ARKANSAS STATE HIGHWAY COMMISSION ArDOT-EQUIPMENT AND PROCUREMENT DIVISION BID INVITATION

Contract Number:	H-18-21	8H		BID OPENING LOCATION: ArDOT Equipment and	MAIL TO: ArDOT Equipment and	DELIVER TO: ArDOT Equipment and		
Bid Opening Date: January 9, 2018 Time: 11:00 a.m.		Procurement Division 11302 West Baseline Road Little Rock, AR 72209	Procurement Division P.O. Box 2261 Little Rock, AR 72203	Procurement Division 11302 West Baseline Road Little Rock, AR 72209				
mail and delivery loo	cations until the above-noted b	id opening	date and time, and	ject to the Standard Bid Conditions on the publicly opened at the above-nobids and unsigned bids will not be	ted bid opening location. Bic			
In compliance with the price set opposite each		all the Cor	nditions thereof, the u	undersigned offers and agrees to furnis	sh any and all items upon whic	ch prices are quoted, at the		
Company Name:				Name (Type or Print):				
Address:				Title:				
				Phone:	Fax:			
City:	State:		Zip:	E-Mail:				
Federal Tax ID or S	Social Security No.:			Signature must be legible,	original (not photocopied) an			

Flashing Arrow, Trailer Mounted, Solar Powered

The Arkansas Department of Transportation (hereafter called ArDOT) will receive bids for a Flashing Arrow, Trailer Mounted, Solar Powered.

Bid prices shall include any applicable labor cost as well as delivery of all Equipment to ArDOT at the F.O.B. location(s) shown on attached Bid Sheet.

Contract may be renewed or extended upon mutual agreement of the parties, but shall not exceed limitations allowed by Arkansas State Procurement Law.

All bidders should complete and return the Eligible Bidder Certification (Attachment A) and Disclosure Form (see Page 2 of Standard Bid Conditions – Item 18) issued with this bid. A current copy of the DFA Illegal Immigrant Contractor Disclosure Certification (see Page 1 of Standard Bid Conditions – Item 17) should also be submitted with bid.

Literature Submittals – Item A2 of Bid Specifications shall supersede Item #11 of Standard Bid Conditions.

Bid Bond in the amount of \$1,000 required of all bidders at time of bid opening or bid will be rejected. **Personal and company checks are not acceptable as Bid Bonds.** See Condition 4 on page 1 of Standard Bid Conditions.

Performance Bond in the amount of 5% of the total awarded to the respective bidders must be furnished within 10 days after receipt of notice of intent to award as a guarantee of delivery in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** See Condition 4 on page 1 of Standard Bid Conditions.

Bidder shall specify guaranteed delivery date for all vehicles/equipment in the space provided under each item number for which a price is being submitted. Successful bidder shall furnish Warranty Data for each vehicle/equipment delivered. The Warranty Data shall contain all necessary information such as motor and/or serial numbers and shall be signed by the selling dealer at the time vehicle/equipment is delivered to the Department of Transportation. Certificate of Origin, Federal Excise Tax Exemption Certificates, Odometer Disclosure Statement and five (5) copies of the Invoice for each vehicle/equipment to be furnished to Equipment & Procurement Division, P.O. Box 2261, Little Rock, AR 72203.

The successful bidder will be required to complete delivery within 90 days after award.

Bids and Specifications are available on-line by going to the ArDOT Web Site – www.arkansashighways.com and clicking on "Commodities and Services Bids/Contracts Information". Tabulations will also be available at this site after award of bid/contract. If you have any questions, call this office at 501-569-2667.

64-8046 thru 64-8048

ArDOT-EQUIPMENT AND PROCUREMENT DIVISION BID SHEET

nt	tract No.: H-18-218H		BIDDER:	
	9Flashing Arrow, Traile	r Mounted, Solar Powered	to meet ArDOT Spec. 18-191-09	90
	4 ea. ArDOT Dist	rict 1 Headquarters. 270	11302 West Baseline Road, Litt 11 Highway 64 West, Wynne, AR 10 Highway 65 South, Pine Bluff,	R 72396
	Bid Price (Do not include	•		-
	Make:	Model	Warranty	Each \$
	Total for 9 Flashing Arr	ov. Tuoilor Mountal Ca	lon Downand	¢
	-			.
	Guaranteed Delivery Da	te		
	Additional Units may be	purchased at the same p	pricing and	
	conditions through	(Date)		

BID TOTAL \$ _____

ARKANSAS STATE HIGHWAY COMMISSION

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STANDARD BID CONDITIONS

- 1. **GENERAL:** Any special terms and conditions included in the invitation for bid override these standard terms and conditions. The standard terms and conditions and any special terms and conditions become part of any contract entered into if any or all parts of the bid are accepted by the Arkansas Department of Transportation (ArDOT).
- 2. **ACCEPTANCE AND REJECTION:** ArDOT reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
- 3. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
- BID BONDS AND PERFORMANCE BONDS: If required, a Bid Bond in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. Personal and company checks are not acceptable as Bid Bonds. Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by ArDOT or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a Performance Bond in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. Personal and company checks are not acceptable as Performance Bonds. In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U.S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
- 5. **TAXES:** ArDOT is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by ArDOT as an addition thereto, and should be added to the billing to ArDOT. The ArDOT is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by ArDOT.
- 6. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
- 7. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
- 8. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
- 9. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
- 10. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.

- 11. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of ArDOT request, and free demonstrations within 30 days, unless ArDOT extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by ArDOT. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
- 12. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
- 13. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to ArDOT, as soon as possible, of the reason for any delay and the expected delivery date. ArDOT has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
- 14. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by ArDOT after delivery. Default in promised delivery or failure to meet specifications authorizes ArDOT to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
- 15. **ETHICS:** "It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business." (Arkansas Code, Annotated, Section 19-11-708).
- 16. **NOTICE OF NONDISCRIMINATION:** The Arkansas State Highway Commission through the ArDOT complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, the ArDOT does not discriminate on the basis of race, sex, color, age, national origin, religion (not applicable as a protected group under the Federal Motor Carrier Safety Administration Title VI Program), disability, Limited English Proficiency (LEP), or low-income status in the admission, access to and treatment in the ArDOT's programs and activities, as well as the hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the ArDOT's nondiscrimination policies may be directed to Joanna P. McFadden Section Head EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501)569-2298, (Voice/TTY 711), or the following email address: **joanna.mcfadden@ahtd.ar.gov.** Free language assistance for Limited English Proficient individuals is available upon request. This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.
- 17. **PROHIBITION OF EMPLOYMENT OF ILLEGAL IMMIGRANTS:** Pursuant to Arkansas Code Annotated 19-11-105, all bidders must certify prior to award of a contract that they <u>do not</u> employ or contract with any illegal immigrant(s) in its contract with the state. Bidders shall certify online at https://www.ark.org/dfa/immigrant/index.php.
- **18. DISCLOSURE:** Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that order, **shall** be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy **shall** be subject to all legal remedies available to the agency.

ATTACHMENT A

ELIGIBLE BIDDER CERTIFICATION

The Bidder represents and warrants for itself, its employees and its subcontractors and certifies they:

- 1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- 2. Have not within a three-year period preceding thus Bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- 3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph two (2) of this Certification;
- 4. Have not within a one-year period preceding this application/Bid had one or more public transactions (Federal, State, or local) terminated for cause or default; and

The Bidder represents, warrants and acknowledges the understanding that restrictions placed on the employment of labor or on the scale of pay for the work on a contract will be the requirements of the Fair Labor Standards Act (Federal Wage-Hour Law) of 1938, 28 USC §201 et seq., and other applicable labor laws.

The person executing this Certification further represents, warrants and affirms the truthfulness and accuracy of the contents of the statements submitted on or with this Certification and understands that the provisions of 31 USC §3801 et seq. are applicable thereto.

BIDDER NAME
BY:Signature
TITLE:

CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

Failure to complete all of	f the following	g informatio	n may result in a delay in obtaini	ng a contra	ct, lease, p	urchase agree	ment, or grant award with any Arkansas State Agency	<i>'</i> .	
SUBCONTRACTOR: ☐ Yes ☐ No		ACTOR NAME:	-		·	-			
			IS THIS FOR:						
TAXPAYER ID NAME:			☐ Goods?	☐ Service	es?	☐ Both?			
YOUR LAST NAME:			FIRST NAME:				M.I.:		
ADDRESS:									
CITY:			STATE:		ZIP CC	DDE:	COUNTY:		
AS A CONDITION	OF OBTA	INING, E	XTENDING, AMENDING	G, OR RE	NEWIN	G A CONT	RACT, LEASE, PURCHASE AGREEMENT	T, OR GRANT AV	VARD_
WITH ANY ARKAI	VSAS STA	TE AGEN	CY, THE FOLLOWING IN	IFORMA	ATION N	ΛUST BE D	DISCLOSED:		
				FOR	INDI	VIDUAL:	S*		
Indicate below if: you, y Commission Member, o			ner, sister, parent, or child of yo	u or your s	spouse is a	a current or fo	ormer: member of the General Assembly, Constitut	ional Officer, State Bo	oard or
Desition Hold	Ma	ark (🗸)	Name of Position of Job He	of Position of Job Held For How Long?		ς?	What is the person(s) name and how are they related to you? (i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.)		
Position Held	Current	Former	(senator, representative, name o board/ commission, data entry, et				Person's Name(s)	Re	elation
General Assembly				,	,				
Constitutional Officer									
State Board or Commission Member									
State Employee									
☐ None of the above	e applies			•	•	·			
			FO	R AN	ENTIT	Y (BUSI	NESS)*		
Constitutional Officer, S	State Board o	or Commissi	on Member, State Employee, c	r the spou	se, brothe	er, sister, pare	ship interest of 10% or greater in the entity: membent, or child of a member of the General Assembly, es or influence the management of the entity.		
D 11.11	Mark (✓)		Name of Position of Job Held For How Long		w Long?	What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?			
Position Held	Current	Former	(senator, representative, name of board/ commission, data entry, etc.)	From MM/YY	To MM/YY		Person's Name(s)	Ownership Interest (%)	Position of Control
General Assembly								, ,	
Constitutional Officer									
State Board or									
Commission Member									
State Employee	1			1	1				1

[☐] None of the above applies

Contract and Grant Disclosure and Certification Form

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the agency.

As an additional condition of obtaining, extending, amending, or renewing a contract with a state agency I agree as follows:

- 1. Prior to entering into any agreement with any subcontractor, prior or subsequent to the contract date, I will require the subcontractor to complete a **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM**. Subcontractor shall mean any person or entity with whom I enter an agreement whereby I assign or otherwise delegate to the person or entity, for consideration, all, or any part, of the performance required of me under the terms of my contract with the state agency.
- 2. I will include the following language as a part of any agreement with a subcontractor:
 - Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor.
- 3. No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy of the CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM completed by the subcontractor and a statement containing the dollar amount of the subcontract to the state agency.

Signature		Title		Date
Vendor Contact	Person	Title		Phone No.
Agency Use Only				
Agency	Agency	Agency	Contact	Contract or
Number	Name	Contact Person	Phone No.	Grant No.

RESTRICTION OF BOYCOTT OF ISRAEL CERTIFICATION

Pursuant to Arkansas Code Annotated § 25-1-503, a public entity **shall not** enter into a contract valued at \$1,000 or greater with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of Israel.

By signing below, the Contractor agrees and certifies that they do not boycott Israel and will not boycott Israel during the remaining aggregate term of the contract.

If a company does boycott Israel, see Arkansas Code Annotated § 25-1-503.

Bid Number/Contract Number	
Description of product or service	
Contractor name	
Contractor Signature:	Date:
Signature must be hand written, in ink	

ARKANSAS DEPARTMENT OF TRANSPORTATION

SPECIFICATION 18-191-090

FOR

TRAILER MOUNTED FLASHING ARROW SOLAR POWERED

A. General Conditions:

- Current Model: Units furnished under this specification shall be the latest improved model in current production, as
 offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines
 manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new.
 Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of
 the units supplied must have been in the business of producing operational units for at least two years and must have
 recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a
 minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation
 substantiating the aforementioned requirements. A list of user references may also be required.
- 2. <u>Literature</u>: Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with ARDOT specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
- 3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas Department of Transportation that deviations will be acceptable.
- 4. <u>Manuals</u>: The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.
 - The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.
- 5. Units shall be assembled, adjusted and made ready for continuous operation at time of delivery.
- 6. All equipment and accessories necessary for satisfactory operation shall be furnished whether or not they are specifically mentioned in this specification. (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications unless specifically excluded by this specification).
- 7. <u>Parts Inventory & Service Facilities</u>: The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
- 8. <u>Demonstration</u>: The Arkansas Department of Transportation reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
- 9. Cooperative Purchasing: Other tax-supported entities* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

^{*} Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

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B. <u>Unit Specifications</u>:

1. <u>General</u>: This specification is intended to cover a trailer mounted fifteen (15) lamp flashing arrow equipped with a self-contained solar power charging system. Complete unit shall consist of the following: Sign Panel with L.E.D. sealed beam lamps attached, Control Console circuitry, mounting frame for two (2) wheel trailer, mechanisms for raising and lowering sign panel, self-contained solar power source and two (2) wheel trailer. Shall meet the requirements of the Federal Manual on Uniform Traffic Control Devices.

- 2. <u>Sign</u>: The sign shall consist of no less than two (2) aluminum panel faces with sufficient room to accommodate lamps, wiring and connectors. Shall be no less than 48" high, 96" wide and approximately 3-1/4" thick. The panel faces shall be painted flat black. Front panel shall contain a minimum of fifteen (15) PAR 46 L.E.D. lamps. Lamp intensity shall be such that on a clear night or sunny day the signal can be readily recognized from a minimum of one (1) mile. Lamps shall be wired to produce the following messages: Right Arrow, Left Arrow, Double Arrow and Caution. The caution mode shall consist of four or more lamps, arranged in a pattern that will not indicate a direction. Lamps shall be mounted in front panel with retaining rings and have visors encompassing no less than 180° of lamps.
- 3. Controls & Circuitry: Control shall be a solid state design enclosed in a lockable enclosure. Shall contain sufficient switches to provide all four (4) messages on sign panel. Shall contain an automatic photo-control to dim lights for night time operation. The controls shall produce a minimum of 25 cycles per minute with a 50% dwell time. All controls shall have overload voltage protection.
- 4. Power Supply: Primary power shall be solar based. The unit shall be designed to operate through the use of a 12 volt DC battery bank of sufficient capacity to power the unit for a minimum of eighteen (18) days with no solar assist (no sun) operation with 100% battery bank charge @ 78° F, single arrow mode, 24 hours per day). The battery bank shall be kept charged by means of a 12 volt DC solar generator incorporating one or more photovoltaic solar panels. The solar panel array shall produce a minimum of 40 watts of power and be positioned on top of the arrow board to provide shade free deployment for the highest possible energy capture regardless of trailer direction. The unit shall also be equipped with a 12 amp minimum battery charger which will operate on 115 volt AC current to be used in the event that sunlight is insufficient for the solar panels to keep the batteries charged. The batteries shall be regulated and protected by solid state electronics. A low voltage disconnect shall be incorporated to protect the battery bank from over discharge. Upper end float regulation shall be incorporated to prevent over charging by the solar array or the on-board battery charger. The battery bank shall be equipped with a volt meter, or similar device, to indicate the current state of battery charge. An ammeter or charge indicator shall be provided to monitor the solar array. Batteries shall be housed in a lockable, ventilated enclosure. Design of the enclosure shall allow batteries to be easily removed and replaced.
- 5. Hour Meter: Shall be equipped with an hour meter indicating actual operating time of the unit.
- 6. Mounting Frame: Shall be constructed from steel tubing integrally welded to the trailer with ample supports to be towed at highway speeds. Support arms shall be constructed from steel tubing with pivot points located so that sign can be raised and lowered. Sign shall be raised and lowered by means of a mechanical winch with not less than 3/16" steel cable or by a lever with a locking device.
- 7. Trailer: Shall be mounted on a single axle equipped with spring type or torsional type suspension and two (2) pneumatic tired steel disc wheels. Tires shall be as regularly furnished by manufacturer with load carrying capacity to handle unit at highway towing speeds. Trailer shall be complete with fenders and have a towing extension with jack stand for leveling of unit. Shall have safety chains with hooks and a 3" pintle eye for attaching to towing vehicle. In addition, a 2" ball type hitch shall be furnished so that unit can be converted for use with a towing vehicle equipped with a 2" ball. Shall be equipped with four (4) screw type jacks with foot pads. Shall have combination tail lights, stop lights and turn signals. A six pole round trailer connector, complete with plug for trailer and receptacle for towing vehicle, shall be provided.
- 8. Color: Manufacturer's standard color is acceptable.
- 9. <u>Warranty</u>: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by ARDOT.
 - a. Warranty shall include all parts, labor and transportation costs to the location of equipment.
 - b. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
 - c. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.

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d. If any warranty literature submitted with the bid conflicts with ARDOT warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.

e. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.