley, which also debouche their surface run-off into the Parnai nallah. Of these, Nandansardrains through Kashmir Himalaya, while the remaining 7 lakes pour their run-off into Suran river through Parnai nallah. Parnai debouches its waters to Suran river below Behramgala and has a source at a height above 3700 m. The Mendhar River is another important river whose basin drains about 25% of the district toward south-western part and joins the Poonch River outside of the area.

IRRIGATION & FLOOD CONTROL DEPARTMENT, JAMMU

Irrigation and Flood Control Department is one of the oldest departments of Jammu & Kashmir state, and its activities have mainly been classified into design and investigation, construction and maintenance of Major-Medium, Minor Irrigation projects and Flood Management projects besides Inland Water Transport. The Department has to maintain the flood mitigation infrastructure in the river basins to safe guard the life and property of the people from the miseries of floods occurring in the region. The Irrigation and Flood Control Department of Jammu among other responsibilities is also entrusted with the task of monitoring and sharing of hydrological data of water resources through its organizational set up. Whereas four P&D Sub-Divisions monitor/record/measure the hydrological data round the year and subsequently pass on to the Data Collection Sub Division, Jammu. The Data Collection Sub Division ensures -

The gauge data at observation sites in consolidated format on weekly basis are submitted to

- a. The Chief Engineer, I&FC Department, Jammu.
- b. The Disaster Management Cell, Jammu.
- c. The Superintending Engineer, Hydraulic Circle, Jammu.

The Gauges and Discharge on various sites of River Chenab and its tributaries

(as shown in table below) are submitted on monthly basis to -

- a. The Ministry of Water Resources, Government of India, New Delhi.
- b. The Indus Water Treaty Cell, Jammu.
- c. The Chief Engineer, I&FC Department, Jammu.

The Central Ministry at their level share the data with their counterparts across the border to meet the commitments accruing out of the international agreement on water sharing between India and Pakistan as per the Indus Water Treaty of 1960.

EXISTING FLOOD FORECASTING & MONITORING SYSTEM, AND FLOOD INFORMATION DISSEMINATION

Any emerging flood situation is assessed on the basis of weather forecast advisories issued by the Indian Metrological Department. Accordingly, an emergency control room is set up in the Chief Engineer's office where from necessary instructions/directions to all the stake holders are issued with regard to the anticipated flood levels, likely inundation of areas, hot spots etc. As & when the water levels cross the alarm levels at the flood monitoring sites, the Flood Control Room is established at Police Control Room, Jammu and by then all concerned perform their designated duties as per the flood duty charts at their respective beats, sectors and zones. The department communicates hourly gauges, discharges, rainfall and necessary advisories.

Abstract of Existing and Proposed Hydro-Meteorological Sites in the River Basis in the Jammu Division, J&K state

River Basin	DischargeGagugingsites			Meteorologicalsites		
	Type of gauging site	Existing	Proposed/ Upgradation	Type	Existing	Proposed/ Upgradation
Tawi River (Tributary of Chenab River)	G	2	1	AWS(Rain gauge And other sensors)	2	0
	GD	0	3	AWS (Snow gauge and other sensors)	0	0
	GDS	0	2	Rain gauge(Manual)	3	0
	GDSQ	1	2	ARG	0	6
				SnowGauge		1
	Total	3	8	Total	5	7
Chenab river basin (excluding Tawi River Basin)	G	5	0	AWS(Rain gauge And other sensors)	0	0
	GD	5	6	AWS (Snow gauge and other sensors)	0	0
	GDS	4	4	Rain gauge(Manual)	26	0
	GDSQ	5	0	ARG	4	3
				SnowGauge		8
	Total	19	10	Total	30	11
Tributaries ofRavi River Basin	G	0	1	AWS(Rain gauge And other sensors)	2	0
	GD	6	3	AWS (Snow gauge and other sensors)	0	0
	GDS	1	1	Rain gauge(Manual)	1	0
	GDSQ	0	1	ARG	0	3
				Snow Gauge	0	0
	Total	7	6	Total	3	3
Tributaries of Jhelum River in Poonch district of Jammu Division	G	1	0	AWS(Rain gauge and other sensors)	0	0
	GD	0	2	AWS (Snow gauge and other sensors)	0	0
	GDS	0	0	Rain gauge(Manual)	1	0
	GDSQ	0	0	ARG	0	3
				Snow Gauge	0	0
	Total	1	2	Total	1	3
Grand Total		30	26	Grand Total	39	25

TECHNICAL SPECIFICATIONS OF EQUIPMENTS

Sr. No	Name of equipment	Specification
1	<u>Automated Rain Gauge</u>	I. Measurement : 0 – 700 mm/hour (at least) II. Accuracy : $\pm 2\%$ (0 – 250 mm/hour) $\pm 3\%$ (250 – 700 mm/hour) III. Resolution: 0.01 in., 0.1 mm and 0.2 mm IV. Mechanical / Power/Size i. Funnel 8 in. Width ii. Aperture (200 mm) iii. Housing 8 in. W x 12 in. L V. Bottom: 1 1/2 in. T (3.81 cm) tower 1.16 mesh i. Material: Housing Extruded aluminum housing, Powder painted ii. Funnel : Spun aluminum iii. screened secondary funnel iv. Base Cast aluminum, Powder painted v. Internal Anodized aluminum internal parts, Stainless steel screws vi. Sensor Tipping bucket with magnetic reed switch sensor and SDI-12 Output vii. Mounting Three anodized aluminum external mounting feet viii. Leveling Three stainless steel leveling screws and bulls eye level. ix. Internal x. Exit Ports Two screened drain tube fittings on bottom of casting VI. SDI-Output i. Baud Rate 1200 ii. Protocol Modbus / IEC iii. Output Voltage Levels Minimum high level: 3.5 volts iv. Maximum low level: 0.8 volts v. Maximum cable length: 250 ft. (76 m) vi. Response Time 0.1 second measurement vii. MODBUS 12 Output Data Parameters 1. Accumulated rainfall since last measurement 2. Raw bucket count since last measurement 3. Total accumulation 4. Total daily accumulation (today) 5. Total daily accumulation (yesterday) VII. Analog Output : 4-20mA corresponding to rainfall

2	<u>Automated Snow Gauge</u>	Site Conditions
		Ambient Temperature: From -40°C to +40°C
		Humidity: 5 to 100%
		Altitude: 2,000m to 5,000m
		Sensor
		Sensor Type: Storage gauge with anti-freeze system without heating
		Capacity: 1,000 mm minimum
		Resolution: 0.5 mm or better
		Accuracy (Intensity): 2% or better ± 2 mm
		General Features
		Output Interface: SDI12/RS 485/4-20 mA/compatible with data logger
		Power Supply: 12 V DC or switch rated for 12 VDC
		Material: Corrosion resistance metal (stainless steel or aluminium)
		Enclosure: NEMA 4 (for sensor and electronics parts)
		Tools: Complete tool kit for operation and routine maintenance
		Manuals: Full documentation and maintenance manual in English
		Accessories: Sensor mounting support, cables and other accessories as required

3	<u>Automatic Water Level Radar</u>	Non-contact Radar Water Level Sensor (AWLR): I. Non-contact type water level measurement II. Maximum Measurement level : 40 m III. Measurement accuracy : ± 3.0 mm or better IV. Beam Angle: 8^0 V. Beam Width: 5.59m for 40m range VI. Radar Sensor should have Multi-Echo Tracking. VII. If the sensor is installed on a bridge, the sensor should have feature for area mapping to avoid beam interference with the bridge structures or bridge piers. VIII. The Radar sensor should have multiple measuring modes and averaging mode. IX. Radar Sensor should be with MODBUS RS 232/485 output X. Should have provision for Built-in LCD display for monitor and setup. The Keypad LCD display should be removable. XI. Frequency Range- approx 26 GHz XII. Supply Voltage: 10 to 16V DC XIII. Low current operation (<13.5 mA) XIV. Operating Temperature: -40 to $+80$ deg C XV. SDI-12 and RS-232 output with MODBUS PROTOCOL i. Baud rate 1200 or higher ii. connecting cable iii. Sensor should be interfaced with Data logger only on SDI Port iv. Sensor should have Fixed capped horn v. Sensor should be light weight, Construction material – PBT Plastic, Horn material- PP Cladded. vi. Sensor should be with NEMA 4x (IP65) enclosure and should be suitable for outdoor installations. Radar Sensors should be installed in a Nema-IV enclosure. The enclosure should be designed in such a way so that snow should not accumulate on the enclosure. vii. 4-20 mA output required
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4	<u>Water Velocity Radar Sensor (WVRS)</u>	Water Velocity Radar Sensor (WVRS): I. It should be non-contact type. II. It should be able to measure flow velocity from 0.08m/sec to 15m/sec at an accuracy of $\pm 2\%$ of measured value III. Resolution 0.1mm / sec. IV. Frequency 24 GHz V. Temperature range -40 deg C to 85 deg C. VI. It should automatically detect flow directions. VII. It should automatically eliminate effects of wind, precipitation and vibration. VIII. It should have low power consumption, ideal for powering with solar power. IX. It should easily integrate with new or existing systems using SDI-12 or Modbus protocols. X. It should have an integrated tilt sensor to provide information regarding change in positions of the sensor. XI. It should have inbuilt provision for corrective factor to arrive at mean velocity. XII. It should have internal discharge computation and quality control facility including Wi-Fi operation with wireless devices. XIII. It should have discharge management software for managing and generating calibration data and reports. 4-20 mA output required
5	<u>Acoustic Doppler Current Profiler</u>	I. The Acoustic Doppler Current Profiler is to be used for recording of cross sectional profile, water current (velocity), water depth (sounding), flow of water (discharge), monitoring dredging of various water bodies of Jammu & Kashmir viz. Chenab River Basin, Tributaries of Chenab River Basin and Ravi River Basin, River Jhelum, tributaries of River Jhelum, Lakes like Dal Lake and Wullar Lake etc. The parameters of these water bodies are as under:- a. Water depth:- minimum zero to maximum 20m b. Velocity range:- minimum 0.25ft/sec to maximum 15ft/sec. c. Discharge range:- minimum a few cusecs to maximum 80000 cusecs. d. Maximum width of River Jhelum: - 250m e. Minimum width of tributaries:- 75 m II. The Acoustic Doppler Current Profiler should be portable, solid state having internally integrated DGPS. III. The system should have provision to be upgraded in future for Bathymetry survey and velocity mapping applications without any change of Hardware System. IV. All discharge computations should be simultaneously done both within the Acoustic Doppler Current Profiles and on the host computer. Data should not be lost if communications drop out. There should be provision for operating ADCP with smart phone. V. The ADCP should have provision to be operated by moving boat

		method and by stationary method (section by section). VI. The ADCP should have automatic system set up allowing the user to start a measurement very quickly and should have customizable user interface, graphs and tabular data. VII. The ADCP should have floating platform with carrying case and recharge batteries along with battery charger. VIII. The ADCP should operate between a temperature range of -15°C to +40°C IX. The ADCP should have a power & communication module with 2.4 GHZ radio modem and a receiver module at the Laptop end. Wireless range between the Laptop & the ADCP should be atleast 450m. X. Laptop with suitable configuration should be supplied alongwith the ADCP. XI. The ADCP should have internal temperature sensor, solid state compass and tilt sensor. XII. The Acoustic Doppler should have internal memory minimum of 8 GB or more. XIII. Doppler to have Modbus RS485 Modbus output. XIV. ADCP shall be provided with suspension cables of requisite standard specifications of 100 meter length.
6	Data-Logger	Should have VSAT and GSM/GPRS (Secured HTTP/Secured FTP) transmission facility with built in display for data transmission Data reporting to the website at 15 minute interval Auto retransmission of failed packets of data to the server Automatic Data reporting through SMS in case of any failure in data logging to website at closing time Data dump facility through SMS command for any date in the previous year On-site data storage facility of 15 minutes data up to 2 year Time stamping of Data Packets SMS alerts on 3 programmable thresholds of Rainfall Configurable Destination, Threshold for Alert report Enable/Disable facility of Alert functionality Should Support Dual SIM Other Provision to browse the data for any given date Simple interface to set time and date Provision to read the GPRS Signal Strength Ability to accommodate different service providers Automatic time sync facility from website Centralized control for Version updates SMS commands To check the status

		To avail data dump for any given date
		To set time, FTP intervals, alert parameters
		To remotely configure site details
		To configure server details (user name, password and server address)
		Remote Programming and Software utilities for the operation from Master Control Centre
		Electronics
		Micro controller /Microprocessor based
		Should have adequate non-volatile memory for 2 year data buffering for 10 variables at
		15 minutes interval
		User interface through LCD and Keyboard
		Battery backed operation
		Solar powered stand alone operation
		Expandability for more parameters
		Data Logger with a minimum of 16 channels with necessary software
		Sensor cabling: Industry standard weather-proof cable for data transmission
		The RTU to have sufficient no. of RS485/RS232 and analog ports to accept signals from sensors.
		Calibration policy
		Rain sensors to be calibrated every month on site
		Other sensors for Temperature, Relative Humidity, Wind Speed and Wind Direction to be calibrated every year and the calibration certificates are to be submitted to IMD Calibration report should also be submitted to IMD at the time of supply.
7	Gauge Plates	Gauge Plates had to indicate water level at a site from 0 to 9.0 metres depending on site. The staff gauges will be supplied in 1.5 metre lengths, marked accordingly in decimetres and centimetres, black on white or black on yellow. Separate indicators for each meter increment of water depth shall also be supplied.
		The supplier is required to perform surveys at all river gauging sites and establish benchmarks that will be used to install a staff gauge. The supplier will be responsible for installing staff gauges and maintaining the staff gauges through the period of the contract, including warranty and AMC periods. Upstream and downstream staff gauge shall be established at various sites, if selected. The datum used for the benchmark will be any GTS Benchmark established by Survey of India located within the river basins. The supplier is required to acquire and install staff gauges at 26 sites. The staff gauges must span the entire range of expected water levels and be easy to read for easily accessible shore locations. The supplier will further supply, maintain, repair, and replace staff gauges through the period of contracted services. The staff gauge shall be of such a design that it can be effectively used under the

		prevailing environmental conditions. All materials on the staff gauge shall be non-corroding. The staff gauges needs to be readable for all possible water levels at each site. The staff gauge shall be composed of sturdy construction, easy to read and maintain. The staff gauge shall generally comply with IS 4080-1994 standards.
8	Civil works	Proper foundation should be laid for civil work at the site with RCC of 1:2:4, 2feet below ground level to 0.5 feet above ground level Mast for mounting the sensors should be made up of Aluminum or GI material, All Sensors enclosures/Buckets to be SS-316 All metallic components besides SS-316 should be power coated/Epoxy painted with standard thickness after properly clearing the surface of any dust/rust. Mast must be at least 2 meters in height to mount the sensors and house the electronics with proper enclosures, high quality hinges, internal locks, painted on either side of the Barbed GI wire /suitable fencing and gate to be provided wherever required. Onsite maintenance Should cover on-site maintenance of the hardware, software, sensors, electronics and all civil works for a period of 5 years from the date of commissioning Downtime Max : 48 hours Website software to be able to run on the customers website Facilities to receive the data from the instrument through secured HTTP and secured FTP Authentication of data packets in both HTTP and FTP Verification of instrument time before accepting the data packet XML formatted output for export of data Master tables for Station and instrument details User Management module
9	Website	Reports Daily closing of rainfall data 15 min data for a chosen station 3 hours data for all station for a day Statistics generation at three levels for daily rain fall Monthly Cross tabulation of rain fall data (data vs station) (State, Division and District levels) Daily average, maximum, minimum of temperature, humidity and wind speed data Suppliers should guarantee for GPRS modules with 1. Proper IMEI number 2. With fully IPR-paid for use of intellectual Property in using GSM/GPRS specs or patented.
10	Server, Laptop and Workstation	Server (Minimum requirements):- Intel Xeon, 2.93Ghz, 8 CPU with 16 core each CPU or equivalent(Rack based) Memory: 128 GB RAM or more. SCSI dynamics 10 TB min.

		250 GB free space in C Drive Networking Ethernet connection, USB 3.0 and Serial Port 42" LED Monitor, Keyboard, Optical mouse Windows 2012 Server R2 64 bit (or latest), Microsoft office professional, Antivirus, static IP. Dual power supply, redundant type. <u>Laptop Specifications</u> Intel i7 processor, 8 GB RAM, 1 TB HDD, 256 GB SSD, 2GB Graphics, DVD Writer (Internal or external), LAN port, USB ports, HDMI port, serial port or USB to Serial converter, 14 inch display, windows professional, Microsoft office professional, antivirus, maximum battery backup. (business or work series machine) <u>Workstation Specifications</u> Intel i7 processor, 8 GB RAM, 1 TB HDD, 256 GB SSD, 2GB Graphics, DVD Writer, LAN port, USB ports, HDMI port, serial port or USB to Serial converter, 17 inch monitor, windows professional, Microsoft office professional, antivirus. <u>UPS/Inverter:</u> 2 No's of 5 KVA capacity each, online, with 6 hours backup <u>Diesel Generator:</u> 10 KVA capacity diesel generator, portable type. The generator should have Meter to show running Hours & Voltage and should also have Overload Protection, Fuel indicator. The genset should be of latest CPCB norms approved with 02 years onsite warranty.
11	Cloud Storage	The processed data generated shall be stored on NIC Cloud which shall be covered in the scope of work. The purchaser shall facilitate the requisite documentation for the same.

The following table provides the list of various equipments suggested as part of the initial IT framework for the Server Room.

Sl. No	Installation	Description
1	Physical access	Bio-metric access control system with software
2	Air cooling system	PAC
3	Power backup	UPS
4	Fire control	Fire Suppression system, sensor
5	Water control	Water logging sensor
6	Rack	42 U for Server, Storage and NW & Security devices
7	Rack panel	Field port cable manager
8	Router	To terminate 2- Internet, 1- MPLS links
9	Firewall	For internet traffic management
10	L3 24 port PoE Switch 10G	WAN/ LAN routing
11	L2 48 port PoE Switch 10G	LAN switching
19	Cabinet	Fire safe proof cabinet
20	Passive work	Cabling and testing
21	Virtualization license	vmWare license
22	Windows Licenses	For server hosting
23	DB License	For DB hosting
24	Monitoring License	For devices, services
25	Monitoring screen	Video Wall or 85inch LED for monitoring
26	High Speed Synchronous Internet connection	Min 8 Mbps upload and 8 Mbps download

Details of Single Stevenson Screen

Stevenson screen will hold wood-backed

- i) Maximum temperature thermometer
- ii) Minimum temperature thermometer
- iii) Wet bulb thermometer and
- iv) Dry bulb thermometer

Conditions & Requirements

- Double layered roof with ventilation provision.
- The screen shall comply with IS 5948 – 1970.
- All dimension requirements shall be met within 5% of specified dimension

Specifications

1. Standard width length between inner slats of louvers is 560 mm
2. width between inner slats of louvers 315 mm
3. height between middle of lower roof and floor 412 mm
4. Double width length between inner slats of louvers 1325 mm
5. width between inner slats of louver 315 mm
6. height between middle of lower roof and floor 412 mm

Note:

- ***Solar charging device should store energy during sunshine hour and should provide energy for 24 hours in absence of other power source.***
- ***The systems should be electrically grounded. Stevenson screen and other sensors will be on mast at certain height as per universal standard of WMO. Rain gauges will be on ground.***
- ***Web software should be compatible for all use by vendor, data user (IMD) and product user (I&FCD). It should be on open-source software for further use (if any, at applicability in other sector e.g. Forecast for agriculture, tourism etc.)***
- ***Data processing software at the data centre for validation, processing and archival will be provided by the purchaser. The supplier will integrate the system with the IOFS (Integrated Operational Forecasting System) developed by the consultant already hired by PMU, JTFRP.***
- ***Solar panel details as per IMD is attached in “Attachment-2” of section VI.***
- ***Calibration details as per WMO standard is in “Attachment -3” of section VI***

Current Meter (Handheld) (minimum specifications):**Sensors****Speed**

Type: High Impact Styrene Impeller

Size: 125mm diameter by 270mm pitch

Range: 0.03 to 5m/s

Accuracy: $\pm 1.5\%$ of reading above 0.15m/s

± 0.004 m/s below 0.15m/s

Direction

Type: Flux gate compass

Range: 0 to 360°

Accuracy: $\pm 2.5^\circ$

Resolution: 0.5°

Temperature

Type: Thermistor

Range: -5 to 35°C

Accuracy: $\pm 0.2^\circ\text{C}$

Resolution: 0.01°C

Pressure

Type: Strain Gauge Transducer

Range: 50, 100, 200 or 500 dBar

Accuracy: $\pm 0.2\%$ Range.

Resolution: 0.025% Range

Data Acquisition**Switching On/Off**

The meters are switched on and off through software control,

Physical**Instrument**

Materials: Titanium, acetal and ABS plastic

Depth Rating: 500m

Power

Internal: 1 x D cell. 1.5v alkaline cell gives approximately 30 days at 10 second sample rate, or 56 days at 5 minute sample rate. 3.6v Lithium cell gives approximately 90 days at 10 second sample rate, or 180 days at 5 minute sample rate. External: For external supply, 12-20v DC is required. Power can also be taken from the Model 8008 CDU.

DWLR without Vent Tube

Site Conditions	
Ambient Temperature	From -5 to 60 °C
Humidity	5-100%
Altitude	0-2,500m
Sensors	sensor
Sensor Type	Non-vented pressure sensor with barometric pressure correction for individual
Range	(10m/30m, 45m, 75m, 105m, 120m)
Dimension	Outer diameter of sensor unit: <80mm, (for sensor)
Material	Stainless steel (SS-316) or other better corrosion resistant material.
Ingress Protection	IP68 for sensor
Accuracy	0.2% FSO
Reproducibility	0.1% full scale or better
Long Term Stability	0.1% full scale and should ensure long term stability without any field calibration requirements except barometric compensation.
Overload Pressure	2 times full scale without effect on calibration
Output	SDI-12, RS-485, 4 – 20mA or compatible with data logger
Installation	The system should be provided with a suspension bracket, well enclosure/ canopy and junction boxes (if required) allowing secure installation within the Piezometers' headwork, including appropriate cable mounting accessories to allow the sensor to be adjusted to the required depth.
Direct Read Cable	The cable shall have following features: Strength members for good longitudinal stability of cable The cable and contacts should be fixed or quick connect.
Data logger	
Atmospheric Pressure Correction	Should be applied automatically
Resolution of Measurement	16-bit ADC with +/- 1LSB accuracy
Measuring Interval and Measuring Modes	Should be programmed to store data from 1 minute one reading to 24 hours one reading.
Settling Time	<30 minutes

Recording Capacity	Shall store data of atleast 1 year
Memory Type	Non-volatile flash memory of at least 8MB and expandable upto minimum 4GB using USB/SO Card.
Power Supply	Should be equipped with lithium or alkaline battery pack, giving at least 2years operation (with one transmission and four recordings per day). Battery must be replaceable in the field or in local offices of the implementing agency or supplier. Replacement batteries must be readily available in India.
Battery Voltage Monitoring	Monitoring and transmission of battery voltage level
Data Logger Location	Data logger should be located on top (on ground surface).
Built in clock	Accurate to ± 1 minute per year
Displayed Time Resolution	1 second
Protection	IP 65 (for data logger) with impact resistant
Port for Configuration	One serial port for communication with laptop for programming
Ports for Telemetry	Port for communication with GSM and GPRS telemetry
Operating System	Windows software for system configuration/communication
Licenses	All required licenses shall be included
Real-time Clock	Time synchronization facility shall be provided
Accessories	Serial cable and adaptor if required along with all accessories and fixing units, etc.
Communication Interface	
Computer Interface	The logger must be capable of connection to a computer via USB2.0/USB 3.0 and supply should include the necessary interface cables
Wireless Communication	Option for Bluetooth/IR/Wi-Fi interface (at least any one of the three options specified) should be available
File Format	The format of the data downloaded by communication interface shall be in standard ASCII/CSV/XML format
GSM/GPRS Transmitter	
Transmission System	VSAT and GSM/GPRS/edge-based data transmission system
Performance	Data reception availability of 95% or better
Communication Direction	Utilize GPRS network for two-way connection with FTP server

Transmission trigger	Data collection to be triggered by interrogation from Data Centre, or by event – based transmission triggered by remote site.
Power Saving	Ability to disable interrogation system to save power at remote site
Communication Protocol	Data transmission to execute FTPS to transmit data to the Data Centre
Accessories	All associated equipment, including Antenna all cables and mounting hardware
Software for Data logger	
OperatingSystem	Windows software for system configuration, transfer and analysis of data to computer
Version	English language version
License	All required licenses included
General Features	
Battery	The battery should be easy to replace in field, and easily available in the market. The battery shall also provide power supply to the DWLR sensor
Tools	Complete tool kit for installation and routine maintenance
Manuals	Full documentation and maintenance instructions in English
Training	As per mutual concern at the time of installation of telemetry system

Water Quality Equipment

Sediment Analysis Equipment (Sonde) for Continuous Monitoring

Site Conditions	
Ambient Temperature	- 5°C to 45°C
Humidity	5 -100 percentage
Altitude	0-5,000m
Sensor Ports	1 to 6, to be specified by manufacturer
Response Time	< 90s
Output	SDI-12, RS-232 or compatible with hand held device and telemetry
Memory	Minimum 512 MB
General	
Software	All required software in English version with licenses
Tools	Complete tool kit for installation and routine maintenance
Manuals	Full documentation and maintenance instructions in English
Protection	All required caps and anti-fouling devices
Sensor Cleaning	Automated sensor cleaning mechanism
Environment protection	IP67
Depth Sensor	Accuracy 0.003 m Resolution 0.001 m Range 0 to 60 m Conductivity Accuracy $\pm 3\%$ FS or $5\mu\text{S}/\text{cm}$ Resolution $1\mu\text{S}/\text{cm}$ Range 0-100 $\mu\text{S}/\text{cm}$
Dissolved oxygen	Sensor Type Optical Accuracy $\pm 5\%$ reading or $\pm 0.2\text{ mg/L}$ Resolution 0.01 mg/L Range 0 to 20 mg/L
Temperature	Accuracy $\pm 0.2^\circ\text{C}$ Resolution 0.2°C Range -5 to 45°C
Turbidity	Accuracy $\pm 5\%$ reading or 2 NTU Resolution 1 NTU Range 0 to 4,000 NTU Sensor Cleaning Automated sensor cleaning mechanism

pH	Accuracy ± 0.2 pH units; ± 1.0 mV Resolution 0.01 pH unit; 0.1 mV
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VSAT System

Operating Temperature	From -20 to +60°C
Antenna cable	LMR400 grade or better
Performance	Data Reception availability of 99% or better
Specific Features	
Communication Direction	VSAT Radio system to allow two-way communication system between data centre and remote station
Single Hop or double hop	Provision to use either single hop (leased lines between user and service provider hub) or double hop (via VSAT) for receiving data at user end
Frequency Band	C band or extended C band (Ku or Ka band would be acceptable)
Band width Sharing	VSAT band width will be able to be shared among all stations using TDMA mode
Alarm Conditions	VSAT remote stations shall be able to transmit based on alarm conditions at the remote site such as critical water level or exceptional precipitation events
Accessories	All associated equipment, including antenna all cables and mounting hardware

BOAT SPECIFICATIONS

Description	Minimum Technical Requirements
Length	18 Feet
Width	5 Feet
Depth	2 Feet
Capacity	7 Persons including Driver
Engine	15 HP Manual Drive Rope Start Yamaha/Mariner/Honda Outboard Motor
Construction	GRP Construction with inbuilt longitudinal & Transverse Stiffeners and marine ply bulkheads. Designed to shape similar to Wooden shikaras in Kashmir. A suitable canopy of nylon fabric over GI removable stanchions. Seats wide enough for reclining seating and cushioned mattress for seating and back support.
Colours	Will be in two colours. Name & Logo of the purchaser's organization shall be painted prominently on Shikara.
Accessories	
Pedals/Oars	2 No's FRP Blade with Aluminum Shaft.
Life Jackets	7 No's

TECHNICAL SPECIFICATIONS FOR DGPS For Both BASE STATION & ROVER**CHARACTERSTICS & SPECIFICATIONS:****1. Measurements Specification**

Should be Capable of tracking **GPS (L1, L1C, L2, L2C, L5) GLONASS (L1, L2), Galileo (E1, E5a, E5b), Beidou (Compass) (B1, B2), SBAS**, with **120 or more channels** & with Static, Real-time Kinematic, Stop and Go as measuring modes.

2. Accuracy

<i>High Precision Static</i>	Horizontal as 3 mm $\pm$ 0.1 ppm;	Vertical as 3.5 mm $\pm$ 0.4 ppm
<i>Real Time Kinematic</i>	Horizontal as 8 mm $\pm$ 1 ppm ;	Vertical as 15 mm $\pm$ 1 ppm

3. Position update rate

Position Update Rate should be upto **20 Hz**.

4. GNSS Antenna

Multi frequency, High gain integrated antenna with Sub-mm Phase Center repeatability.

5. Controller Specification

Controller should be provided with both Base and Rover. Controller should have latest Windows Operating System with coloured display & back light illumination, touch screen with full Alphanumeric Hard & Touch QWERTY keyboard along with 2 MP or more camera. Controller should be able to configure the base and rover.

6. General Specification

- a. Should have Integrated Bluetooth to communicate between GPS and Controller with RS 232 ports, 1 no for Power/Data and other port dedicated to data Communication.
- b. GNSS receiver should be operable with internal batteries long enough to last at least 6 hours in RTK mode.
- c. Should be protected against temporary immersion in water.
- d. Should withstand pole drop onto concrete up to a minimum of 1m.
- e. Initialization Time should be typically less than 8 seconds.
- f. External chargers one for each battery should be supplied.
- g. Memory of 10 MB though internal memory or through industrial grade compact flash card in receiver or controller.
- h. Initialization Reliability should be better than 99.99%.

7. Controller On Board Software

- a. The Software should allow configurable survey style for RTK, PPK, Static / Fast Static, RTK & PPK etc.
- b. The software should be capable of multitasking so that multiple operations can be opened at a time e.g Stakeout, int Manager, COGO in which should be able to key in Lines, Sub-divide lines and creating parallel lines for staking out purpose etc.
- c. Should be able to e-mail data collected in the field incase facility is available. Should be able to import and export DXF files for effective GIS support.
- d. Should be able to accept background maps in CAD format & Google image.
- e. Should have datum and projection support. Should support Grid coordinates.
- f. Should support Feature Coding with attributes for GIS data collection. Control coding should be possible for automatic plot creation.

8. Radio Modem

Should have preferably in-built Radio Modem with free License.

9. Office Post Processing Software

- a. Software should be Windows based & be able to import Raw data from the GPS/GLONASS receiver as well as RINEX data. Also should be able to import raw data as well as precise ephemeris data via internet IGS data from met.
- b. The software should be capable of Surface Modelling, 3D visualization and quick contouring, COGO & should support feature coding & Google earth.
- c. Should be capable of generating reports directly for the surveyed data & should be able to export the data in RINEX format as well in CAD format.
- d. Should be capable of transferring the data from one datum to another for given set of common points with or without the knowledge of datum.
- e. Should be able to perform Network Adjustment using Least Square adjustment principle.

10. Internal & External Battery Connectivity

- a. External 12V battery with necessary original battery cables with crocodile clips and charging cable/ instrument be provided **or** external battery which can be attached on tripod, for which required facility should be available.
- b. Internal battery should be of 2.6 Ah & 7.2 V

Warranty = Minimum for 02 years.

Training = To be imparted at least two weeks by the vender to four persons at Consignee's place in J&K free of cost in one month from the date of purchase.

Preferable Makes = 1. Leica 2. Trimble 3. Topcon

TOTAL STATION SPECIFICATIONS

Item No.	Name of Goods or Related Services	Technical Description, Specifications, and		The bidder shall state as Fully complaint/ Partially complaint/ Non complaint
		Particulars	Requirements	
1	2	3	4	5
1	Total Station	Angular	5" or better	
		Angle Least Count	1"	
		Telescope	▢ Length: 165 to 175 mm ▢ Magnification: 30 times or better ▢ Focus: Minimum 1.5m ▢ Image: Erect	
		Distance Measurement	▢ Single Prism: 1.5 m to 5000m or better ▢ Three Prism : up to 6000m or better ▢ Reflector Less : at least 500m	
		Distance Accuracy	▢ Prism mode: (2+2ppm×D)mm in above defined range ▢ Distance least count : at least 1mm ▢ Measuring time: Maximum 1s in Fine	
		Display and Keyboard	Minimum 3.5 inch., Touch screen and Alphanumeric keys	
		Clamp system	Horizontal and vertical clamp	
		Optical Plummet	Yes	
		Interface	Extra trigger key for measuring	
		Instrument tracking system	Yes	
		Memory	▢ Internal memory: Minimum 500MB or more with installed OS ▢ External memory device: Compatible 1 USB (8GB or	
		Operating System	Microsoft Windows CE 6.0 or better with Magnet field	
		Country of origin	Japan/Germany/Switzerland (Designed and manufactured)	

		Accessories	▢ Tripod for total station (wooden). ▢ Single prism 3 , prism pole 3 & prism pole stand (tripod) 3set, 1set charger and battery, ▢ 1 set additional battery ▢ All standard accessories including cables ▢ Instrument Operating Manual and Software Installation CD	
		Operating Time	Minimum 8 hours continuous observation	
		Maintenance Facility	Company Authorized Maintenance facility (Lab) within Nepal.	
		Training	4 days Full operation with hardware and software handling for 15 persons.	
		Warranty	2 years on parts and services	
* Authorized document required along with bid document that certifies the Country of Origin. Remarks - 1. Accessories should be compatible with Instrument and same brand. 2. Any technical requirements as per the specification above, is if not mentioned in the product brochure should be defined by the Authorized Letter from the Manufacturer.				

Item	Description
AUTOMATIC LEVEL	Technical Specifications : Magnification : 24X. Image : Erect. Objective Aperture : 32mm. Resolving Power : 4.0”. Minimum Focus Distance: 0.3m. Leveling Accuracy Standard deviation for 1Km double-run leveling 2.00mm. Compensator: Magnetic damping system. Working Range : +/- 15’ Setting Accuracy : 0.5” Sensitivity of Circular Level: 10’/2mm. Water Protection : IPX6 or better. Aluminum Telescopic Tripod. : 1no. Aluminum telescopic staff 5mtrs. length : 2nos. The minimum following accessories should be supplied with the Instrument. Lens cap, Plumb bob, Vinyl cover, Tool kit, carrying case and operation manual.
GPS navigator system, along with the GPS Asia Map	GPS navigator system, along with the GPS Asia Map Technical Specification: Unit dimensions, WxHxD: 2.9" x 5.7" x 1.4" (7.48 x 14.42 x 3.64 cm) Display size, WxH: 2"W x 3.5"H (5.06 x 8.93 cm); 4" diag (10.2 cm) Display resolution, WxH: 272 x 480 pixels Display type: bright, transfective 65k color TFT, dual-orientation touch screen; sunlight readable Weight: 10.2 oz (289 g) with included lithium-ion battery pack; 11.7 oz (333 g) with 3 AA batteries (not included) Battery: rechargeable lithium-ion (included) or 3 AA batteries (not included); NiMH or Lithium recommended Battery life: up to 16 hours (lithium-ion); up to 22 hours (AA batteries) Waterproof: Yes (IPX7) High-sensitivity receiver: Yes Interface: high-speed USB and NMEA 0183 compatible Maps & Memory: Base map: Yes

	Ability to add maps: Yes Built-in memory: 3.0 GB Accepts data cards: micro SD™ card (not included) Waypoints/favorites/locations: 4000 Routes: 200 Track log: 10,000 points, 200 saved tracks Important Features: • Automatic routing (turn by turn routing on roads) • Electronic compass • Touch screen • Barometric altimeter • Camera • Geo caching-friendly • Custom maps compatible • Photo navigation (navigate to geo tagged photos) • Hunt/fish calendar • Sun and moon information • Tide tables • Area calculation • Custom POIs (ability to add additional points of interest) • Unit-to-unit transfer (shares data wirelessly with similar units) • Picture viewer • Garmin Connect™ compatible (online community where you analyze, categorize and share data)
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SPECIFICATIONS OF CABLEWAY

Specifications:

- Strong execution of stationary cable
- Precisely constructed
- High-grade body

Features:

- Optimality
- Ability to withstand in severe conditions
- Seamless finish
- Cost-effective
- Durability
- High performance
- Accuracy
- Timeliness

Specifications of IT equipments :

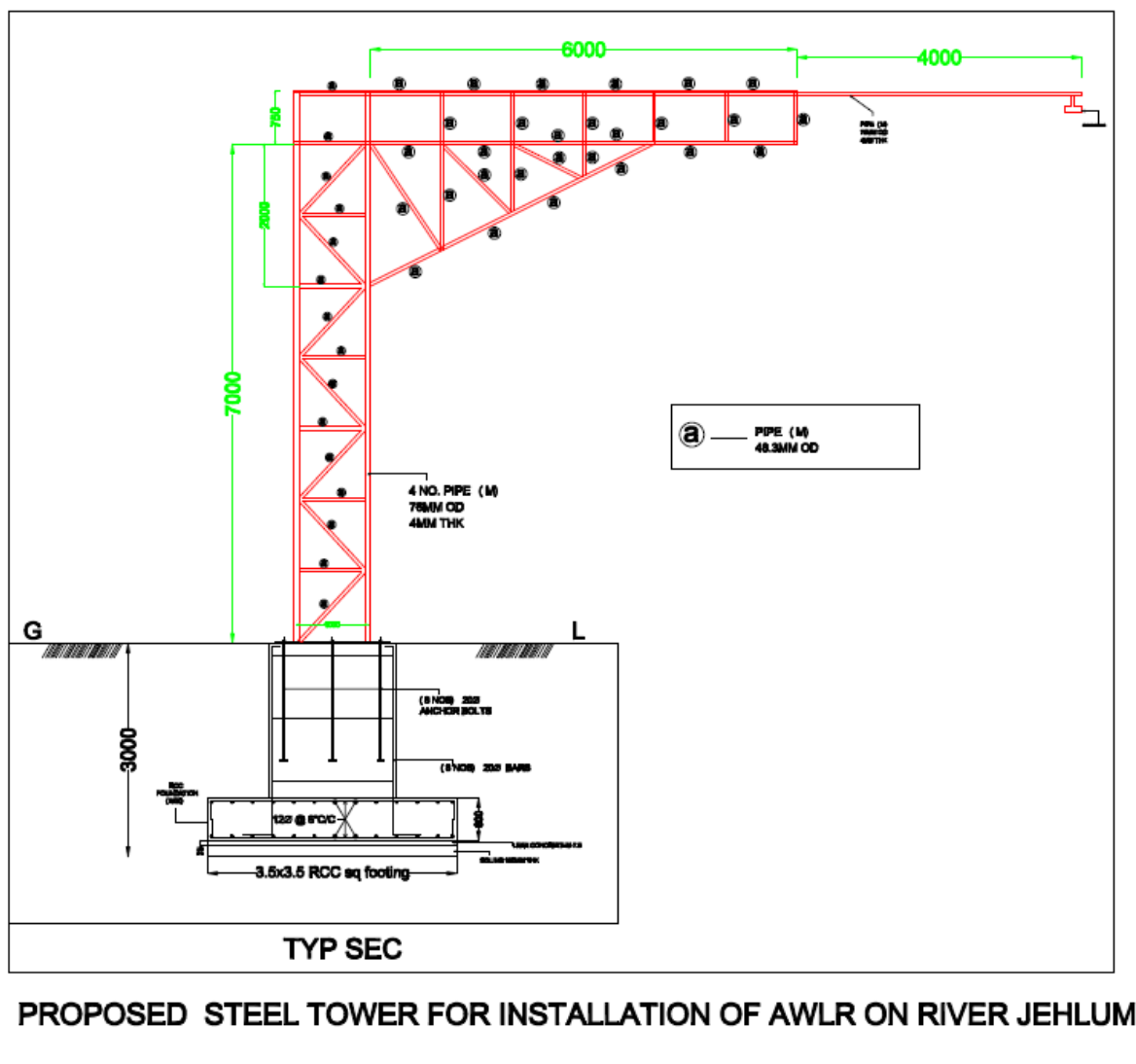
The bidder shall offer their detailed technical specifications for the IT equipments suitable for the implementation of the Hydro Metereological Action Plan.

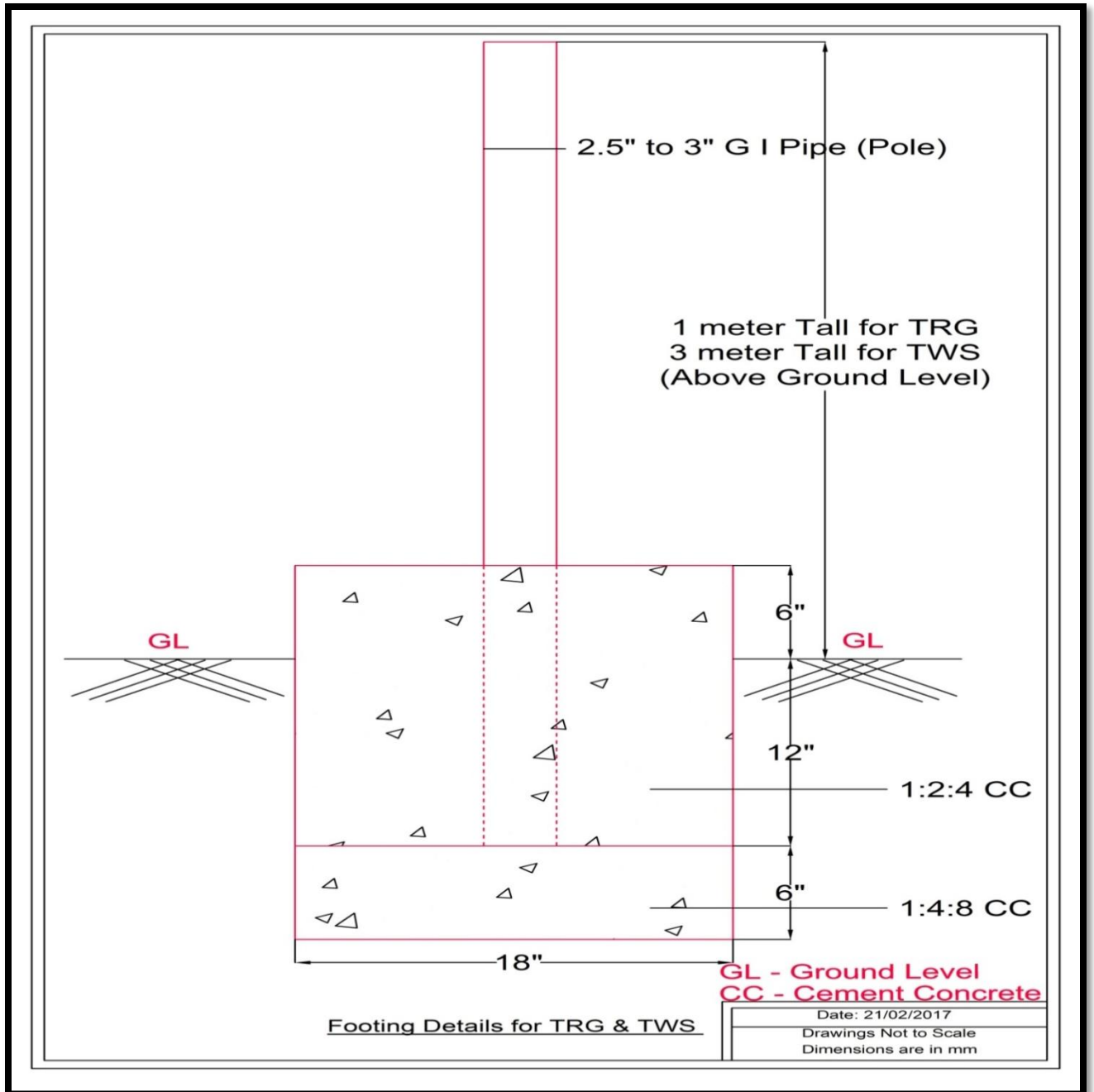
Site preparation and Installation:

- a) The purchaser shall allow the supplier to perform site inspection and construction of suitable structures before the installation of the hardware.
- b) The location of antenna and sensors will be decided by the respective Site Engineer-in-charge depending on the site and river flow conditions.
- c) The supplier should complete the required works at the site for proper installation of the equipment before receipt of the equipment to ensure timely completion of contract.

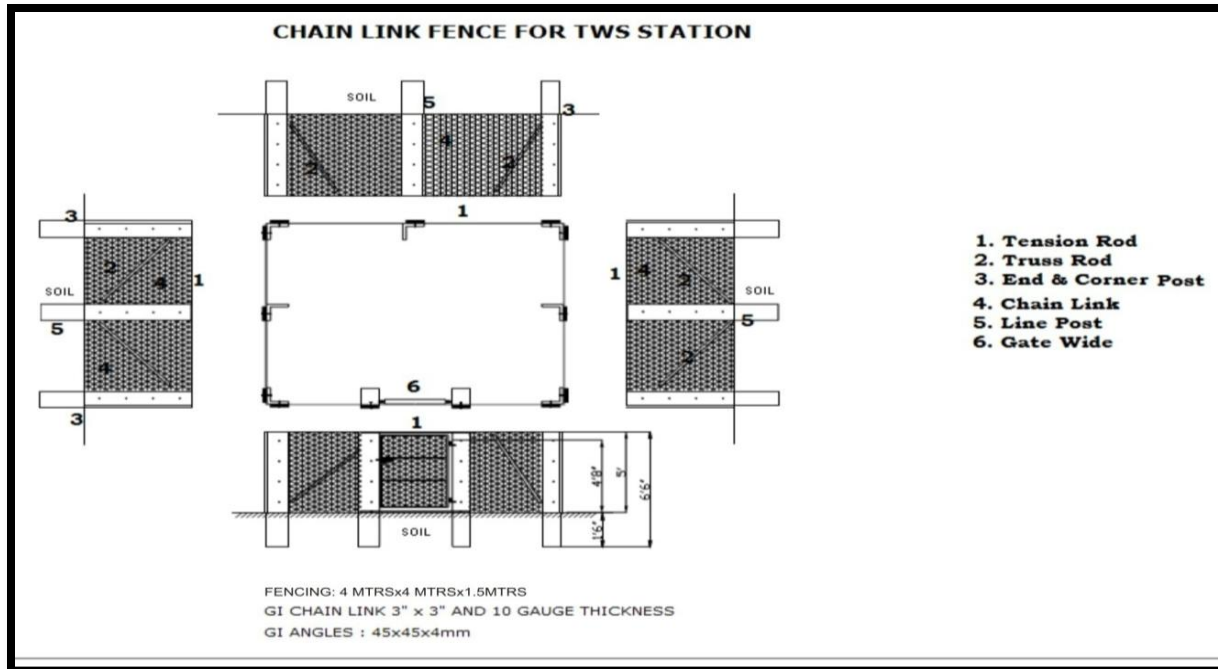
4. Drawings

These Bidding Documents includes *the following* drawings.

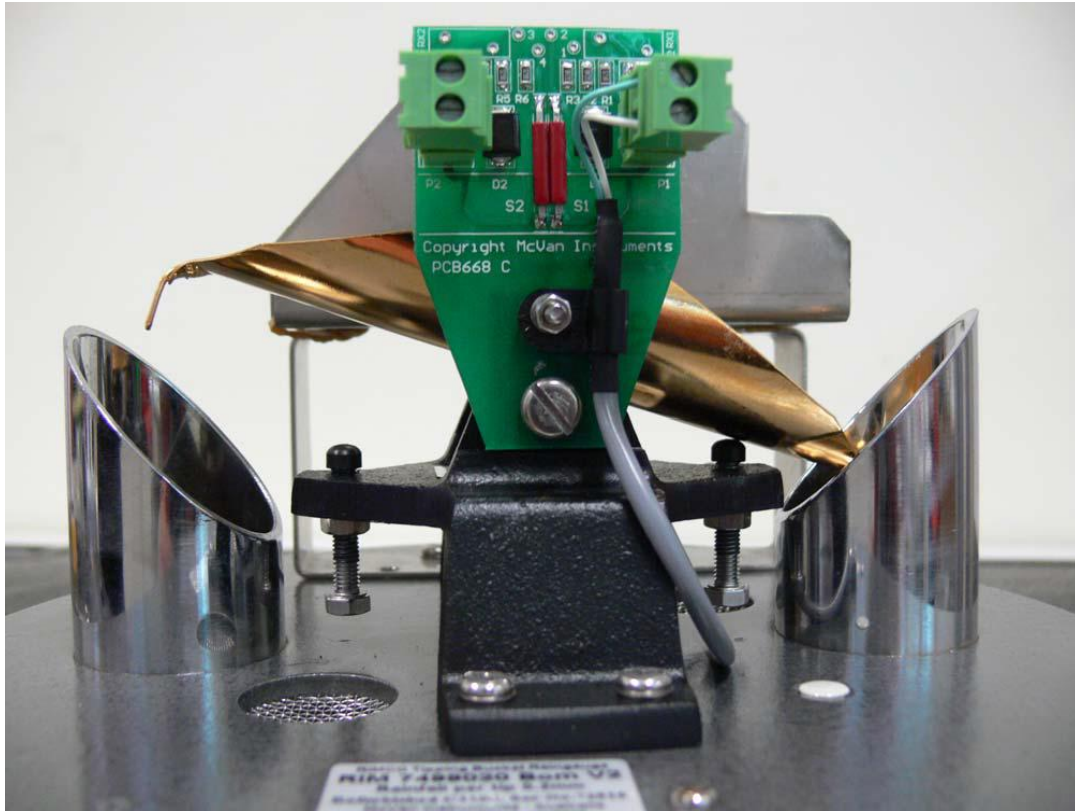




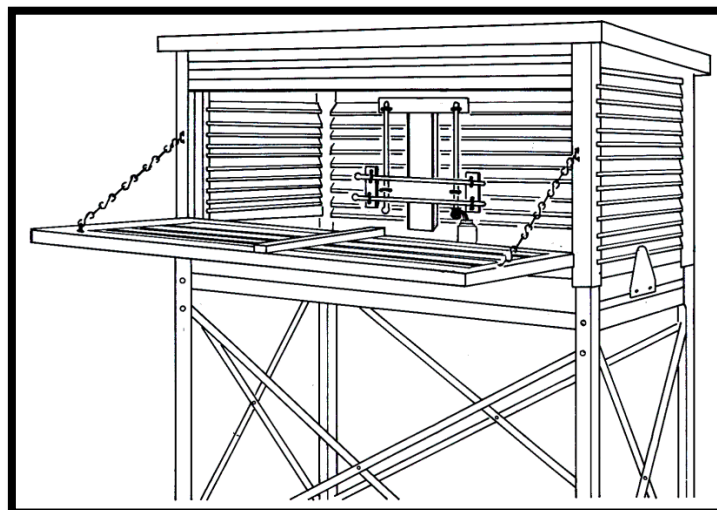
FOOTING DETAILS FOR ARG AND AWS



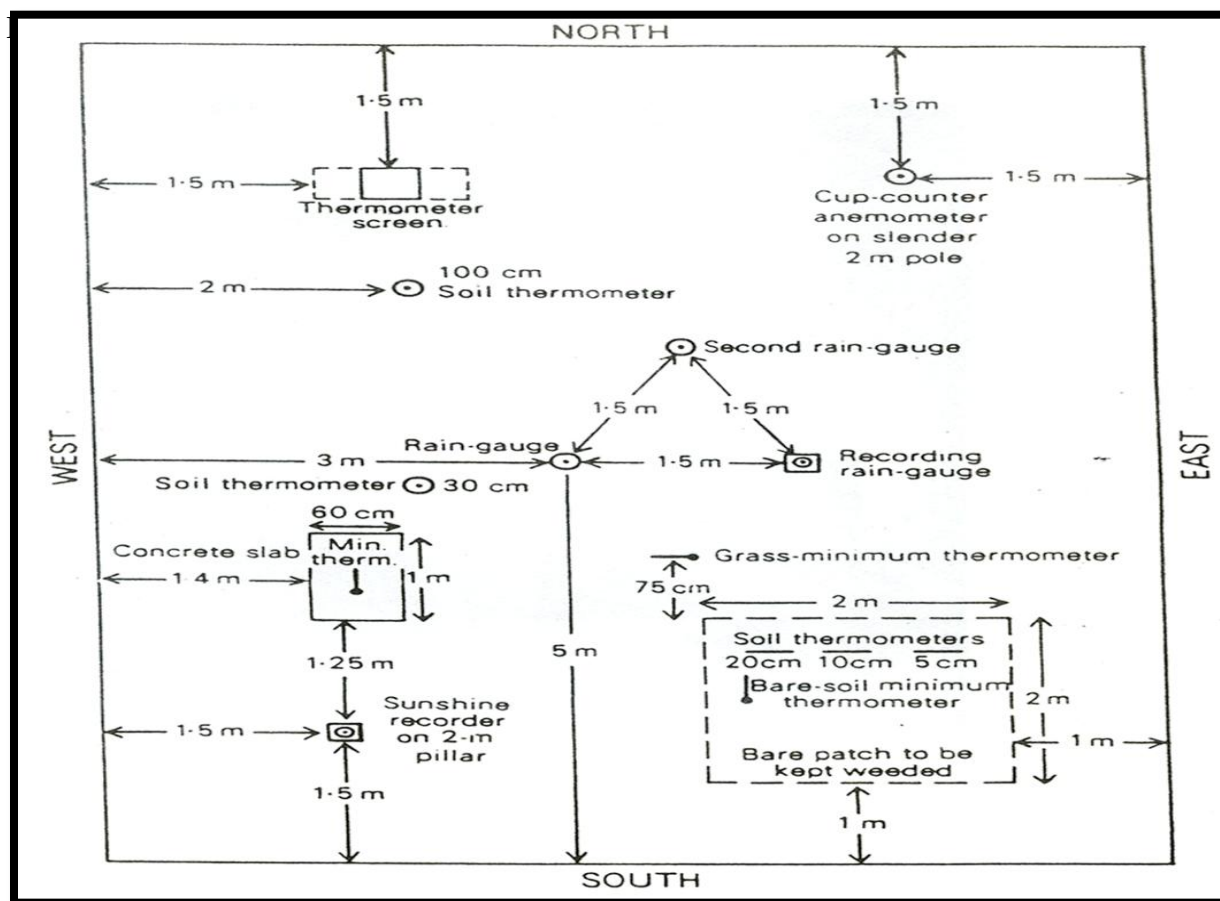
SITE ARRANGEMENT FOR AWS



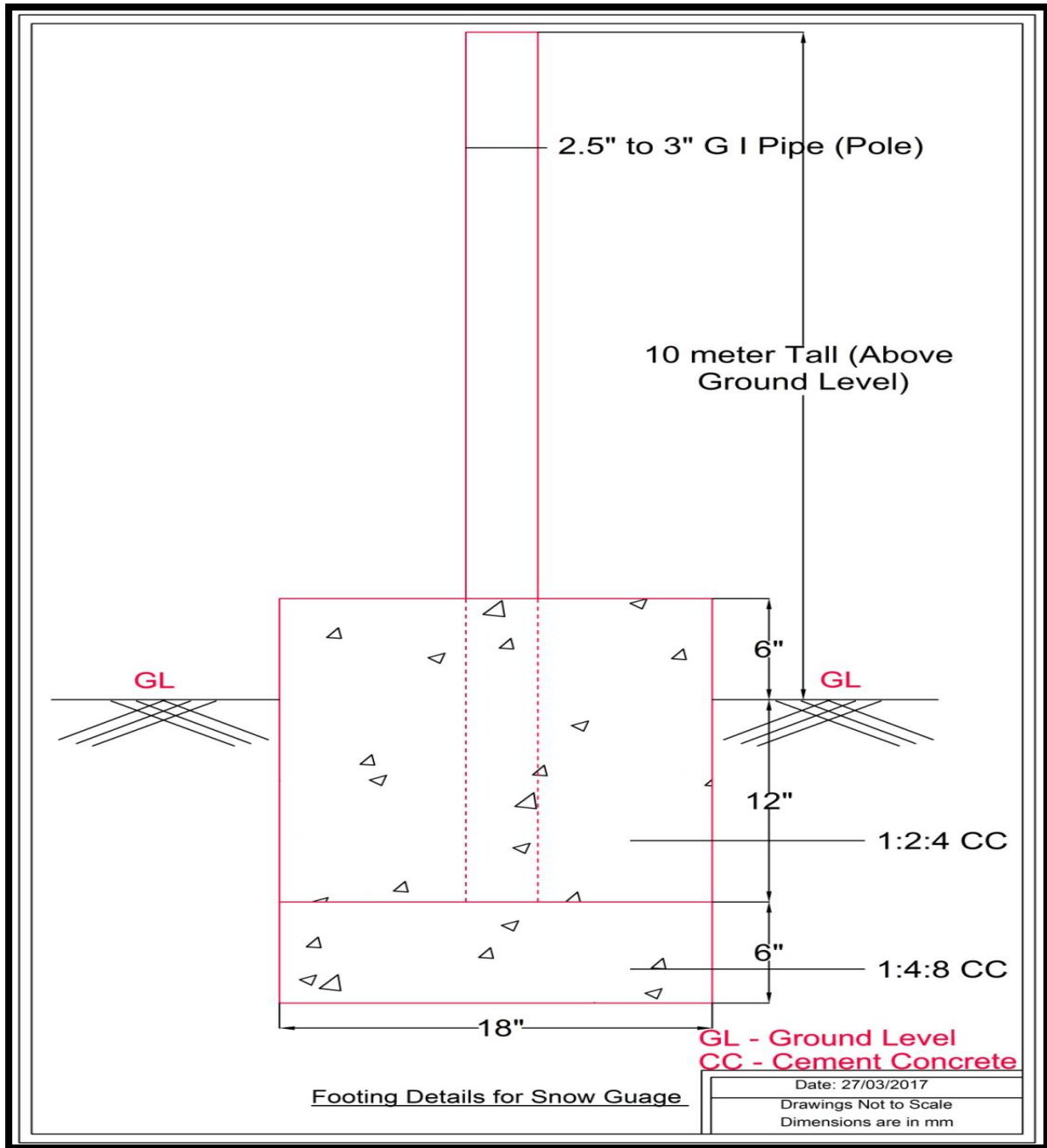
TIPPING BUCKET RAIN GAUGE



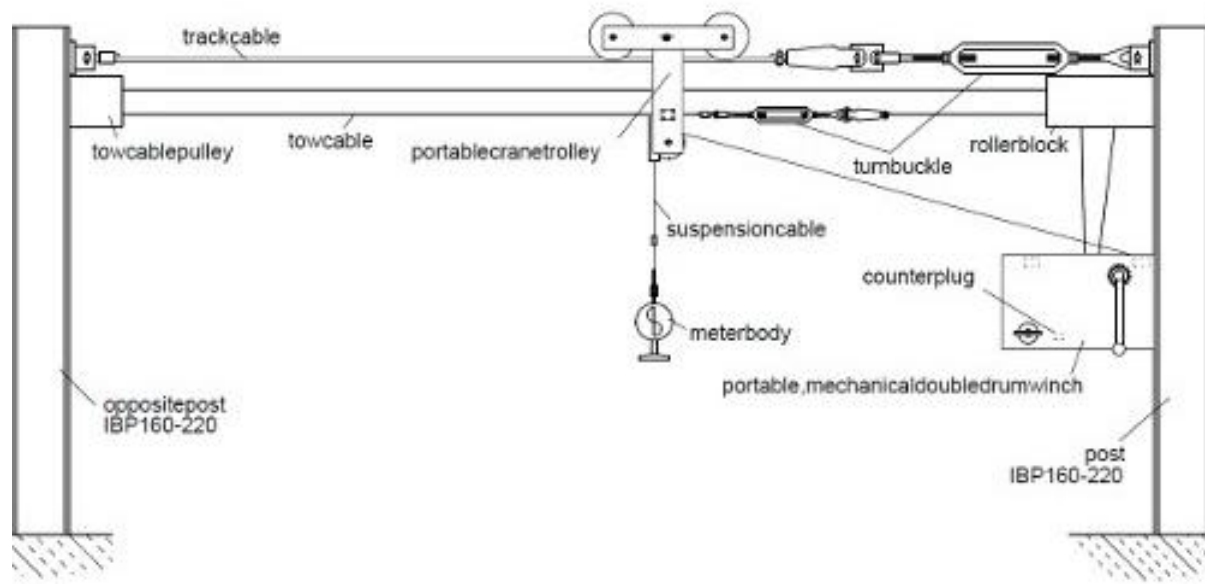
SCHEMATIC DRAWING FOR SSS



SITE PREPERATION FOR SFO



FOOTING DETAILS FOR ASG



CABLE WAY

ATTACHMENTS

ATTACHMENT 1: Locations

A. JAMMU DIVISION

S.No.	District	Name of site	Name of Equipment to be installed	Location Coordinates	
				Latitude (°N)	Longitude (°E)
1	Jammu	Chenani	AWLR + WVRS+GP	33.0314	75.2793
		Pingar/Manwal	AWLR + WVRS+GP	32.7767	75.1444
		Tardala	AWLR + WVRS+GP	32.8015	75.0162
		Nagrota	AWLR + WVRS+GP	32.7971	74.9123
		Jammu (Gujar-Nagar)	AWLR +GP	32.7248	74.8702
		Jammu	ARG	32.6991	74.8425
		Jammu (Nikki-Tawi)	AWLR + WVRS+GP	32.72	74.8442
		Jammu (Bhagwati Nagar)	AWLR+GP	32.7149	74.8477
		Siot	AWLR + WVRS+GP	33.114	74.3749
		Chillah	ARG	32.7683	74.9975
		Mand	ARG	32.8882	74.9851
		Gursala	ASG	32.8979	75.4965
		Ghar	ARG	32.9655	74.5472
2	Udhampur	Udhampur (Salmay Bridge)	AWLR +GP	32.939	75.1662
		Udhampur (Divisional Office Complex)	ARG	32.9	75.1
		Ramnagar	ARG	32.805	75.3176
		Chenani	ARG	33.0388	75.2868
		Gulabgarh	ASG	33.3123	76.1915
		Thuru	ARG	33.2575	74.8333
		Nandkot	ASG	33.4707	74.6402
		Shewa	AWLR + WVRS+GP	33.1498	75.48446
		Machail	AWLR + WVRS+GP	33.4073	76.3796
		Patnazi	ASG	33.143	75.9568
		Shol	ASG	33.1609	76.2517
		Bharansal	ASG	33.4259	75.0019
		Mungli	ASG	33.8339	75.5485
4	Ramban	Chanderkote	AWLR + WVRS+GP	33.1828	75.3115
		Digdol	AWLR + WVRS+GP	33.3065	75.171
		Gool	ASG	33.2707	75.0014

10	Shadipora	AWLR + WVRS	34°11'6.68"N	74°40'25.24"E
11	Asham	VSAT only +ADCP	34°14'47.88"N	74°37'23.93"E
12	Banyari	AWLR	34°20'39.12"N	74°37'51.38"E
13	Sopore	AWLR +WVRS	34°16'58.74"N	74°28'17.49"E
14	Baramullah	AWLR + WVRS+ADCP	34°12'30.01"N	74°20'44.64"E
15	Khandinyaar	AWLR	34°10'56.23"N	74°16'20.36"E
16	Danter	AWLR +WVRS	33°43'2.85"N	75° 8'18.16"E
17	Larnoo	AWLR +WVRS	33°37'45.49"N	75°22'17.41"E
18	Daksum	AWLR +WVRS	33°36'38.70"N	75°26'7.45"E
19	GadoolAhlan	AWLR +WVRS	33°29'43.54"N	75°23'41.85"E
20	Mir Danter	AWLR +WVRS	33°43'43.13"N	75° 8'48.19"E
21	Chakipora	AWLR +WVRS	33°47'19.87"N	75°22'51.66"E
22	Muniwar	AWLR +WVRS	33°43'59.95"N	75° 7'31.76"E
23	d/s Chhohan	AWLR +WVRS	33°27'37.43"N	75°21'54.36"E
24	Pahalgam	AWLR +WVRS	34° 0'41.28"N	75°18'51.98"E
25	Batkoot	VSAT only +WVRS	33°56'27.51"N	75°17'36.34"
26	Akran	AWLR +WVRS	33°40'38.72"N	75° 6'24.38"E
27	KanchlooKund	AWLR +WVRS	33°34'32.11"N	75° 7'45.92"E
28	Chak Wazoo	AWLR +WVRS	33°33'33.29"N	75° 8'2.47"E
29	Kokernag	WVRS	33°35'13.60"N	75°17'48.18"E
30	Mattan	WVRS	33°45'42.55"N	75°12'39.13"E
31	Achabal	WVRS	33°40'57.74"N	75°13'19.17"E
32	Panzath	WVRS	33°36'22.59"N	75°10'1.79"E
33	Verinag	WVRS	33°32'5.50"N	75°14'58.57"E
34	Khudwani	VSAT only +WVRS	33°43'28.79"N	75° 5'21.52"E
35	Nihama	AWLR +WVRS	33°38'1.54"N	74°53'15.52"E
36	Aharabal	AWLR +WVRS	33°38'42.42"N	74°46'49.66"E
37	Kounserbal	AWLR +WVRS	33°36'3.56"N	74°55'53.64"E
38	Nagam	AWLR +WVRS	33°34'13.74"N	74°58'26.21"E
39	Aglar	VSAT only +WVRS	33°48'52.10"N	74°47'29.18"E
40	ChivaKhurd	AWLR +WVRS	33°53'18.54"N	74°51'43.22"E
41	Sangaroni	AWLR +WVRS	33°48'14.92"N	74°43'19.92"E
42	Chowan	AWLR +WVRS	33°46'45.35"N	74°41'35.30"E
43	Wuchi	VSAT only +WVRS	33°48'24.54"N	75° 1'59.00"E
44	Chitra Gam	AWLR +WVRS	33°47'31.26"N	74°55'34.86"E
45	KaniPora	AWLR +WVRS	33°45'12.35"N	74°50'44.26"E
46	Day Gam	AWLR +WVRS	33°40'42.89"N	74°44'7.75"E
47	Batagund	AWLR +WVRS	33°56'57.73"N	75° 5'33.03"E
48	Arizal	VSAT only +WVRS	33°54'24.41"N	74°35'27.70"E

49	Trikulbal	AWLR +WVRS	34°10'3.52"N	74°35'22.98"E
50	Drung	AWLR +WVRS	34° 2'20.38"N	74°24'33.17"E
51	Trikulbal	AWLR +WVRS	34°10'0.91"N	74°35'20.28"E
52	Raithen	AWLR +WVRS	33°54'9.51"N	74°38'45.84"E
53	UtraDalabal	AWLR +WVRS	33°53'21.42"N	74°38'40.29"E
54	Brenwar	AWLR +WVRS	33°53'22.97"N	74°40'52.49"E
55	Barzullah	VSAT only +WVRS	34° 2'59.16"N	74°48'12.29"E
56	Padshahi Bagh	AWLR +WVRS	34° 3'30.55"N	74°49'35.92"E
57	Bemina	AWLR +WVRS	34° 4'22.08"N	74°45'46.99"E
58	Hokersar	AWLR +WVRS	34° 6'33.28"N	74°43'7.72"E
59	NowgamJheel	AWLR +WVRS	34°13'40.35"N	74°34'52.02"E
60	Wari Pura Bala	AWLR +WVRS	34° 8'17.74"N	74°29'7.10"E
61	Shoom	AWLR +WVRS	34° 6'51.39"N	74°25'56.43"E
62	Kakothal	AWLR +WVRS	34° 7'38.75"N	74°25'12.97"E
63	Kowachek	AWLR +WVRS	34° 8'47.39"N	74°26'53.33"E
64	BotaKadal	AWLR +WVRS	34° 7'8.05"N	74°48'45.51"E
65	Dachigam (Tail)	AWLR +WVRS	34° 9'17.41"N	74°54'52.71"E
66	Tailbal	AWLR +WVRS	34° 9'29.45"N	74°51'51.39"E
67	Dalgate	AWLR	34° 4'53.09"N	74°49'47.36"E
68	Doderhama	VSAT only +WVRS	34°12'44.82"N	74°46'8.54"E
69	Sonamarg	AWLR +WVRS	34°18'3.32"N	75°17'46.18"E
70	D/s Sonamarg	AWLR +WVRS	34°18'9.72"N	34°18'9.72"N
71	Kalantra	AWLR +WVRS	34° 8'2.11"N	74°24'15.07"E
72	Khaitangan	AWLR +WVRS	34° 9'44.41"N	74°25'16.61"E
73	Ningli	VSAT only +WVRS	34°16'8.71"N	74°29'56.65"E
74	Seuloo	VSAT only +WVRS	34°20'0.55"N	74°24'49.07"E
75	Papchan	AWLR	34°24'33.65"N	74°39'17.19"E
76	Sonarwani	AWLR +WVRS	34°26'44.90"N	74°38'51.96"E
77	Gushi	AWLR +WVRS	34°31'5.75"N	74°13'45.30"E
78	Verinag	ARG	33°31'56.75"N	75°16'4.30"E
79	Kokarnag	ARG	33°35'11.69"N	75°17'48.90"E
80	Pahelgham	ARG	34° 0'58.13"N	75°18'54.16"
81	Kulgham	ARG	33°38'42.69"N	75° 1'4.21"E
82	Babapora	ARG	33°46'40.15"N	75° 0'51.01"E
83	shopain	ARG	33°43'2.44"N	74°49'49.24"E
84	charisharief	ARG	33°51'45.17"N	74°45'56.74"E
85	Tangmarg	ARG	34° 3'34.55"N	74°25'34.64"E
86	Sonarwani	ARG	34°28'23.31"N	74°41'31.14"E
87	Pulwama	ARG	33°52'12.79"N	74°53'45.95"E

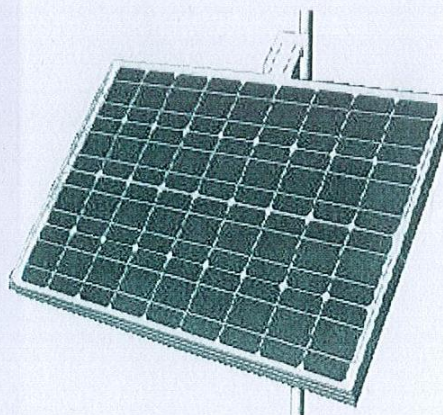
88	Bumhama	ARG	34°30'32.77"N	74°16'8.84"E
89	Nowgam	ARG	34°20'50.31"N	74°11'56.19"E
90	Lolab	ARG	34°29'48.57"N	74°22'40.39"E
91	Pahalgham	ASG	34° 0'58.90"N	75°18'53.28"E
92	Duksum	ASG	33°36'42.14"N	75°26'12.26"E
93	Shopian	ASG	33°43'2.67"N	74°49'49.17"E
94	Yusmarg	ASG	33°49'24.62"N	74°40'16.91"E
95	Sonmarg	ASG	34°18'11.54"N	75°17'32.72"E
96	Gund	ASG	34°15'21.73"N	75° 5'15.81"E
97	Chandusa	ASG	34° 8'58.52"N	74°23'2.98"E
98	Gulmarg	ASG	34° 2'50.40"N	74°23'15.24"E
99	Athwatoo	ASG	34°29'22.62"N	74°42'2.89"E
100	Nowgam	ASG	34°30'5.22"N	74°22'41.97"E
101	Chandigam	ASG	34°28'17.24"N	74°23'38.95"E
102	Chowkibal	ASG	34°24'34.28"N	73°57'36.50"E
103	Khurhama	ASG	34°28'24.07"N	74°26'29.53"E

Total (B) : AWLR (with VSAT) = 59
WVRS = 68
ADCP = 04
ARG = 13
ASG = 13
VSAT only = 13

Attachment 2

2.3 Solar Panel, Battery

We have proposed the proposed 35 Watt solar panel for charging the Sealed Maintenance Free 12Volt /65AH Battery, which delivers typical peak power of 35 watts. This panel consists of series connected monocrystalline silicon solar cells. The glass is self-cleaning in most climates, retains its excellent transmissivity indefinitely, and is extremely resistant to mechanical stress. The module is framed with lightweight corrosion-resistant anodized aluminum sections with silicon edge sealant around the laminate.



Specifications/Electrical characteristics follow:

	Nominal Wiring Configuration
Voltage	12-Volt
Typical peak power (Pp)	35 W
Voltage at peak power (Vpp)	17.5 V
Short-circuit current (Isc)	2.35A
Open-circuit voltage (Voc)	21.77V
Weight	Less than 3.5 Kg approx.

Attachment 3

CALIBRATION STRATEGY

1. Introduction

Traceability of measurement and calibration results plays a key role for many application areas, ranging obviously on the assessment of climate variability and changes, but also to aspects that may have strong economic and legal impacts in the context of issuance of warnings for severe weather to protect lives and livelihood.

Ensuring metrological traceability enables full confidence in the truth of measurement results, which leads to confidence in the implications of the measurement data: in the forecasts and warnings derived from the measurements; in climate analyses and trends derived from the measurements. And this in turn leads to improvements in disaster risk reduction, climate change mitigation, advice for policy developers, human health and safety, and property protection.

On the other hand, the lack of traceability of measurement results was recognized as major concern by Commission for Instruments and Methods of Observation (CIMO), because a full potential of WMO Integrated Observing System (WIGOS) could be brought into question without regular traceability. Therefore, CIMO stressed the need to sensitize NMHSs to the necessity of regular instrument calibrations, in addition to preventive maintenance and periodical instrument checks, as an essential tool to ensure the required traceability and quality of measurement results.

Even though the principles of traceability are clearly laid down in the CIMO Guide, numerous developing country Members have no calibration laboratory at all to ensure the traceability of their instruments. Some developed country Members are also facing challenges with the calibration of their network instruments and are applying a strategy consisting of carrying out field verification checks to identify instruments which are out of the calibration tolerances and to perform complete laboratory calibrations only of those instruments which were identified as not meeting the expected tolerances during the field verification check.

To overcome those shortages, CIMO-16 recommended that calibration strategy be finalized as a matter of urgency and invited Regional Associations to encourage their Members to implement calibration strategy to improve the traceability of measurements within their Region, according to their Regional WIGOS Implementation Plan.

This strategy seeks to build upon best available practices to strengthen calibration services and improve traceability assurance across the entire WMO. It focuses on providing widely acceptable guidelines in order to enable full confidence in measurement results.

2. Definitions

Definitions of terms in metrology are given in *International vocabulary of metrology – Basic and general concepts and associated terms (VIM)* by the International Organization for Standardization (ISO,2007) *Joint Committee for Guides in Metrology (JCGM, 200:2012)*, and for the simplicity, some of them are reproduced here:

Calibration - operation that, under specified conditions, in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication.

Calibration hierarchy - sequence of calibrations from a reference to the final measuring system, where the outcome of each calibration depends on the outcome of the previous calibration.

International System of Units (SI) - system of units, based on the International System of Quantities, their names and symbols, including a series of prefixes and their names and symbols, together with rules for their use, adopted by the General Conference on Weights and Measures (CGPM).

Measurement uncertainty (uncertainty of measurement) - non-negative parameter characterizing the dispersion of the quantity values being attributed to a measure and, based on the information used.

Metrological traceability - property of a measurement result whereby the result can be related to a reference through a documented unbroken chain of calibrations, each contributing to the measurement uncertainty.

Metrological traceability chain (traceability chain) - sequence of measurement standards and calibrations that is used to relate a measurement result to a reference.

3. *Objective of the strategy*

The main objective of the calibration strategy for traceability assurance is to ensure the proper traceability of measurement and calibration results to the International System of Units (SI), through an unbroken chain of calibrations, each contributing to the measurement uncertainty.

The strategy aims to provide guidance on how to effectively and efficiently achieve this objective.

4. *Responsibility for implementing the strategy*

The responsibility for traceability assurance lies with WMO Members, which should enable all the required calibrations as well as other necessary steps to achieve the objective of the strategy.

It is up to each NMHS to choose the most suitable approach for its traceability assurance, but ensuring the metrological traceability of all measurement results is strongly recommended.

5. *Ways of traceability assurance*

Simplifying the ISO/JCGM definition, metrological traceability could be described as a direct link between a result of a measurement made in the field and a result obtained by the calibration process in a calibration laboratory. It ensures that different measurement methods

and instruments used in different countries at different times produce reliable, repeatable, reproducible, compatible and comparable measurement results. When a measurement result is meteorologically traceable, it can be confidently linked to the internationally accepted measurement references.

At the top of the metrological traceability chain there is an internationally defined and accepted reference, in most cases the International System of Units (SI), whose technical and organizational infrastructure has been developed and maintained by the Bureau International des Poids et Mesures – BIPM (www.bipm.org).

All the calibrations performed by National Metrology Institutes (NMIs) have to be traceable to the references maintained by BIPM. The framework through which National Metrology Institutes demonstrate the international equivalence of their measurement standards and the calibration and measurement certificates they issue is called the CIPM Mutual Recognition Arrangement (CIPM MRA). The outcomes of the Arrangement are the internationally recognized (peer-reviewed and approved) Calibration and Measurement Capabilities (CMCs) of the participating institutes. Approved CMCs and supporting technical data are publicly available from the CIPM MRA Key Comparison Database (KCDB), (<http://kcdb.bipm.org/>).

NMIs are responsible for maintenance of national standards and dissemination of traceability on the national level, either by themselves or by Designated Institutes (DIs). DIs are well experienced institutes, operating at the top of the national metrology system, but which are not part of formal NMI structure. They are designated to be responsible for certain national standards and associated services that are not covered by the regular activities of NMIs.

Whenever possible, all the measurements within any particular country have to be traceable to its NMI or DI.

Taking into account all aforementioned, as well as WMO Members capabilities and needs, following ways of traceability assurance can be identified, ranking from the most appropriate to not appropriate:

- 5.1 Fully assured traceability – the most appropriate way
- 5.2 Assured traceability (without accreditation) – acceptable way
- 5.3 Partially assured traceability – the least appropriate way
- 5.4 Lack of traceability – not appropriate

5.1. Fully assured traceability - the most appropriate way

This way of traceability assurance (Figure 1) ensures a fully traceable meteorological measurement results provided by particular NMHS's service, to the international standards.

Following preconditions have to be met to achieve this status:

- NMHS has a calibration laboratory.
- Laboratory personnel are well trained and competent to properly operate laboratory standards and equipment.
- Calibration standards and equipment meet the target uncertainties required for calibrations of meteorological instruments.
- Calibration standards and equipment are regularly calibrated and maintained.

- Quality management system, including all the calibration procedures, working instructions and forms, is well documented and applied in laboratory work.
- Calibration laboratory is accreditation according to ISO/IEC 17025.
- Calibration laboratory participates in inter laboratory comparisons.

A determined engagement of NMHS's management board to support continuous strengthening of their calibration laboratory should be stated. This should be followed by a clear policy on the needs for regular calibrations of all meteorological instruments under the responsibility of NMHS, including the defined calibration intervals, as well as policy on implementation of calibration results.

Traceability of the laboratory standards and equipment have to be assured, whenever possible, by the means of calibrations at NMI or DI, aiming at the best possible CMCs within the particular county.

In the lack of direct calibration at NMI or DI, calibration by other accredited calibration laboratory or WMO Regional Instrument Centre (RIC) is acceptable solution.

All NMHS's field instruments have to be calibrated in the calibration laboratory regularly, whenever possible, ensuring the best achievable measurement uncertainties.

The NMHS's calibration laboratory should also, jointly with other relevant departments, develop procedures aiming to avoid gaps in field measurements due to calibration activities.

The following potential options are:

- NMHS's calibration laboratory, or the relevant department, should have, at its disposal, a small reserve of calibrated sensors that can be used as a replacement set for the instruments in the network. Those recovered should be calibrated in the laboratory forming, as a consequence, a new set of replacement and so on to cover the whole network.
- An additional set of travelling standards and / or portable calibration devices for on-site calibrations, covering the whole range will be of a great advantage, but particular care should be taken on achievable uncertainties.
- A set of travelling standards or portable calibration devices have to be regularly calibrated in the calibration laboratory, and checked before and after field use.
- On-site calibrations, or checks only, could be used to identify instruments out of uncertainty specifications.

The bidder shall submit the following alongwith the bid:-

A comprehensive Method Statement on the applied calibration and in-factory test procedures shall accompany the bid. The Method Statement should define the test and calibration methods applied on the instruments and the components thereof.

The Method Statement shall also include, for each calibrated product, an audit trail to national standards on all instruments and facilities used for testing and calibration. The Audit Trail Report shall associate the calibration of the reference instruments and test equipment to the national calibration standards. If the Supplier or Manufacturer is not in a position to deliver an Audit Trail Report to the national standards, the Manufacturer shall explain what the quality standards are and how they are maintained and monitored. Conditions during calibration, such as room and/or instrument temperature, equipment and facilities used, shall be included in the calibration and test documents.

The test and calibration documents (QAP) shall contain the data generated during calibration and testing, including:

- Calibration data provided by the Manufacturer for all instruments
- Calibration and test data of the data-logger electronics
- Data on hysteresis test, temperature tests, zero stability test, scale stability test.
- Humidity test
- Spray test on enclosure(s), connectors and cables.

Attachment 4

Details of Personnel

The Bidder must demonstrate that it will have the personnel for the key positions that meet the following requirements. The supplier shall require the purchasers consent to substitute or replace the Key Personnel (reference the Particular Conditions of Contract 9.1).

S. No	Designation of Personnel (Position)	No.	Minimum Qualification	Minimum years of experience	Minimum experience in HMAP or similar works.
1.	Project Manager	01	B.E (Civil/Mechanical/IT/Computer/Instrumentation)	15 Years	10 Years
2.	Instrumentation Engineer	01	B.E (E&C/Instrumentation)	10 years	5 Years
3.	IT / Networking Engineer	01	B.E (IT/Computer)	10 years	5 years
4.	Civil Engineer	02	B.E (Civil)/ Diploma (Civil)	7 / 10 years	5 years
5.	Electrical/Mechanical Engineer	01	B.E (Electrical/Mechanical)/ Diploma (Elec./Mech.)	7 / 10 years	5 years
6.	Surveyor	02	B.E (Civil)/ Diploma (Civil)	7 / 10 years	5 years

The Bidder must not have in his employment:

- [i] A near relations (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of persons of Jhelum Tawi Flood Recovery Project / JKERA.
- [ii] Without Government permission, any person who retired as gazetted officer within the last one year.

In addition to above, the bidder shall provide details of minimum two teams of operational staff one each for Srinagar and Jammu region. Schedule of personnel for operational support including number, location, period of engagement, responsibilities and qualification of technical personnel shall be specified by the bidder. The Bidder shall provide details of the proposed personnel and their experience records alongwith the bid.

5. Inspections and Tests

The following inspections and tests shall be performed:

1. Inspection and tests prior to shipment of Goods and at final acceptance are as follows:

(i) The inspection of the goods shall be carried out to check whether the goods are in conformity with the technical specifications attached to the purchase- order form and shall be in line with the inspection/test procedures laid down in the technical specifications and the General Conditions of contract. Following broad test procedure will generally be followed for inspection and testing of machine. The supplier will dispatch the goods to the ultimate consignee after internal inspection testing along with the supplier's inspection report, manufacturer's warranty certificate. The purchaser will test the equipment after completion of the installation and commissioning at the site of the installation. For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment. Complete hardware and software as specified in section VI should be supplied, installed and commissioned properly by the supplier prior to commencement of performance tests.

(ii) The acceptance test will be conducted by the purchaser/their consultant or any other person nominated by the purchaser, at its option. The acceptance will involve trouble- free operation for seven consecutive days. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of any part of hardware or excessive heating of motors attached to printers, drivers etc. or bugs in the software should occur. All the software should be complete and no missing modules/sections will be allowed. The supplier shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified. An average uptake efficiency of 100 % for the duration of test period shall be considered as satisfactory.

(iii) In the event of the hardware and software failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser.

2. Manuals

- Before the goods and equipment are taken over by the Purchaser, the Supplier shall supply operation and maintenance manuals of the goods and equipment. These shall be in such detail as will enable the Purchaser to operate, maintain, adjust and repair all parts of the equipment as stated in the specifications.
- The manuals shall be in the ruling language (English) and in such form and numbers as stated in the contract.

- Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purpose of taking over until such manuals have been supplied to the Purchaser.

3. For the System and Other Software the following will apply:

The Supplier shall provide complete and legal documentation of hardware, and licensed operating systems. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.

4. Acceptance Certificates:

On successful completion of acceptability test, receipt of deliverables etc, and after the purchaser is satisfied with the working on the system, the acceptance certificate signed by the supplier and the representative of the purchaser will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the systems.

6.Proforma of Certificate for Issue by the Purchaser after Successful Installation and Startup of the Supplied Goods

[This is to be attached for supply, erection, supervision of erection and startup contracts only]

No.

Date:

M/s.

Sub: Certificate of startup of the supplied Goods

1. This is to certify that the plant/s as detailed below has/have been received in good condition along with all the standard and special accessories (subject to remarks in Para No. 2) and a set of spares in accordance with the Contract/Specifications. The same has been installed and commissioned.

(a) Contract No. _____ dated _____

(b) Description of the plant _____

(c) Plant Nos. _____

(d) Quantity _____

(e) Bill of Lading _____ dated _____
(for import contract)

(f) Name of the vessel/transporter _____

(g) Rail/Roadways Receipt No.
_____ dated _____

(h) Name of the consignee _____

(i) Date of startup and proving test _____

2. Details of accessories/spares not yet supplied and recoveries to be made on that account.

<u>S. No.</u>	<u>Description</u>	<u>Amount to be recovered</u>
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3. The proving test has been done to our entire satisfaction and operators have been trained to operate the plant.
4. The supplier has fulfilled his contractual obligations satisfactorily. *

OR

The supplier has failed to fulfill his contractual obligations with regard to the following:

- (a)
- (b)
- (c)
- (d)
5. The amount of recovery on account of non-supply of accessories and spares is given under Para No. 2.
6. The amount of recovery on account of failure of the supplier to meet his contractual obligations is as indicated in endorsement of the letter.

Signature

Name

Designation with Stamp

* Explanatory notes for filling up the certificates:

- (a) He has adhered to the time schedule specified in the contract in dispatching the documents/drawings pursuant to Technical Specifications.
- (b) He has supervised the startup of the plan in time i.e., within the period specified in the contract from the date of intimation by the Purchaser in respect of the installation of the plant.

- (c) Training of personnel has been done by the supplier as specified in the contract
- (d) In the event of documents/drawings having not been supplied or installation and startup of the plant have been delayed on account of the supplier, the extent of delay should always be mentioned

PART 3 - Contract

Section VIII. General Conditions of Contract

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Section VIII. General Conditions of Contract

1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

- (a) “Bank” means the World Bank and refers to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
- (b) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- (c) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.
- (d) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- (e) “Day” means calendar day.
- (f) “Completion” means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (g) “GCC” means the General Conditions of Contract.
- (h) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (i) “Purchaser’s Country” is the country specified in the Special Conditions of Contract (SCC).
- (j) “Purchaser” means the entity purchasing the Goods and Related Services, as specified in the SCC.
- (k) “Related Services” means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.
- (l) “SCC” means the Special Conditions of Contract.

- (m) “Subcontractor” means any person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (n) “Supplier” means the person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (o) “The Project Site,” where applicable, means the place named in the **SCC**.

2. Contract Documents

- 2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Corrupt and Fraudulent Practices

- 3.1 The Bank requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Appendix to the GCC.
- 3.2 The Purchaser requires the Supplier to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the bidding process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee.

4. Interpretation

- 4.1 If the context so requires it, singular means plural and vice versa.
- 4.2 Incoterms
 - (a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.
 - (b) The terms EXW, CIP, FCA, CFR and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the **SCC** and published by the International Chamber of Commerce in Paris, France.
- 4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

- (a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the **SCC**. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

- | | |
|--|--|
| 6. Joint Venture, Consortium or Association | 6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser. |
| 7. Eligibility | <p>7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.</p> <p>7.2 All Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.</p> |
| 8. Notices | <p>8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term “in writing” means communicated in written form with proof of receipt.</p> <p>8.2 A notice shall be effective when delivered or on the notice’s effective date, whichever is later.</p> |
| 9. Governing Law | <p>9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser’s Country, unless otherwise specified in the SCC.</p> <p>9.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Purchaser’s country when</p> <p style="padding-left: 40px;">(a) as a matter of law or official regulations, the Borrower’s country prohibits commercial relations with that country; or</p> <p style="padding-left: 40px;">(b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower’s Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.</p> |

10 Settlement of Disputes

- 10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 10.2 If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC**.
- 10.3 Notwithstanding any reference to arbitration herein,
- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
 - (b) the Purchaser shall pay the Supplier any monies due the Supplier.

11. Inspections and Audit by the Bank

- 11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep, accurate and systematic accounts and records in respect of the Goods in such form and details as will clearly identify relevant time changes and costs.
- 11.2 The Supplier shall permit, and shall cause its Subcontractors to permit, the Bank and/or persons appointed by the Bank to inspect the Supplier's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Supplier's and its Subcontractors and consultants' attention is drawn to Clause 3 [Fraud and Corruption], which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under this Sub-Clause 11.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures)

- | | |
|--|--|
| 12. Scope of Supply | 12.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements. |
| 13. Delivery and Documents | 13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be furnished by the Supplier are specified in the SCC . |
| 14. Supplier's Responsibilities | 14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13. |
| 15 Contract Price | 15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the SCC . |
| 16. Terms of Payment | <p>16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the SCC.</p> <p>16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.</p> <p>16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.</p> <p>16.4 The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the bid price is expressed.</p> <p>16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the SCC, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the SCC, for the period of delay until payment has been made in full, whether before or after judgment or arbitration award.</p> |
| 17. Taxes and Duties | 17.1 For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the |

Purchaser's Country.

17.2 For goods Manufactured within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.

17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.

**18. Performance
Security**

18.1 If required as specified in the SCC, the Supplier shall, within twenty-eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the **SCC**.

18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

18.3 As specified in the SCC, the Performance Security, if required, shall be denominated in the currency(ies) of the Contract, or in a freely convertible currency acceptable to the Purchaser; and shall be in one of the format stipulated by the Purchaser in the **SCC**, or in another format acceptable to the Purchaser.

18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the **SCC**.

19. Copyright

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party

**20. Confidential
Information**

20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such

information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

- (a) the Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;
- (b) now or hereafter enters the public domain through no fault of that party;
- (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
- (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards**22.1 Technical Specifications and Drawings**

- (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VI, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.
- (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
- (c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and Documents

- 23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the **SCC**, and in any other instructions ordered by the Purchaser.

24. Insurance

- 24.1 Unless otherwise specified in the **SCC**, the Goods supplied under the Contract shall be fully insured—in a freely convertible currency from an eligible country—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the **SCC**.

25. Transportation and Incidental Services

- 25.1 Unless otherwise specified in the **SCC**, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.
- 25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, **specified in SCC**:
- (a) performance or supervision of on-site assembly and/or start-up of the supplied Goods;
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
 - (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
 - (e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
- 25.3 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

26. Inspections and Tests

- 26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the **SCC**.
- 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the **SCC**. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.
- 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board

and lodging expenses.

- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

- 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum

deduction of the percentage specified in those **SCC**. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 28.3 Unless otherwise specified in the **SCC**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the **SCC**, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC**, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **SCC**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent Indemnity

- 29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design,

trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

- 29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- 29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.
- 29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30 Limitation of Liability

- 30.1 Except in cases of criminal negligence or willful misconduct,
- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and
 - (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement

31. Change in Laws and Regulations

- 31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

32. Force Majeure

- 32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**33. Change Orders
and Contract
Amendments**

33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

**34. Extensions of
Time**

34.1 If at any time during performance of the Contract, the Supplier or its sub-contractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its

discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

- 34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. Termination

35.1 Termination for Default

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;
 - (ii) if the Supplier fails to perform any other obligation under the Contract; or
 - (iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

- (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will

accrue thereafter to the Purchaser

35.3 Termination for Convenience.

- (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

36. Assignment

- 36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

**37. Export
Restriction**

- 37.1 Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser and of the Bank that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Purchaser's convenience pursuant to Sub-Clause 35.3.

APPENDIX TO GENERAL CONDITIONS

Bank's Policy- Corrupt and Fraudulent Practices

Guidelines for Procurement of Goods, Works, and Non-Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, dated January 2011:

“Fraud and Corruption:

1.16 It is the Bank's policy to require that Borrowers (including beneficiaries of Bank loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Bank-financed contracts.⁸ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “corrupt practice” is the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;⁹
 - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;¹⁰
 - (iii) “collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;¹¹
 - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;¹²

⁸ In this context, any action to influence the procurement process or contract execution for undue advantage is improper.

⁹ For the purpose of this sub-paragraph, “*another party*” refers to a public official acting in relation to the procurement process or contract execution. In this context, “*public official*” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

¹⁰ For the purpose of this sub-paragraph, “*party*” refers to a public official; the terms “*benefit*” and “*obligation*” relate to the procurement process or contract execution; and the “*act or omission*” is intended to influence the procurement process or contract execution.

¹¹ For the purpose of this sub-paragraph, “*parties*” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other's bid prices or other conditions.

- (v) "obstructive practice" is:
 - (aa) deliberately destroying, falsifying, altering, or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or
 - (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under paragraph 1.16(e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award, or any of its personnel, or its agents, or its sub-consultants, sub-contractors, service providers, suppliers and/or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (c) will declare misprocurement and cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a recipient of any part of the proceeds of the loan engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of the contract in question, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur, including by failing to inform the Bank in a timely manner at the time they knew of the practices;
- (d) will sanction a firm or individual, at any time, in accordance with the prevailing Bank's sanctions procedures,¹³ including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated¹⁴;

¹² For the purpose of this sub-paragraph, "party" refers to a participant in the procurement process or contract execution.

¹³ A firm or individual may be declared ineligible to be awarded a Bank financed contract upon: (i) completion of the Bank's sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks, and through the application the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines.

¹⁴ A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that allow the bidder to meet the qualification requirements for the particular bid; or (ii) appointed by the Borrower.

- (e) will require that a clause be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Bank to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.”

Section IX. Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(i)	The Purchaser's country is: India
GCC 1.1(j)	The Purchaser is: Chief Executive Officer, Jhelum Tawi Flood Recovery Project.
GCC 1.1 (o)	The Project Site(s)/Final Destination(s) is/are: Jammu & Kashmir regions of Jammu and Kashmir
GCC 4.2 (a)	The meaning of the trade terms shall be as prescribed by Incoterms.
GCC 4.2 (b)	The version edition of Incoterms shall be 2010
GCC 5.1	The language shall be: English
GCC 8.1	For <u>notices</u>, the Purchaser's address shall be: Name & Designation of Officer : Iftikhar Ahmed Kakroo. Official Address : PMU JTFRP office, ERA Commercial Complex, Rambagh Srinagar, J&K, India - 190009. Email : dirpmujk@gmail.com, dirpnc@gmail.com. Telephone: 0194-2437320 Website: www.jtfrp.in
GCC 9.1	The governing law shall be the law of: Union of India
GCC 9.2	Replace in the first line, the word 'Contractor' with 'Supplier'.
GCC 10.2	The rules of procedure for adhoc arbitration proceedings pursuant to GCC Clause 10.2 shall be as follows: (a) In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen

	by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Chairman of the Institution of Engineers (India), Srinagar Chapter. (b) In the case of a dispute with a Foreign Supplier, the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules. The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties, and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the 'The International Centre of Alternative Dispute Resolution (India)'. (c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the Chairman of the Institution of Engineers (India), Srinagar Chapter/The International Centre for Alternative Dispute Resolution (India), both in cases of the Foreign supplier as well as Indian supplier, shall appoint the arbitrator. A certified copy of the order of the Chairman of the Institution of Engineers (India), Srinagar Chapter/The International Centre for Alternative Disputes Resolution (India), making such an appointment shall be furnished to each of the parties. (d) Arbitration proceedings shall be held in India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English. (e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself. (f) Except otherwise agreed to by the Parties, Arbitrators should give a decision in writing within 120 days of receipt of notification of dispute.
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	Any dispute or difference whatsoever arising between the parties out of or relating to the supply, erection, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by arbitration in accordance with the Rules of Domestic Commercial Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties. The arbitral tribunal shall consist of 3 Arbitrators, arbitration proceedings shall be held at Delhi, India and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English. <i>[ICA rules provide for arbitration tribunal of 3 arbitrators if the value of claim is over Rs 1 crore unless the parties have agreed otherwise for a sole arbitrator].</i> Except as otherwise agreed to by the Parties, Arbitrators should give a decision in writing within 120 days of receipt of notification of dispute.
GCC 13.1	Details of Shipping and other Documents to be furnished by the Supplier are given below: (a) <u><i>For Goods supplied from abroad:</i></u> GC 13.1 Within 24 hours of shipment, the Supplier shall notify the Purchaser and the Insurance Company by cable or telex or fax the full details of the shipment including Contract number, description of goods, quantity, the vessel, the bill of lading number and date, port of loading, date of shipment, port of discharge, etc. The Supplier shall mail the following documents to the Purchaser, with a copy to the Insurance Company: (i) 03 Copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount; (i) Original and 03 copies of the negotiable, clean, on-board bill of lading (<i>Airway bill or equivalent transport</i>) marked freight prepaid and 03 copies of non-negotiable bill of lading (<i>Airway bill or equivalent transport</i>); (ii) 03 Copies of packing list identifying contents of each package; (iv) Insurance certificate; (v) Manufacturer's/Supplier's warranty certificate;

	(vi) Inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and (vii) Certificate of origin. The above documents shall be received by the Purchaser at least one week before arrival of Goods at the port or place of arrival and, if not received, the Supplier will be responsible for any consequent expenses. (b) <u>For Goods from within India:</u> GCC 13.1 Upon delivery of the goods to the transporter/consignee, the supplier shall notify the purchaser and mail the following documents to the Purchaser: (i) 03 Copies of the Supplier invoice showing contract number, goods description, quantity, unit price, total amount; (ii) Delivery note, Railway receipt, or Road consignment note or equivalent transport document or acknowledgement of receipt of goods from the Consignee; (iii) 03 Copies of packing list identifying contents of each package; (iv) Insurance certificate; (v) Manufacturer's/Supplier's warranty certificate; (vi) Inspection certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and (vii) Certificate of origin. The above documents shall be received by the Purchaser before arrival of the Goods (except where the goods are handed over to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.
GCC 15.1	The prices charged for the Goods supplied and the related Services performed " <i>shall not</i> " be adjustable.

GCC 16.1

The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:

(a) **Payment for Goods supplied from abroad and related services:**

Payment of foreign currency portion shall be made in (Indian Rupees in the following manner:

For Supply:

- (i) **On Shipment: Fifty (50)** percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favor of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 13.1 including: (i) Packing list and (ii) Supplier's certificate that the amounts shown in the invoice are correct in terms of the contract and that all terms and conditions of the contract have been complied with.
- (ii) **On Acceptance:** Thirty (30) percent of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods upon submission of claim supported by the acceptance certificate issued by the Purchaser's representative in the proforma given in Section VII, item 6 and on completion of the installation and civil works after the verification of the work from site from Purchaser's representative.
- (iii) **10% of the contract price (supply)** shall be paid after 2 months of satisfactory operation from the date of completion of works on Receipt of report from site from Purchaser's representative. ***Invoice to be raised for above % only.***
- (iv) **Balance 10% of the contract price (supply)** shall be paid after completion of warranty/guarantee period. ***Invoice to be raised for above % only.***

Payment of local currency portion including Agency Commission shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.

(b) Payment for Goods and Services supplied from within the Purchaser's country:

Payment for Goods and Services (excluding supervision) supplied from within India shall be made in Indian Rupees, as follows:

For Supply:

(i) **50% of the contract price (supply)** shall be paid on receipt of Goods at respective site and upon submission of the requisite documents. ***Invoice to be raised for above % only.***

(ii) **30% of the contract price (supply)** shall be paid on completion of the installation and civil works after the verification of the work from site from Purchaser's representative. ***Invoice to be raised for above % only.***

(iii) **10% of the contract price (supply)** shall be paid after 2 months of satisfactory operation from the date of completion of works on Receipt of report from site from Purchaser's representative. ***Invoice to be raised for above % only.***

(iv) **Balance 10% of the contract price (supply)** shall be paid after completion of warranty/guarantee period. ***Invoice to be raised for above % only.***

(c) For Installation and Civil Works:

(a) 100% of the contract price (Installation and Civil Works) shall be paid on completion of 100% installation and civil works after the verification of the work from site from Purchaser's representative and issuance of Operational Acceptance Certificate issued by the Purchaser's representative in the Performa given in Section VII - item 6. Invoice to be raised for above % only. However, 5% of the invoice shall be retained as retention money which shall be released at the end of 1st year of O&M period.

(d) For Training:

100% of the training amount shall be paid within 30 days on completion of all the trainings as mentioned in the contract and on submission of invoice. Invoice to be raised for above % only.

	(e) For Operation of the System: Charges for operation of the system shall be paid after the successful commissioning of the system, in equal quarterly instalments at the end of each quarter as per the rates quoted in the price schedule on submission of relevant supporting documents. <u>(f) For Comprehensive AMC:</u> Charges for Comprehensive AMC shall be paid after the successful completion of 2 years warranty period in equal six monthly instalments at the end of each half year period as per the rates quoted in the price schedule on submission of relevant supporting documents. In case of non – operational sites and failed data flow beyond agreed downtime during the contract period of 5 years, the purchaser shall withhold the equivalent payment in respect of such sites till the defects are rectified.
GCC 16.5	The payment-delay period after which the Purchaser shall pay interest to the supplier shall be 56days. In case of payments in Indian Rs, the interest rate that shall be applied is 4%. In case of payments in foreign currency, the interest rate that shall be applied is 4 % <i>(based on the discount rate of the central bank in the country of the currency of payment, or if not available, the interbank offered rate)</i>
GCC 17.3	In the case of tax/ duty waiver, the purchaser will issue only the certificates in terms of the Government of India's relevant notification as per information given by supplier in form stipulated in Section IV. Supplier is solely responsible for obtaining such benefits and in case of failure to receive such benefits, the purchaser will not compensate the supplier separately.
GCC 18.1	A Performance Security shall be required. Performance Security payable to the Purchaser shall be for an amount of 5% of the accepted contract value, valid up to 60 days after the date of completion of performance obligations including warranty obligations. However, 28 days before the date of release of this performance security the supplier is required to submit a fresh performance security for the amount equivalent to his quoted price for O&M services, valid for 45 days beyond O&M period, which will be released after successful completion of O&M period. In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/ replaced material shall be extended to a further period of 24 months and

	the Performance Bank guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.
GCC 18.3	The Performance Security shall be in the form of a “Bank Guarantee” or “a cashier’s cheque or banker’s certified cheque or FDR” drawn in favour of the Purchaser. The Performance Security submitted by a Joint Venture shall be in the name of the Joint Venture listing all members. The Performance security shall be denominated in “a freely convertible currency acceptable to the Purchaser” or “the currencies of payment of the Contract, in accordance with their portions of the Contract Price”
GCC 18.4	Discharge of the Performance Security shall take place not later than 60 days following the date of completion of the Supplier’s performance obligations, including the warranty obligation, under the contract.
GCC 18.5	Add as Clause 18.5 to the GCC the following: In the event of any contractual amendment, the Supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for 60 days after the completion of performance obligations including warranty obligations.
GCC 23.2	<u>Packing Instructions:</u> The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint/indelible ink with the following: (i) Project; (ii) Contract No.; (iii) Country of Origin of Goods; (iv) Supplier’s Name; (v) Packing List Reference Number. Suppliers should use recycled materials as much as possible for packing.
GCC 24.1	The insurance shall be paid in an amount equal to 110 percent of the EXW value of the Goods from “Warehouse to warehouse (final destination)” on “All Risks” basis including War Risks and Strikes.
GCC 25.1	The Supplier is required under the Contract to transport the Goods duly insured to the specified final destination, and all related costs shall be included in the Contract Price.
GCC 25.2 (e)	The supplier shall impart one week training per equipment to Purchaser’s personnel on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods as per the details below:- Control Centre : 05 each at Srinagar and Jammu Field Stations: 50 each in Srinagar and Jammu. All expenditures on account of stationary, training material, media, etc

	will be borne by the supplier.
GCC 25.2	The following clauses shall be added after GCC 25.2 (e). The Supplier shall be required to provide any or all of the following services in addition to already mentioned in GCC 25.2 i. Furnishing of appropriate hardware, system design and programming services required for development and/or maintenance of the supplied Goods; ii. Software updates and bug fix services for the software originally developed by the supplier and third party software packages during the period of warranty and subsequent maintenance. License and Updates for all software shall be available to Purchaser for 10 years beyond AMC period. iii. All cost related to the installation and maintenance at the sites will be the responsibility of the supplier. Purchaser will not provide office space at any Sub-centers for the supplier's technicians.
GCC 26.1	The inspections and tests shall be: 1. Inspection and tests prior to shipment of Goods and at final acceptance are as follows: i. The inspection of the goods shall be carried out to check whether the goods are in conformity with the technical specifications attached to the purchase- order form and shall be in line with the inspection/test procedures laid down in the technical specifications and the General Conditions of contract. Following broad test procedure will generally be followed for inspection and testing of machine. The supplier will dispatch the goods to the ultimate consignee after internal inspection testing along with the supplier's inspection report, manufacturer's warranty certificate. The purchaser will test the equipment after completion of the installation and commissioning at the site of the installation. For site preparation, the supplier should furnish all details to the purchaser sufficiently in advance so as to get the works completed before receipt of the equipment. Complete hardware and software as specified in section VI should be supplied, installed and commissioned properly by the supplier prior to commencement of performance tests. ii. The acceptance test will be conducted by the purchaser/their consultant or any other person nominated by the purchaser, at its option. The acceptance will involve trouble- free operation for seven consecutive days. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of any part of hardware or excessive heating of motors attached to printers, drivers etc. or bugs in the software

	should occur. All the software should be complete and no missing modules/sections will be allowed. The supplier shall maintain necessary log in respect of the results of the tests to establish to the entire satisfaction of the purchaser, the successful completion of the test specified. An average uptake efficiency of 100 % for the duration of test period shall be considered as satisfactory. iii. In the event of the hardware and software failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which the purchaser reserves the rights to get the equipment replaced by the supplier at no extra cost to the purchaser. 2. For the System and Other Software the following will apply: The Supplier shall provide complete and legal documentation of hardware, and licensed operating systems. The supplier shall also indemnify the purchaser against any levies/penalties on account of any default in this regard.
GCC 26.2	The Inspections and tests shall be conducted at: a) Suppliers Premises b) Site
GCC 27.1	The liquidated damage shall be: 1% of contract price per week or part thereof upto a maximum limit of 10% of the contract value.
GCC 28.3	The period of validity of the Warranty shall be(24) twenty four months after the Goods, or any portion thereof as the case may be, have been delivered, installed and accepted at the final destination. For purposes of the Warranty, the place(s) of final destination(s) shall be: <i>Jammu and Kashmir (different locations)</i> The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract. If, for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall, at its discretion, make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4. The scope of warranty period would include all materials and services including major replacement components including batteries, mandatory spare parts required to ensure smooth and sustainable operations of the entire system. 100% mandatory spares and 10% non-mandatory spares shall be made available at both control stations based in Srinagar and Jammu to decrease the downtime of equipments during warranty and AMC period.

	In case of non – operational sites and failed data flow beyond agreed downtime during the contract period of 5 years, the purchaser shall withhold the equivalent payment in respect of such sites, till the defects are rectified.
GCC 28.5	The period for repair or replacement shall be: 15days.
GCC 31.1	This clause will apply only to variations in GST payable in India on the final product which is being supplied and not for variations in tax on the individual components / raw materials which go into the product.

Section X. Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

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Letter of Acceptance

[letterhead paper of the Purchaser]

[date]

To: *[name and address of the Supplier]*

Subject: **Notification of Award Contract No.**

This is to notify you that your Bid dated ***[insert date]***for execution of the
.***[insert name of the contract and identification number, as given in the SCC]***. . .
. for the Accepted Contract Amount of ***[insert amount in numbers
and words and name of currency]***, as corrected and modified in accordance with the
Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance
with the Conditions of Contract, using for that purpose the of the Performance Security
Form included in Section X, Contract Forms, of the Bidding Document.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Contract Agreement

Contract Agreement

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS AGREEMENT made

the [insert: **number**] day of [insert: **month**], [insert: **year**].

BETWEEN

- (1) [insert complete name of Purchaser], a [insert description of type of legal entity, for example, an agency of the Ministry of of the Government of {insert name of Country of Purchaser}, or corporation incorporated under the laws of {insert name of Country of Purchaser}} and having its principal place of business at [insert address of Purchaser] (hereinafter called “the Purchaser”), of the one part, and
- (2) [insert name of Supplier], a corporation incorporated under the laws of [insert: country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called “the Supplier”), of the other part:

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., [insert brief description of Goods and Services] and has accepted a Bid by the Supplier for the supply of those Goods and Services

The Purchaser and the Supplier agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other contract documents.
 - (a) the Letter of Acceptance
 - (b) the Letter of Bid
 - (c) the Addenda Nos. _____ (if any)
 - (d) Special Conditions of Contract
 - (e) General Conditions of Contract
 - (f) the Specification (including Schedule of Requirements and Technical Specifications)

- (g) the completed Schedules (including Price Schedules)
 - (h) any other document listed in GCC as forming part of the Contract
3. In consideration of the payments to be made by the Purchaser to the Supplier as specified in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
 4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services 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 in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*
 in the capacity of *[insert title or other appropriate designation]*
 in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
 in the capacity of *[insert title or other appropriate designation]*
 in the presence of *[insert identification of official witness]*

Note: In the case of a Joint Venture add another clause as under

“5. The Joint Venture consisting of

M/s.....

.....
Covenants that they shall be liable jointly and severally for the execution in conformity in all respects with the provisions of the Contract.”

Performance Security (Bank Guarantee)

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid Submission]*
ICB No. and title: *[insert no. and title of bidding process]*

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Purchaser]*

Date: _ *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _ *[insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the supply of _ *[insert name of contract and brief description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* () *[insert amount in words]*,¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, and denominated either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date sixty days after the expected completion date as described in GC Clause 18.4. The Purchaser should note that in the event of an extension of this date for completion of the Contract, the Purchaser would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

guarantee, the Purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Advance Payment Security

Bank Guarantee for Advance Payment

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid Submission]*

ICB No. and title: *[insert number and title of bidding process]*

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[Insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We, *[insert legal name and address of bank]* have been informed that *[insert name of Supplier, which in the case of a joint venture shall be the name of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *[insert name of contract and brief description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum *[insert amount in figures]* () *[insert amount in words]* is to be made against an advance payment guarantee.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (____) *[insert amount in words]*¹ upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

- (a) has used the advance payment for purposes other than toward delivery of Goods;
or
- (b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Purchaser.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Applicant on its account number *[insert number]* at *[insert name and address of Applicant's bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, has been certified for payment, or on the *[insert day]* day of *[insert month]*, 2 *[insert year]*, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No.758, except that the supporting statement under Article 15(a) is hereby excluded.

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[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.