

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
EQUIPMENT DIVISION

PROCUREMENT SPECIFICATIONS
NO. 839-1-M

OPEN END CONTRACT
TRAILER MOUNTED SOLAR POWERED ELECTRIC ARROWBOARD

1.0 PURPOSE

It is the purpose of these specifications to describe a Trailer Mounted Solar Powered Electric Arrowboard (hereinafter referred to as an "arrowboard" or a "unit") to be purchased for use by the West Virginia Division of Highways (DOH) on an Open End Contract basis.

2.0 BIDDING PROCEDURES

The current purchasing procedures regarding bidding as established by the Department of Administration, Purchasing Division, shall apply. Failure to submit the " Request for Quotation" forms, complete in its entirety and according to directions indicated, may subject the bidder to disqualification. **Each bid submitted shall also be accompanied by a Bidder's Evaluation Report completed in detail.** Addendums in order, along with exception sheets, should be with Bidder's Evaluation Report. **FAILURE TO SUBMIT THE BIDDER'S EVALUATION REPORT, COMPLETE IN ITS ENTIRETY, WILL RESULT IN AUTOMATIC DISQUALIFICATION.**

3.0 SPECIFICATIONS

The specifications named herein, mandatory and non-mandatory, establish the acceptable level of quality only and are not intended to reflect a preference or favor any particular brand or vendor.

3.1 EXCEPTIONS TO NON-MANDATORY SPECIFICATIONS

Exception to a non-mandatory unit specification may be made by the bidder, providing the exception is not available from the manufacturer. **Any such exception must be noted on the bidder's evaluation report and should be accompanied by supporting documentation/literature from the manufacturer. Any exception must be indicated on a separate attachment to the bidder's evaluation report and labeled as "Exception to Specifications".** The state reserves the right to waive minor irregularities in bids or specifications in accordance with §148-1-4(f) of the WV Legislative Rules and Regulations.

3.2 MANDATORY SPECIFICATIONS

All specifications preceded by "shall, will, and/or must" or are stated as a "minimum and/or maximum" are mandatory as stated in Purchasing Divisions Policies and Procedures. Any bid failing to meet any mandatory item shall be immediately disqualified. Failure to respond in the appropriate evaluation section will also be grounds for immediate disqualification at the discretion of the State.

A mandatory pre-bid conference is scheduled for this equipment purchase as stated in the RFQ. Vendors having products with variations or exceptions in specified mandatory items are expected to address any such variations or exceptions during the pre-bid conference. **The State shall review and consider any such variation or exception, and may at its sole discretion, issue an addendum to change mandatory specifications deemed to be in the State's best interest. Bids from any vendor failing to attend the mandatory pre-bid shall be disqualified. Bids containing any variation or exception to a mandatory specification that was not addressed during the pre-bid conference and accepted by the issuance of an Addendum shall be disqualified.**

4.0 REPRESENTATIVE UNIT FOR TEST

The successful vendor must (if specified) provide DOH one (1) completed representative unit to be observed and evaluated on each order to insure compliance with specification. If requested, the time period for testing and evaluation shall be seven (7) working days following receipt of the unit. DOH will incur no obligation for deterioration of surfaces, finishes, seals, and mechanical or electrical parts on the unit resulting from operation and testing within the limits of these specifications; nor will DOH incur obligation for damage to the unit resulting from failure to meet specifications when due care and attention is given by DOH and testing is done within the limits of these specifications. Failure of the pilot unit to satisfactorily meet specifications as bid may be cause for cancellation of the purchase order, and return of the delivered unit along with all associated equipment to the vendor at the vendor's expense.

4.1 CONDITION OF UNIT(S) UPON DELIVERY

All units must arrive at the prescribed delivery point having been completely preserviced with oil, lubricants, and coolant. All prescribed precautions pertaining to first operations and break-in of the unit are to be posted conspicuously on the unit for ready observance by the operator.

4.2 DELIVERY

Delivery point of the completely assembled representative unit will be the DOH, Equipment Division, Route 33 at Brushy Fork Road, Buckhannon, West Virginia (26201).

The vendor is responsible for guaranteeing delivery of the completed units within the time specified and agreed to by the State. Delivery is preferred within 35 days after receipt of purchase agreement. The vendor is responsible for establishing and coordinating delivery terms with allied manufacturers or suppliers. Delivery terms should be stated in the bid and the State reserves the right to accept or reject such terms. Failure to reach an agreement may result in rejection of the bid. **The successful bidder shall provide their manufacturer's confirmation of the order to the WVDOH contact person within seven (7) working days after receiving the approved purchase order.**

A completed pilot model for inspection must be provided within 20 calendar days after receipt of the purchase agreement by the successful vendor.

Delivery is an integral part of this specification and failure to comply will be cause to initiate a D.O.T. Administrative Form WV-82, Vendor Performance Form. The WV-82 Form will provide a means of officially notifying the Purchasing Division and the vendor of unsatisfactory performance; such as late deliveries, poor service, inadequate parts supplies, etc.

The decision to initiate subject Form will be at the sole discretion of the D.O.H. Commissioner's established Equipment Review Board.

Issuance of the WV-82 Vendor Complaint Form on unsatisfactory delivery against any vendor will be cause to refuse to consider similar items from those vendors on future Request For Quotations.

(NOTE: Delivery time could be altered due to labor strikes, severe inclement weather conditions, etc.)

5.0 AWARD CRITERIA

5.1 DOH will recommend the award in accordance with the RFQ evaluation criteria described in the requisition. **The award shall be made to the lowest unit cost vendor that meets or exceeds the specifications.** DOH reserves the right to place multiple orders in any quantity.

6.0 SPECIFICATIONS AND GUIDELINES - GENERAL

6.1 IDENTIFICATION OF THE UNIT BEING PROPOSED

The bidder must identify the unit by manufacturer, model, series, and year of manufacture, to enable identification by DOH in the manufacturer's specifications of the proposed unit. The bidder will submit complete descriptive literature of the proposed unit, to establish that the bid is the manufacturer's most current model, including latest engineering improvements, which have been, or will imminently be, regularly advertised and sold on the open market. The unit specified herein and offered

to be manufactured after January 1, 2011 and be clearly identified and marked with date of manufacture.

6.2 OPERATING AND SERVICE MANUALS AND PARTS LISTS

An operator's manual must be included with each unit upon delivery. A "line sheet" (if applicable) and Equipment Preventative Maintenance Questionnaire (as shown in X6.2 of the Bidder's Evaluation Report) must be with pilot unit upon delivery. In addition, there must be 12 service, shop, or maintenance manuals; ten (10) to be distributed to the Districts and two (2) for the Equipment Division. Also, there must be 14 parts manuals; ten (10) to be distributed to the Districts and four (4) for Equipment Division use. CD ROM is preferred in lieu of parts or service manuals.

* **NOTE: MANUALS SHALL BE DELIVERED UPON COMPLETION OF DELIVERY OF TOTAL UNITS. FAILURE TO DO SO WILL DELAY PAYMENT.**

6.3 TRAINING:

Manufacturers and/or dealers will be required to stage a thorough seminar on the subjects of Preventative Maintenance, Operator and Mechanic Training. **In order to keep the operators and mechanics updated, the successful vendor shall conduct training with each purchase order against this open end contract.** Training is preferred within 2 working days after delivery of the pilot unit on the individual purchase order.

Manufacturers and/or dealers shall be required to furnish the Training Academy with one (1) Operator's Manual to be shipped direct to WVDOH Training Academy, Post Office Box 610, Buckhannon, West Virginia 26201 prior to delivery of the pilot.

The seminar to be held at the W. Va. Division of Highways, Equipment Division, Buckhannon, West Virginia.

6.4 PREVENTIVE MAINTENANCE AND OPERATOR PROCEDURES:

Manufacturers and/or dealers will be required to submit to the Equipment Division, in addition to the operating and service manuals, booklets and pamphlets explaining the Preventive Maintenance and Operator Procedures to be used by the operators of this equipment, and must include such things as daily prestart inspection procedure, service schedule, and routine maintenance required, safety precautions, etc.

The successful vendor shall furnish all training aids; i.e., videos, projectors, etc. required in conducting the training.

6.5 WARRANTY AND SERVICE POLICY

The Manufacturers warranty or service policy is to apply to the unit. Such warranty or service policy is to be recognized at any authorized unit dealer, representing manufacturer of proposed unit throughout the State of West Virginia. The applicable warranty or service policy will not be contingent upon obtaining routine service, lubrication, and servicing of the unit from factory authorized agencies. It will be the responsibility of the bidder to have available labor to repair or replace any defective replacement parts, components and materials, and to have available those replacement parts, components, and/or materials found to be defective during the terms of the warranty period. The bidder should state the labor rates, locations where parts will be stocked, availability of parts, and discounts offered for parts, when terms of the warranty offer a pro-rated cost for parts and labor. In addition, the successful bidder should offer field work to repair or replace defective parts, components, and materials found to be defective during the terms of the warranty and should provide mechanic's travel rates, mileage charges, field mechanic rates, and any surcharge for miscellaneous items, if applicable, for field work during the warranty period. Submit to Division of Highways any technical or engineering improvements during the term of the warranty. **The unit must be accompanied upon delivery by the unit's manufacturer's executed warranty or service policy.**

A mandatory minimum two (2) year bumper to bumper basic parts and labor warranty excluding abuse and normal wear items is required for this unit.

THE "WARRANTY AND SERVICE POLICY QUESTIONNAIRE" ATTACHED IN THE BIDDER'S EVALUATION REPORT MUST BE COMPLETED IN ITS ENTIRETY BY THE SUCCESSFUL BIDDER OR MANUFACTURER PRIOR TO DELIVERY OF THE PILOT MODEL. (SEE SECTION X6.5 OF BIDDER'S EVALUATION REPORT).

6.6 EVALUATION COMMITTEE REQUIREMENTS

Detailed component specifications, product literature, component models, required for specification compliance determination by the Evaluation Committee should be provided with each bid. Any information supplied that is contrary to/or conflicting with the specifications and/or attached Bidders Evaluation Report may be sufficient cause for rejection of bid.

6.7 UNSPECIFIED ACCESSORIES & FEATURES

All parts, equipment, accessories, material, design and performance characteristics not specified herein, but which are necessary to provide a complete unit, must be furnished with each unit and required to conform to strength, quality of material, and quality of workmanship to those which are advertised and provided to the market in general by the unit industry.

All parts and accessories advertised and regularly supplied as standard shall be included, except those which would represent duplication of these specified, and except those which, by specification, are not to be furnished. All standard safety features, required by Federal and State Law, shall be included.

7.0 SPECIFICATIONS OF THE QUOTED UNIT ARE AS FOLLOWS:

Unit shall have built in auxiliary battery charger which would enable the batteries to be hooked up to an AC power source at the storage yard or off of a generator in the field so that the batteries could be fully charged. Charge time and charger version shall be based on the manufacturers battery configuration.

7.1 Arrowboard:

7.1.1 The arrowboard to be a weather-tight panel approximately 48 inches high by 96 inches wide.

7.1.2 The height from the bottom of the panel to the roadway should be seven (7) feet above the roadway.

7.1.3 The face of the panel should be flat back with 15 hooded lamps.

7.1.3.1 Lamp shall be five (5) inch amber LED with minimum angularity of 33 degrees.

7.1.4 The unit to have the capability of the following modes of operations:

7.1.4.1 Right Arrow - ten (10) lamps flashing in unison.

7.1.4.2 Left Arrow - ten (10) lamps flashing in unison.

7.1.4.3 Double Arrow - five (5) lamps in each arrowhead and three (3) lamps in shaft, all flashing in unison.

- 7.1.4.4 Warning Bar - seven (7) horizontal lamps flashing in unison.
- 7.1.4.5 Four Point Caution - four (4) outermost corner lamps flashing in unison.
- 7.1.4.6 Indicator Lights on back of panel.
- 7.1.5 The flash rate should be 30 fpm and the flash cycle time to be two (2) seconds with 50 percent on time.
- 7.1.6 The unit should reduce lamp brightness when the ambient light level drops below five (5) foot candles, plus or minus one (1) foot candle, **and shall increase lamp brightness when the ambient light level increases to five (5) foot candles, plus or minus one (1) foot candle.**
- 7.1.7 **Unit should have minimum legibility distance of one (1) mile.**
- 7.2 Electrical System:
 - 7.2.1 **The solar generator shall incorporate a 12 Volt DC Photovoltaic Solar Panel mounted on a self-erecting, automatic positioning device located above the unit.**
 - 7.2.2 **The battery bank shall be of sufficient size and capacity to power the unit for 30 days with no solar assist.**
 - 7.2.3 The batteries to be protected to prevent damaged due to overcharging or discharging too deeply at any temperature.
 - 7.2.4 The unit to have an external warning light, or other device to indicate when the unit is in need of auxiliary charging prior to arrow shutoff.
 - 7.2.5 The battery compartment should be vented, protected by a special acid-resistant finish, and lockable.
 - 7.2.6 **The arrowboard controller shall be housed in a weatherproof, lockable enclosure.**
 - 7.2.7 **Unit shall be safe guarded from any unwanted outside RF interference which would include but not be limited to VHF/FM receiver, 2-way radio receiver, cell phones, etc.**
 - 7.2.8 The unit to be equipped with an hour meter.

7.3 Trailer:

7.3.1 The trailer to be equipped with the following:

7.3.1.1 2,000 lb. axle with leaf springs.

7.3.1.2 Tubeless, standard tread tires and wheels.

7.3.1.3 Heavy duty pintle eye hitch

7.3.1.4 Adjustable jack stand on trailer tongue.

7.3.1.5 Adjustable jack stands to stabilize unit while in operation.

7.3.1.6 Approved lighting and safety chains for highway use.

7.3.1.7 Heavy duty light wiring for towing of unit with quick disconnect plug Cole Hersee Part Number 12081 male or equal.

7.3.1.8 License plate brackets.

7.3.1.9 Wheel fenders.

7.3.1.10 The arrowboard to be raised and lowered using a hand operating winch (or hydraulic pump and ram) and locked into place using latches of steel pins with keeper chains permanently attached to the unit.

7.4 Paint:

7.4.1 The unit to be painted the manufacturers standard color except that the arrowboard will be painted flat black.

7.5 Vendor must certify that the arrowboard offered will meet or exceed the "Occupational Safety and Health Act of 1970" or subsequent changes that are in effect at time of manufacture of the unit.

7.6 Advertising: No visible decals or nameplates or painted on names representing the manufacturer or model number or trademark should appear on the exterior surfaces of the unit. Such logos created through the stamping or casting process of manufacture are accepted.

7.7 All other features considered as standard equipment but not specifically addressed above.

7.8 Preventive Maintenance & Operator's Training School:

Manufacturers and/or dealers will be required to stage a thorough seminar on each order on the subjects Preventive Maintenance and Operator Training. The seminar should be held at the Equipment Division.

In addition to the operating and service manuals, booklets and pamphlets explaining the Preventive Maintenance and Operator Training procedures to be used by the operators of this equipment are also required. Must include such things as daily prestart inspection procedure, service schedule and routing maintenance required, safety precautions, etc.

Bidder to attach a copy of the proposed program with his bid, state the time required to perform the program, and briefly describe his program.

The successful vendor to furnish all training aids; i.e. videos, projectors, etc., required in conducting the training.