



STATE OF UTAH - DEPARTMENT OF TRANSPORTATION
Division of Procurement Services
4501 South 2700 West, Taylorsville, Utah 84119
www.udot.utah.gov/procurement



Issuing Procurement Unit
Conducting Procurement Unit

UDOT Procurement Services
UDOT Traffic Operations Center

ATTACHMENT C
INVITATION FOR BIDS FOR GOODS
(Multiple Award Contract)
Road Weather Information System Instrumentation
SOLICITATION # DOT160459TB

This Invitation for Bids ("IFB") is issued in accordance with the Utah Procurement Code and applicable administrative rules of the Utah Administrative Code.

DEFINITIONS

The following definitions are used throughout the RFP:

ATMS: Advanced Traffic Management System

CPU: Central Processing Unit

ESS: Environmental Sensor Station

IFB: Invitation for Bids

NTCIP: National Transportation Communications Systems for ITS Protocols

RPU: Remote Processing Unit

RWIS: Road Weather Information System

TOC: Traffic Operations Center

UAC: Utah Administrative Code

UDOT: The Utah Department of Transportation

SECTION 1: PROCUREMENT INFORMATION

1.1 Purpose of this Solicitation

The purpose of this IFB is to enter into a contract, with a qualified contractor to provide RWIS instrumentation, related components, subcomponents and parts.

It is anticipated that this IFB may result in an award of a contract to multiple bidders.

1.2 Length of the Contract

The contract resulting from this IFB will be for five (5) years.

1.3 Background

The UDOT RWIS network currently consists of more than 100 sites and 1000 instruments across the state of Utah. The stations operate either on cellular or fiber communications, sending data via TCP/IP and are either powered over a hardline AC connection or a solar photovoltaic 12V DC system. Utah's RWIS sites consist of atmospheric and road sensors polled in regular intervals via RS-232 or RS-485 communications to a Campbell Scientific datalogger. All of the data is then polled by existing Campbell Scientific Inc. LoggerNet software from a Windows based server.

1.4 Issuing Procurement Unit, Conducting Procurement Unit, and Solicitation Number

The UDOT Division of Procurement Services is the issuing procurement unit for this IFB on behalf of the UDOT Traffic Operations Center, which is the conducting procurement unit (collectively referred to as "UDOT"). The reference number for this IFB is Solicitation #DOT160459TB. This solicitation number must be referred to on all bids, correspondence, and documentation submitted to UDOT relating to this IFB.

SECTION 2: GENERAL INSTRUCTIONS

2.1 List of Attachments

Attachments include the following:

Attachment A: Standard Terms and Conditions for Goods

Attachment B: Standard Information Technology Terms and Conditions

Attachment C: Invitation for Bid - RWIS Instrumentation

Attachment D: Price Schedule

2.2 Mandatory Pre-Bid Conference

A pre-bid conference will not be held.

2.3 Price Guarantee Period

All pricing must be guaranteed for one (1) year.

A request for price adjustment must be made at least thirty (30) days prior to the effective date. A request for price adjustment must include sufficient documentation (market analysis) supporting the request. Any price adjustment will not be effective unless approved by UDOT. A price adjustment must be guaranteed for the same length of time as the original price guarantee. The conducting procurement unit will be given the immediate benefit of any decrease in the market, or allowable discount. Price adjustments will extend into the contract administration phase.

2.4 Required Contractual Terms and Conditions

A contract that results from this IFB will include the required State of Utah Standard Terms and Conditions for Goods and the Standard Information Technology Terms and Conditions ("Standard Terms and Conditions"). If the Standard Terms and Conditions are not attached to this IFB (see Attachment A), then the Standard Terms and Conditions can be found at <http://purchasing.utah.gov/purchasingforms.html>. It is the responsibility of the bidders to review the Standard Terms and Conditions, whether attached to this IFB (see Attachment A) or at <http://purchasing.utah.gov/purchasingforms.html>.

The Standard Terms and Conditions will not be negotiated. Section 63-6a-604(3) of the Utah Procurement Code requires that a bid will be rejected if it is not responsive or responsible. A bid that is not responsive includes a bid that: (a) is conditional; (b) attempts to modify the bid requirements; (c) contains additional terms or conditions; or (d) fails to conform with the requirements or specifications of the invitation for bids.

A bid that contains exceptions and/or additions to the Standard Terms and Conditions will be rejected and disqualified from this IFB. UDOT will not allow a bidder to remove or withdraw exceptions and/or additions from the Standard Terms and Conditions from a bid. However, a bidder may request an exception and/or addition to the Standard Terms and Conditions during the Question and Answer period.

UDOT will not allow a bidder's terms and condition to become part of a contract that results from this IFB.

If a bidder's terms and conditions are attached, referenced, or embedded into a bid, whether intentionally or inadvertently, then the bidder's terms and conditions shall be null and void and will not become part of a contract that results from this IFB. If a bidder is awarded a contract and the bidder requests that its terms and conditions become part of the contract, then the bidder's bid will immediately be disqualified and the bidder will not be awarded a contract.

2.5 Submitting a Bid

Bids must be received by the date and time specified on Bidsync (the "closing date"). Bids received after the closing date will be late and ineligible for consideration.

The preferred method of submitting your bid is electronically through BidSync. When submitting a bid electronically through BidSync, please allow sufficient time to complete the online forms and upload documents. This IFB will close at the closing time. If you are in the middle of uploading your bid at the closing time, Bidsync will stop the upload process and your bid will not be received by Bidsync and your bid will not be reviewed by UDOT.

Electronic bids may require uploading of electronic attachments. BidSync will accept a wide variety of document types as attachments. Documents containing embedded encryptions cannot be processed by BidSync. Additionally, the submission of documents containing embedded documents, zip files, mov, wmp, and mp3 files is prohibited. All documents should be attached as separate files.

However, bidders may submit hard copies of bids, one (1) original and three (3) identical copies. Hard copies must be received at the Division of Procurement Services, 4501 South 2700 West, Second Floor, Taylorsville, Utah 84129. If sending via United States Postal Services (USPS), mail to UDOT Division of Procurement Services, P.O. Box 148260, Salt Lake City, Utah 84114-8260. If sending via a carrier who cannot deliver to a PO Box, mail to 4501 South 2700 West, Second Floor, Taylorsville, Utah 84129. Please allow sufficient time for delivery. Responses sent overnight, but not received by the closing date will not be accepted.

2.6 Questions and Answers Period

The Question and Answer period closes on date and time specified on Bidsync. All questions must be submitted through BidSync during the Question and Answer period. Answers from UDOT will be posted on BidSync. Questions may include notifying UDOT of any ambiguity, inconsistency, scope exception, excessively restrictive requirement, or other errors in this IFB. A question may also include a request to modify the Standard Terms and Conditions, including the insurance requirements for this IFB. Questions are encouraged.

Questions may be answered individually or may be compiled into one document. Questions may also be answered via an addendum. An answered question or an addendum may modify the specification or requirements of this IFB. Answered questions and addendums will be posted on BidSync. Bidders should periodically check BidSync for answered questions and addendums before the closing date. It is the responsibility of the bidders to submit their bids as required by this IFB, including any requirements contained in an answered question and/or addendums.

Prior to the closing date, UDOT may, at its sole discretion, issue addenda. Addenda may modify any minimum requirement or specification of this IFB. It is the responsibility of the bidders to submit their bids as required by this IFB, including any requirements contained in addenda issued by UDOT.

Bidder shall not contact any employee, board member, or evaluation committee member of the issuing procurement unit of this IFB. Failure to comply with this requirement may result in disqualification.

NOTE: Exceptions taken by a bidder to the scope of work or other content of the solicitation that have not been addressed during the Question and Answer period will result in the bidder being disqualified.

SECTION 3: SOLICITATION REQUIREMENTS

3.1 Professional Licensing Requirements

This IFB does not require a professional license.

3.2 Mandatory Minimum Requirements

This section contains mandatory minimum requirements that must be met in order for your bid to be considered responsive. All of the items described in this section are non-negotiable. All bidders express their willingness, capability, and ability to satisfy these requirements by submitting a bid for consideration. If it is determined that your bid does not meet these requirements, at any time during the solicitation process, it will be deemed non-responsive and disqualified from further consideration.

The mandatory minimum requirements are as follows:

1. Weather instrumentation must successfully integrate into the existing UDOT RWIS-ESS architecture (refer to Section 1.3 above). Bidders must provide supporting documentation to demonstrate compliance.
2. All components possessing a communication element shall be NTCIP 1204 compliant.
3. Bidder must be able to supply at least one of the product categories noted in Section 3.3 below.
4. All equipment purchased from an awarded contract shall be warranted for a minimum of two (2) years from the date of shipment. For heavy duty equipment, the warranty shall be a minimum of three (3) years from date of shipment.

All warranties shall include repair or replacement of defective components. For repairs under warranty, the Contractor shall bear all costs including labor, parts, handling and shipping charges

5. Contact information from three (3) firms to which products and/or services of similar size and scope have been provided. If contacted, all of those references must verify that a high level of satisfaction was provided.

3.3 Mandatory Minimum Technical Specifications

Bidders must demonstrate the ability to meet or exceed the technical specifications outlined herein. All RWIS components listed below shall be new equipment and be available for purchase by the awarded contractor.

All sensors must be compatible with the current RWIS system outlined in the background portion of this IFB. Sensors shall also be low power, 12 VDC compatible, and have the ability to be integrated with an alternative power source such as solar. Sensors must include mounting hardware and any other relevant hardware.

The mandatory minimum technical specifications are as follows:

3.3.1 **Ambient Temperature and Relative Humidity**

- Air temperature measurement range: -40°F to 120°F
- Air temperature accuracy: $\pm 1^\circ\text{F}$ over the measurement range
- Relative humidity measurement range: 0 to 100%
- Relative humidity sensor accuracy: $\pm 5\%$ over the measurement range

3.3.2 **Wind Speed and Wind Direction (Basic)**

- Wind speed range: 0 to 224 mph
- Wind speed accuracy: ± 0.6 mph or 1% of reading
- Wind direction range: 0 to 360°, 355° electrical (5° open)
- Wind direction accuracy: $\pm 3^\circ$

3.3.3 **Wind Speed and Wind Direction (Heavy Duty/Ice Resistant)**

- Wind speed range: 0 to 224 mph
- Wind speed accuracy: ± 0.6 mph or 1% of reading
- Wind direction range: 0 to 360°, 355° electrical (5° open)
- Wind direction accuracy: $\pm 3^\circ$
- Warranty: 5 years

3.3.4 Visibility

- Minimum visibility: 10 meters
- Accuracy: 0 to 10,000 meters $\pm 10\%$; 10,000 to 20,000 meters $\pm 20\%$

3.3.5 Precipitation Detection/Intensity

- Ability to determine if hydrometeors are falling
- Ability to determine the intensity at which the hydrometeors are falling

3.3.6 Liquid Precipitation Gauge

- Resolution: 0.01"
- Accuracy
 - Up to 1 in./hr: $\pm 1\%$
 - 1 to 2 in./hr.: +0, -3%
 - 2 to 3 in./hr.: +0, -5%

3.3.7 Solar Radiation

- Light Spectrum Waveband: 400 to 1100 nm
- Accuracy: $\pm 5\%$ maximum
- Stability: $< \pm 2\%$ change over a 1 year period
- Temperature Dependence: 0.15% per $^{\circ}\text{C}$ maximum
- Operating temperature range: -40°F to 120°F

3.3.8 Snow Depth

- Measurement Range: 1.6 to 32.8 ft
- Accuracy: $\pm 0.4"$ or 0.4% of distance to target (whichever is greatest)
- Operating Temperature: -40°F to $+120^{\circ}\text{F}$

3.3.9 Subsurface Temperature

- Temperature Measurement Range: 25°F to 120°F
- Accuracy: $\pm 1^{\circ}\text{F}$ over the measurement range

3.3.10 Soil Moisture

- Range for solution Electrical Conductivity: 0 to 8 dS/m
- Electrical Conductivity accuracy: $\pm (5\% \text{ of reading} + 0.05 \text{ dS/m})$
- Volumetric Water Content range: 5% to 50%
- Volumetric Water Content accuracy: $\pm 3\%$ typical in mineral soils that have solution electrical conductivity $\leq 10 \text{ dS/m}$

3.3.11 Road Surface Sensor (In-Situ; Active)

- Must include eutectic (freezing) point
 - Measuring range: 0°F to $+32^{\circ}\text{F}$
- May include road temperature
 - Measuring range: -20°F to $+140^{\circ}\text{F}$
 - Accuracy: $\pm 0.9^{\circ}\text{F}$

3.3.12 Road Surface Sensor (In-Situ; Passive)

- Must include the following:
 - Road state (dry, damp, wet, slush, snow, ice, etc.)
 - Road temperature
 - Measuring range: -20°F to $+140^{\circ}\text{F}$
 - Accuracy: $\pm 0.2^{\circ}\text{F}$
- Must include at least one of the following:
 - Eutectic (freezing) point
 - Measuring range: 0°F to $+32^{\circ}\text{F}$
 - Salinity
- May include any of the following:
 - Road water depth
 - Friction coefficient (grip)

3.3.13 Road Surface Condition Sensor (Non-Invasive)

- Road state (dry, damp, wet, slush, snow, ice, etc.)

- Friction coefficient (grip)
- If integrated into the sensor, may include road temperature
 - Range: -40°F to +140°F

3.3.14 Road Surface Temperature Sensor (Non-Invasive; stand-alone)

- Road temperature
 - Measuring range: -40°F to +140°F

3.3.15 Remote Processing Unit (RPU)

The RPU shall be user programmable with an open architecture. The UDOT weather staff and third party consultants must be able integrate all instrumentation from UDOT's weather operations and in the field. In addition, the RPU must meet the following technical requirements:

- Internal memory to store at least 1 week of data at 5 minute intervals
- User programmable
- Compatible with TCP/IP
- Multiple analog channels individually configured
- Switched excitation channels
- Pulse counters
- Control ports
- Communication ports: RS-232, 1 parallel peripheral
- Protocols supported: Pakbus, Modbus, DNP3, FTP, HTTP, XML, POP3, SMTP, Telnet, NTCIP, NTP, SDI-12, SDM
- Power requirements: 9.6 to 16 V DC
- Maximum typical current drain at 12 V DC: 28 mA

3.3.16 RPU Enclosure

- Minimum internal dimensions: 16 x 18 x 9 inches
- Maximum weight: 50 lbs.
- Enclosure classification: NEMA 4X

3.3.17 Instrumentation Tower

- 20 ft and 30 ft solutions
- Climbable
- Shall not require guyed wires
- Wind load: at least 110 mph

3.4 Scope of Work

The scope of work for this contract is to provide Road Weather Information System (RWIS) instrumentation, related components, subcomponents and parts.

UDOT has been a leader and innovator in the RWIS-ESS field and as such, anticipates the scope of work will evolve as technological advances avail themselves to the program. The goal of the program is to offer near real time information in a cost effective manner to all of UDOT's customers. These include but are not limited to: Traveler Information, Maintenance/Construction, Traffic Management Division, and Public and Private sector interest.

3.5 Price Schedule

Please see Attachment D.

Bidders must complete and submit 'Price Schedule' according to the instructions provided on the price schedule. Bidders shall not change the format of the price schedule and must submit pricing in the exact format requested for a fair comparison of pricing among all bidders. Bids received in an alternate format may be disqualified.

SECTION 4: EVALUATION AND AWARD PROCESS

4.1 Bid Evaluation General Information

Pursuant to Section 63G-6a-606 of the Utah Procurement Code this IFB shall be evaluated by the objective criteria described in this IFB. Bids submitted must comply with the general instructions in Section 2 of this IFB and the General Provisions contained on the Cover Page. Any bid that does not comply with the requirements and instructions contained in these solicitation documents will be deemed non-responsive and disqualified from further evaluation.

Any exceptions to the content of this IFB, including the specifications and minimum requirements, must be protested in writing to UDOT Procurement prior to the closing date.

4.2 Bid Checklist

This checklist is intended to serve as a reminder to submit all the requested and required information. Full instructions are contained within the solicitation documents and must be followed.

- ✓ Invitation for Bid Cover Page completed and signed (Bid Sync Attachment).
- ✓ Section 3.2 - Mandatory Minimum Requirements Documentation saved as 'Mandatory Minimums'.
- ✓ Section 3.3 - Mandatory Minimum Technical Specifications Documentation saved as 'Technical Specifications'.
- ✓ Section 3.5 Price Schedule saved as 'Price Schedule'.
- ✓ Section 5 Confidential Information, if any, saved as 'Confidential Information'.

4.3 Bid Evaluation Administrative and Mandatory Minimum Requirement Compliance

Each bid received shall be evaluated for responsiveness in the following manner:

Criteria	Determination
Timely Receipt of Bid	Pass/Fail
Complete Bid Packet	Pass/Fail
Complete and Correct Documents	Pass/Fail
Mandatory Requirements Compliance	Pass/Fail

Any bid that does not pass these administrative criteria and the mandatory minimum requirements will be deemed non-responsive and will be rejected from this solicitation.

4.4 Bid Evaluation Technical Specifications

Bids that pass the administrative and mandatory minimum requirements will be evaluated to determine that they meet or exceed the technical specifications or scope of work. Any bid that does not meet or exceed the technical specification or scope of work will be deemed as non-responsive and disqualified from further consideration.

4.5 Contract Award Process

Contract awards will be issued to the lowest responsive and responsible bidder(s) of each manufacturer within the product categories noted in Section 3.3 above.

All bids that meet or exceed the technical specifications or scope of work shall be evaluated on price and UDOT, in accordance with UAC R33-12-301 and pursuant to Section 63-6a-606(3) of the Utah Procurement Code, shall:

- (a) award the contract as soon as practicable to:
 - (i) the lowest responsive and responsible bidder who meets the objective criteria described in the invitation for bids; or
 - (ii) if, in accordance with Subsection (4), the procurement officer or the head of the conducting procurement unit disqualifies the bidder described in Subsection (3)(a)(i), the next lowest responsive and responsible bidder who meets the objective criteria described in the invitation for bids; or
- (b) cancel the invitation for bids without awarding a contract.

SECTION 5: PROTECTED INFORMATION

The Government Records Access and Management Act (GRAMA), Utah Code Ann., Subsection 63G-2-305, provides in

part that:

the following records are protected if properly classified by a government entity:

- (1) trade secrets as defined in Section 13-24-2 if the person submitting the trade secret has provided the governmental entity with the information specified in Section 63G-2-309 (Business Confidentiality Claims);*
- (2) commercial information or non-individual financial information obtained from a person if:
 - (a) disclosure of the information could reasonably be expected to result in unfair competitive injury to the person submitting the information or would impair the ability of the governmental entity to obtain necessary information in the future;*
 - (b) the person submitting the information has a greater interest in prohibiting access than the public in obtaining access; and*
 - (c) the person submitting the information has provided the governmental entity with the information specified in Section 63G-2-309;**

* * * * *

- (6) records the disclosure of which would impair governmental procurement proceedings or give an unfair advantage to any person proposing to enter into a contract or agreement with a governmental entity, except that this Subsection (6) does not restrict the right of a person to see bids submitted to or by a governmental entity after bidding has closed;*

Pricing may not be classified as confidential or protected and will be considered public information.

Process for Requesting Non-Disclosure: Any Bidder requesting that a record be protected shall include with the bid a Claim of Business Confidentiality. To protect information under a Claim of Business Confidentiality, the Bidder must complete the Claim of Business Confidentiality form with the following information:

1. Provide a written Claim of Business Confidentiality *at the time the information (proposal) is provided to the state*, and
2. Include a concise statement of reasons supporting the claim of business confidentiality (Subsection 63G-2-309(1)).
3. Submit an electronic "redacted" (excluding protected information) copy of the proposal. Copy must clearly be marked "Redacted Version."

The Claim of Business Confidentiality form may be accessed at:

<http://www.purchasing.utah.gov/contract/documents/confidentialityclaimform.doc>

An entire bid cannot be identified as "PROTECTED", "CONFIDENTIAL" or "PROPRIETARY" and shall be considered non-responsive unless the Bidder removes the designation.

Redacted Copy: If an Bidder submits a bid that contains information claimed to be business confidential or protected information, the Bidder must submit two separate proposals: one redacted version for public release, with all protected business confidential information either blacked-out or removed, clearly marked as "Redacted Version"; and one non-redacted version for evaluation purposes clearly marked as "Protected Business Confidential."

All materials submitted become the property of the State of Utah. Materials may be evaluated by anyone designated by the State as part of the bid evaluation committee. Materials submitted may be returned only at the State's option.