BID FORM

MISSOURI DEPARTMENT OF TRANSPORTATION GENERAL SERVICES

PO Box 270, Jefferson City, MO 65102(Mailing Address) 830 MoDOT Drive, Jefferson City, MO 65109 (Physical Address)

REQUEST NO.	3-121004RW
DATE	September 17, 2012

SEALED BIDS, SUBJECT TO THE ATTACHED CONDITIONS WIL	L
BE RECEIVED AT THIS OFFICE UNTIL	

2:00 PM, CDT, October 4, 2012

AND THEN PUBLICLY OPENED AND READ FOR FURNISHING THE FOLLOWING SUPPLIES OR SERVICES.

BID TO BE BASED F.O.B. MISSOURI DEPARTMENT OF TRANSPORTATION

Submit net bid as cash discount stipulations will not be considered

F.O.B. Destinations

Locations as Shown on Attachment B

SIGN AND RETURN BEFORE TIME SET FOR OPENING

BUYER:	Robi	n Warren, Sr. General Services Specialist	BUYER TELEPHONE:	(573) 526-7929
BUYER EMAIL:		Robin.Warren@modot.mo.gov		

SUPPLIES OR SERVICES

MoDOT is seeking bids from qualified bidders whom can provide **High-Intensity Emergency Vehicle Lighting and Accessories** for Motorist Assist and Emergency Response vehicles authorized to operate as Emergency Vehicles under RSMo 304.022

***NOTE: It is the responsibility of the Bidder to access MoDOT's website in order to obtain any and all addenda(s) issued during the course of this RFB process.

All questions regarding this RFB shall be submitted to the RFB Coordinator/Contact.

(SEE ATTACHED FOR CONDITIONS AND INSTRUCTIONS) In compliance with the above Request For Bid, and subject to all conditions thereof, the undersigned bidder agrees to furnish and deliver any or all the items on which prices were bid within the timeframe specified herein, after receipt of formal purchase order. Date: Telephone No.: Firm Name: Address: Fax No.: Email Address: By (Signature): Type/Print Name Title:

Form E-103 (Rev. 11-04)

1. INTRODUCTION AND GENERAL INFORMATION

1.1 Introduction:

1.1.1 This Request for Bid seeks bids from qualified organizations to provide **High-Intensity Emergency Vehicle Lighting and Accessories**, with an effective contract period of Notice to Proceed through October 31, 2013, to the Missouri Highways and Transportation Commission (MHTC) and Missouri Department of Transportation (MoDOT). Each bid must be mailed in a sealed envelope to Robin Warren, Missouri Department of Transportation, General Services Procurement, P.O. Box 270, Jefferson City, MO 65102, or hand-delivered in a sealed envelope to the General Services Procurement Office at 830 MoDOT Drive, Jefferson City, MO 65109. All questions regarding the RFB shall be submitted to Robin Warren. Bids must be returned to the office of General Services Procurement no later than 2:00 p.m., CDT, October 4, 2012.

RFB Coordinator:

Robin Warren, Sr. General Services Specialist Missouri Department of Transportation General Services - Procurement

Phone: 573-526-7929

E-mail: Robin.Warren@modot.mo.gov

1.2 General Information:

- 1.2.1 This document constitutes an invitation for competitive, sealed bids for the procurement of High-Intensity Emergency Vehicle Lighting and Accessories as set forth herein.
- 1.2.2 Organization This document, referred to as a Request for Bid (RFB), is divided into the following parts:
 - 1) Introduction and General Information
 - 2) Scope of Work
 - 3) Bid Submission
 - 4) Pricing Pages
 - 5) Terms and Conditions
 - 6) Attachment A Specifications
 - 7) Attachment B District Map

2. SCOPE OF WORK

2.1 General Requirements:

- 2.1.1 The contractor shall provide Emergency Vehicle Lighting on an as needed, if needed basis for the Missouri Highway and Transportation Commission (MHTC) and Missouri Department of Transportation (MoDOT), hereinafter referred to as the "MoDOT", in accordance with the provisions and requirements stated herein.
- 2.1.2 The contractor shall provide all deliverables/services to the sole satisfaction of MoDOT.
- 2.1.3 MoDOT does not guarantee any specific quantities that may be required to be provided by the contractor.
- 2.1.4 MoDOT shall award a contract for each of the three (3) bid categories.
- 2.1.5 To ensure an uninterrupted delivery of items to MoDOT, MoDOT anticipates awarding a maximum of two (2) contingency contracts for each of the three (3) bid categories. Such contingency contracts shall be based upon the second and third lowest bids received for each of the bid categories.
 - a. In the event the contractor is unable to meet contractual requirements as specified herein and/or provide lighting that meet specifications on three (3) separate occurrences within the one-year contract period (or a renewal period if a renewal period is utilized), MoDOT may utilize the first contingency contractor (defined as being the second lowest priced contractor).
 - b. In the event the first contingency contractor is unable to meet contractual requirements as specified herein and/or provide lighting that meet specifications on three (3) separate occurrences within the one-year contract period (or a renewal period if a renewal period is utilized), MoDOT may utilize the second contingency contractor (defined as being the third lowest priced contractor), if a third contract exist.
 - c. The first and second contingency contractor(s) shall understand and agree to provide services under the same contractual requirements as the contractor(s).
 - d. In the event the contractor is unable to fulfill the terms of the contract to the satisfaction of MoDOT due to such factors as, but not limited to, repeated late deliveries, poor quality or inability to meet specifications, MoDOT reserves the right to cancel the contract with the contractor and elevate the first contingency contractor to the status of contractor for a given district.
 - e. The contingency contractor(s) shall understand and agree that MoDOT does not guarantee that any orders will be sent to the contingency contractor(s).
 - f. The contractor(s) and contingency contractor(s) shall understand and agree that the contractor selection shall be made by MoDOT and that such selection shall be final and without recourse.
- 2.1.6 The MoDOT reserves the right to obtain "like or similar" products as specified herein from other manufacturers, exclusive of the contract, when use of such products is deemed in the best interest of the MoDOT.
- 2.1.7 Unless otherwise specified herein, the contractor shall furnish all material, labor, facilities, equipment, and supplies necessary to provide the deliverables/services required herein.

2.2 Specific Requirements:

2.2.1 The contractor shall furnish emergency vehicle lighting that complies with the attached specifications (Attachment A) and any other provisions outlined in the solicitation document.

2.3 Delivery Requirements:

- 2.2.1 The contractor shall deliver items as specified herein to the various counties within the State of Missouri. Specific delivery locations will be indicated on the purchase orders used to place orders from the districts on an as needed basis. *See Attachment B District Map*
- 2.2.2 The contractor shall deliver the ordered items within thirty (30) calendar days after the order is placed.

2.3 Invoicing and Payment Requirements:

- 2.3.1 The contractor shall submit an itemized invoice to the applicable requesting address for the completion of deliverables, as specified herein.
- 2.3.2 Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- 2.3.3 The contractor shall be paid in accordance with the firm, fixed prices stated on the pricing page(s) of this document after completion of deliverables specified herein and acceptance by MoDOT.
- 2.3.4 Other than the payment specified above, no other payments or reimbursements shall be made to the contractor for any reason whatsoever.
- 2.3.5 Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- 2.3.7 The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the contractor's expense.
- 2.3.8 The MHTC reserves the right to purchase goods and services using the state-purchasing card.

2.4 Other Contractual Requirements:

- 2.4.1 Contract Period The contract shall commence from the date of Notice to Proceed until October 31, 2013, with three (3) one-year renewal option periods. If the option for renewal is exercised by MoDOT, the contractor shall agree to all terms and conditions of the RFB and all subsequent amendments. Renewal options are at the sole discretion of MoDOT.
- 2.4.2 Renewal Periods If the option for renewal is exercised by MoDOT, the contractor shall agree that the prices for the renewal period shall not exceed the maximum percentage for the applicable renewal period stated herein.
 - a. If renewal percentages are not provided, the prices during renewal periods shall be the same as during the original contract period.
 - b. MoDOT does not automatically exercise its option for renewal based upon the maximum percentage and reserves the right to offer or to request renewal of the contract at a price less than the maximum percentage stated.
 - c. In the event MoDOT exercises its option(s) to renew the contract, the requirements for future years shall be basically similar.

- 2.4.3 Escalation Clause In the event the contractor requests a price increase during the contract period (original contract period or contract renewal period), the contractor must provide a written request and documentation justifying the need for a price increase, and the amount of such price increase. MoDOT will review the contractor's written request and documentation, and decide if a price increase is to be granted at that particular time. The contractor shall understand and agree that MoDOT's decision shall be final and without recourse.
 - a. No price increase shall be granted during the first 3 months of the original contract period, or if applicable, first 3 months of a contract period for a renewal.
 - b. In the event a price increase is granted due to an approved escalation, the renewal percentage shall be based upon the current contract value.

3. BID SUBMISSION

3.1 Bid Submission Information:

- 3.1.1 All bids must be received in a sealed envelope clearly marked "High-Intensity Emergency Vehicle Lighting".
- 3.1.2 All bids must be received at the following address no later than October 4, 2012, at 2:00 p.m., CDT.

The Missouri Department of Transportation General Services – Procurement Division

Attn: Robin Warren

PO Box 270 Mailing Address

Jefferson City, MO 65102

830 MoDOT Drive Physical Address

Jefferson City, MO 65109

- 3.1.3 The bidder may withdraw, modify or correct his bid after it has been deposited with MoDOT provided such request is submitted in writing and received at the location designated for the bid opening prior to the time specified for opening bids. Such a request received as specified will be attached to the bid and the bid will be considered to have been modified accordingly. No bid may be modified after the time specified for the opening of bids.
- 3.1.4 Bids will be reviewed to determine if the bid complies with the mandatory requirements, and to determine the lowest and best bid.
- 3.1.5 Cost Determination On the pricing page specified herein for Line Item 1, 2 and 3, bids shall be ranked lowest bid, second lowest bid, third lowest bid, etc. *Note: Items 1a through 1i must be priced, but the award is based on the combined price of these items in Line Item 1.*
- 3.1.6 Contract Award MoDOT reserve the right to award up to three (3) contracts within each category (*Line Item 1*, 2 and 3). Reference section 2.1.5 under General Requirements.
- 3.1.7 MHTC reserves the right to reject any or all bids, and no award is final until formally approved by the MHTC.
 - a. Notification of award shall be at the time the tabulation is posted to the Internet. It is the sole responsibility for all bidders to check the website for bid results.

4. Pricing Pages

4.1		de firm, fixed prices below. All costs associated with providing the required deliverables e prices stated below. Supply all pricing on attached Pricing Page behind Attachment A
4.2	renewal periods. The	ne bidder shall provide below the maximum percentage of increase or decrease for the percentage shall be computed against the <u>original contract period prices</u> for each renewal ercentage is not provided, the prices for the renewal periods shall be the same as the original
	1 st Renewal Period	% of maximum increase and/or% of maximum decrease.
	2 nd Renewal Period	% of maximum increase and/or% of maximum decrease.
	3 ^{nr} Renewal Period	% of maximum increase and/or% of maximum decrease.
Com	pany	Signature

VENDOR INFORMATION & PREFERENCE CERTIFICATION FORM

Vendor Information

All bidders must furnish <u>ALL</u> applicable information requested below

Vendor Name/Mailing Address:		Vendor Contact Information (including area codes):
		Phone #:
Email Address:		Cellular #:
		Fax #:
Printed Name of Responsible Off	ficer or Employee:	Signature:
Trimou rumo di ridopondibio di	ion or Employee.	orginaturo.
For Corporations - State in which	incorporated:	For Others - State of domicile:
If the address listed in the Vendor Number places of business:	Name/Mailing Address block above is not	located in the State of Missouri, list the address of Missouri offices or
If additional space is required, plea	se attach an additional sheet and identify	it as Addresses of Missouri Offices or Places of Business.
M/WBE INFORMATION: List all conformation subcontractors and identify the		erprises (M/WBE) utilized in the fulfillment of this bid. Include percentages
M/WBE Name	<u>Percentage</u>	of Contract M/WBE Certifying Agency
If additional space is required, plea	se attach an additional sheet and identify	it as M/WBE Information
n additional opace to regamed, pred	•	Certification
All k	oidders must furnish <u>ALL</u> appli	cable information requested below
proposes to supply to the MHTC ar	re not manufactured or produced in the "L	or all of the goods or products offered in the attached bid which the bidder Jnited States", or imported in accordance with a qualifying treaty, law, er than the United States where each good or product is manufactured or
Item (or item number)	Location	on Where Item is Manufactured or Produced
		d identify it as Location Products are Manufactured or Produced.
	VETERAN BUSINESS: Please complete v definitions for qualification criteria:	the following if applicable. Additional information may be requested if
Service-Disabled Veteran is define of veterans' affairs.	ed as any individual who is disabled as co	ertified by the appropriate federal agency responsible for the administration
Service-Disabled Veteran Busine	ess is defined as a business concern:	
 a. Not less than fifty-or 	ne (51) percent of which is owned by one	or more service-disabled veterans or, in the case of any publicly owned
		which is owned by one or more service-disabled veterans; and controlled by one or more service-disabled veterans.
Veteran Ir	oformation	Business Information
<u>veteran n</u>	<u>normadori</u>	<u>Dusinoss imolitiation</u>
Service-Disabled Vetera	n's Name (Please Print)	Service-Disabled Veteran Business Name
	_	
Service-Disabled V	'eteran's Signature	Missouri Address of Service Disabled Veteran Business

NOTICE

MoDOT is interested in assisting Missouri governmental entities, etc. in purchasing equipment, various materials, and supplies that meet the MoDOT specifications.

Each bidder is asked to indicate below whether they would be willing to offer **High-Intensity Emergency Vehicle Lighting and Accessories** listed in the attached "Request for Bid" for sale to these local political entities at the same bid price offered to MoDOT.

It is understood MoDOT will not issue purchase orders, accept delivery nor make payment for these items ordered by any of these agencies. It is further understood the price is based on the **High-Intensity Emergency Vehicle Lighting** meeting MoDOT specifications. Any added options, deletions, or extra freight costs would be negotiated between the local agency and the successful vendor.

Indicate below whether your company is willing to offer such cooperative purchasing for Missouri counties, cities or other political entities.

destinations, please indicate the price
-
_
_
_
-

DATE _____

Missouri Highways and Transportation Commission Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions

STANDARD SOLICITATION PROVISIONS

- a. The solicitation for the procurement of the supplies referenced therein, to which these "Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions" are attached, is being issued under, and governed by, the provisions of Title 7 Missouri Department of Transportation, Division 10 Missouri Highways and Transportation Commission, Chapter 11 Procurement of Supplies, of the Code of State Regulations. The Missouri Highways and Transportation Commission (MHTC), acting by and through its operating arm, the Missouri Department of Transportation (MoDOT), draws the Bidder's attention to said 7 CSR 10-11 for all the provisions governing solicitation and receipt of bids/quotes and the award of the contract pursuant to this solicitation.
- b. All bids/quotes must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.

GENERAL TERMS AND CONDITIONS

Definitions

Capitalized terms as well as other terms used but not defined herein shall have the meaning assigned to them in section 7 CSR 10-11.010 Definition of Terms.

Nondiscrimination

- a. The Contractor shall comply with all state and federal statutes applicable to the Contractor relating to nondiscrimination, including, but not limited to, Chapter 213, RSMo; Title VI and Title VII of Civil Rights Act of 1964 as amended (42 U.S.C. Sections 2000d and 2000e, et seq.); and with any provision of the "Americans with Disabilities Act" (42 U.S.C. Section 12101, et seq).
- b. <u>Sanctions for Noncompliance:</u> In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MHTC shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
 - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
 - ii. cancellation, termination or suspension of the contract, in whole or in part.

Contract/Purchase Order

- a. By submitting a bid/quote, the Bidder agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's bid response, and (3) the MHTC's acceptance of the bid by post-award contract or purchase order.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized notice to proceed and/or purchase order.

Applicable Laws and Regulations

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri, Missouri Department of Revenue, and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MHTC a copy of their current Authority Certificate from the Secretary of State of the State of Missouri and/or a copy of their Certificate of No Tax Due from the Missouri Department of Revenue.
- c. Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MHTC a copy of their current Transient Employer Certificate from the Missouri Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.

Executive Order:

The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6th) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.

- 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
- 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
- 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

Preferences

- a. In the evaluation of bids/quotes, preferences shall be applied in accordance with 7 CSR 10-11.020(7). Contractors should apply the same preferences in selecting subcontractors. The attached document entitled "VENDOR INFORMATION AND PREFERENCE CERTIFICATION FORM" must be completed and returned with the solicitation documents.
- b. Bidders are encouraged to obtain minority business enterprise (MBE) and women business enterprise (WBE) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBEs. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.

Page 1 of 3 Accepted: 05/16/11 Updated: 04/18/11

Missouri Highways and Transportation Commission Standard Bid Provisions, General Terms and Conditions and Special Terms and Conditions

Cancellation of Contract

The MHTC may cancel the Contract at any time for a material breach of contractual obligations or for convenience by providing Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.

Bankruptcy or Insolvency

Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntarily, or upon the appointment of a receiver, trustee, or assignee, for the benefit of creditors, the Commission reserves the right and sole discretion to either cancel the Agreement or affirm the Agreement and hold the Contractor responsible for damages.

Warranty

The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by the MHTC, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.

Status of Independent Contractor

The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

Non-Waiver

If one of the parties agrees to waive its right to enforce any term of this Contract, that party does not waive its right to enforce such term at any other time or to enforce any or all other terms of this Contract.

Indemnification

The Contractor shall defend, indemnify and hold harmless MHTC, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Contractor's performance of its obligations under the contract awarded pursuant to this solicitation.

Page 2 of 3 Accepted: 05/16/11 Updated: 04/18/11

Missouri Highways and Transportation Commission Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

SPECIAL TERMS AND CONDITIONS

Tax Exempt Status:

MHTC is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax.

Liquidated Damages

- a. In the event the successful Contractor fails to deliver the material within the time specified, the Department and the public will sustain damages because of such delay in delivery, the exact extent of which would be difficult to ascertain, and in order to liquidate such damage in advance it is agreed that the **sum of \$100.00 per day** for each assessable calendar day on which the delivery has not been completed, is reasonable and the best estimate which the parties can arrive at as liquidated damages, and it is therefore agreed that said amount will be withheld from payments due the Contractor or otherwise collected from the Contractor as liquidated damages.
- b. Saturdays, Sundays, holidays and days whereas the Department has suspended work shall not be assessable days.

Page 3 of 3 Accepted: 05/16/11 Updated: 04/18/11

ATTACHMENT A SPECIFICATIONS

For the purpose of this specification, left side and right side shall be used for driver's side and passenger's side respectively.

GENERAL SPECIFICATIONS

General

All units and controls shall be built to the following specifications.

Lighting Requirements

All light modules and lamps shall be light emitting diodes (LED's). LED's shall be generation 3.5 or greater and shall meet or exceed California Title 13 requirements and SAE Class I standards for light output. Certification of standards shall be provided with bid submittal.

Lighting Voltage

The lighting, siren and controls shall operate on typical automotive twelve (12) Volt DC systems.

Line Item 1: Exterior Lighting/Audio Package and Control

Vendor shall provide pricing for all components in line Item 1. This line item bid shall be awarded based on the combined price of one (1) each of items 1a, 1e and 1f and two (2) each of items 1b, 1c, and 1d. Any part of this line item may be deleted per order as necessary. Items on this bid may be purchased on a per-item basis.

Item 1a: Exterior Mount LED Light Bar:

Each package shall contain a light bar with lighting visible from 360 degrees. Light bar shall be of "plug and play" modular design such that modules can be removed and replaced by the consumer without specialized tools. All forward and rear facing modules shall be dual colored, of the same size and interchangeable. All angled modules shall be dual colored, of the same size and interchangeable. Failure of any one module shall not interrupt the operation of the remaining modules in the bar. Each warning light module shall meet or exceed the Candela criteria established in California Title 13 for high-intensity lamps. The light bar shall be equipped with a light sensor or photocell that automatically adjusts the brightness of the light bar based on ambient lighting. Maximum dimming shall be 50% for nighttime operation. All exterior lens surfaces shall be hard coated to prevent discoloration. Hard coated lenses shall meet AMECA standards and certification of such shall be provided with bid submission. Light bar shall have UV barrier on all top surfaces to reduce UV damage to interior wiring and surfaces. All wiring shall be UV protected. The light bar frame and casing shall be no taller than 4 inches and shall have a width of 52" to 60" to allow for mounting to a typical mid-size pick-up, full-size pick-up, SUV style cab or tubular steel headache rack. The light bar dimensions shall not include attached brackets or mounting hardware. The Department will specify on each purchase the year, make and model of the vehicle to which the bar is being installed. All necessary mounting hardware and brackets shall be included in the bid price. The price of the light bar, mounting hardware and brackets shall be the same regardless of

vehicle specified for installation. The mounted light bar must be visible from 360 degrees. The light bar shall include a minimum twenty (20) feet of cable.

The forward section of the light bar shall contain two (2) angled wide-angle red/amber LED warning light modules, four (4) directional amber/white LED warning light modules and two (2) directional red/white LED warning light modules in the following configuration left to right:

The rear section of the light bar shall contain two (2) angled wide-angle red/amber LED warning light modules, four (4) directional amber/white LED warning light modules and two (2) directional red/white LED warning light modules in the following configuration left to right:

All light modules shall be spaced proportionately side-to-side.

Item 1b, 1c & 1d: Exterior Mount LED Grill Modules:

Externally mounted LED warning light modules with self-contained flasher, shroud, mounting bracket and hardware for grill mounting. Each exterior module shall be a single color of similar design and optic technology as the warning light modules provided for item 1a: Exterior Mount LED light bar. Exterior Mounted LED grill modules shall have a black housing and applicable wiring needed to power the unit and connect it to the lighting controller. Modules shall be capable of being energized by the lighting control module as described in this specification. Modules shall be available individually in red, amber and white denoted as items 1b, 1c and 1d respectively.

Item 1e: Siren and Lighting Controls

The package shall include an integrated siren and lighting control module. The exterior light bar and exterior grill mounted or similar modules shall be controlled from a siren control module with integrated lighting controls. The lighting control shall provide for a three (3)stage progressive switch. The progressive switch shall be capable of turning on additional lighting with each progressive position while maintaining the lighting from previous positions along the switch. Position one(1) shall energize all rear facing amber/white warning light modules, the white portion of the red/white warning light modules, the amber portion of the rear wide-angle amber/red corner light modules and up to six(6) external grill mounted or similar lights. Position two (2) shall add the red portion of the rear red/white warning light modules, the red portion of rear wide-angle amber/red corner light modules, the forward facing amber/white warning light modules, the white portion of the forward facing red/white warning light modules, the amber portion of the forward wide-angle corner lights and up to six (6) additional exterior grill mounted or similar lights. Position three (3) shall add the red portion of the forward red/white warning light modules, the red portion of forward wide-angle amber/red corner light modules and up to six (6) additional exterior grill mounted or similar lights. In Position 3 up to 18 exterior lights shall be capable of being

energized. The lighting controller shall emit an audible chirp or tone alerting the operator that the light bar and external mounted lights are energized.

Flash Pattern: The lighting control shall double flash a quad lighting pattern consisting of Quads 1 & 4 and then Quads 2 & 3, for two (2) cycles then random flash all lighted modules for 15 seconds before returning to the 2 cycle quad double flash.

Quad flash shall include the wide-angle corner lights and color displays as indicated in the figure below for each switch position.

		E	NGER SID	PASSE		DRIVER SIDE						
	Random	А	Α	W	R	R	W	А	А			
Position3	Flash	R	W	А	R	R	Α	W	R			
	Quad Flash		QUAD 4					QUAD 3				
	Random	А	W	А	W	W	А	W	А			
Position 2	Flash	Α	Α	W	W	W	W	А	А			
	Quad Flash		JAD 4	Ql			3	QUAI				
	Random	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK			
Position1	Flash	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK			
	Quad Flash		QUAD 4				QUAD 3					
NT	FRONT		DIRCTL	DIRCTL	DIRCTL	DIRCTL	DIRCTL	DIRCTL	WIDE ANG			
ιR	REAR		DIRCTL	DIRCTL	DIRCTL	DIRCTL	DIRCTL	DIRCTL	WIDE ANG			
	Random	А	W	W	Α	Α	W	W	А			
Position 1	Flash	Α	Α	W	W	W	W	Α	Α			
	Quad Flash		JAD 2	Ql		QUAD 1						
	Random	R	А	W	А	А	W	А	R			
Position 2	Flash	А	W	R	W	W	R	W	А			
	Quad Flash		QUAD 2			QUAD 1						
	Random	R	А	W	А	А	W	А	R			
Position 3	Flash	А	W	R	W	W	R	W	А			
	Quad Flash	·	JAD 2	Ql			01	QUAI				

The flash pattern shall not affect the exterior mounted grill or similar modules that have a self contained flashers.

The siren module shall contain user selectable Wail and Yelp siren cadences. The siren shall only be energized by a momentary contact switch on the control module and shall **not** be capable of continuous on operation. The siren control module shall **only** be capable energizing the siren when the progressive lighting switch is in Position 3 of 3. An electronic Air Horn function shall also be included and controlled by a momentary contact switch on the siren control module. The siren module shall be capable of Public Address (PA) and Radio Rebroadcast functions. The Public Address system shall be controlled by a separate microphone mounted from the base siren module.

The control head for the lighting and siren shall be capable of mounting remotely, up to fifteen (15) feet from the power wiring and base electronic siren module. The control head shall be no larger than 3 inches deep, 6 inches tall and 12 inches wide. All controls shall feature backlighting capability.

Item 1f: Speaker

The package shall include a single one hundred (100) watt heavy duty speaker and driver. The speaker shall be capable of mounting externally or under the vehicle hood. The speaker shall come with, and bid price shall include, the appropriate mounting bracket based on the mounting location indicated at the time the order is placed.

Item 1g, 1h & 1i: Replacement 'Plug and Play' Warning Light Modules for Item 1a

This bid shall contain prices for replacement/additional red/white directional warning light module, the amber/white directional warning light module and the wide-angle red/amber corner light module that are contained in Item 1a above. Red/white, amber/white and red/amber modules shall be denoted as items 1g, 1h and 1i respectively.

Partial Lighting Packages for Line Item 1

Any part of this line item may be deleted per order as necessary. Items on this bid may be purchased on a per-item basis.

Line Item 2: Vehicular Mounted LED Flashing Arrow Panel

The vehicular mounted flashing arrow panel shall consist of an arrow panel, mounting frame and rotating mechanism, remote control switches and circuitry, and a lockable control cabinet housing electronic components. Each unit shall be fully assembled when delivered.

Arrow Panel

The arrow panel shall be constructed of aluminum panels with reinforced edges and with inner stiffening. Panel shall be completely weather resistant. Panel shall be painted or coated with a flat black finish. Arrow panel shall meet or exceed legible visibility and all other requirements for advance warning arrow panels as listed in Part 6F.61 of the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition for Type B, arrow boards.

- The arrow panel shall be a minimum 30 inches high by 60 inches wide.
- The arrow panel shall contain a minimum of 15 LED lamps, hereafter referred to as lamps, which form the shaft and arrowheads.
- Lamps shall be yellow in color. The yellow shall fit in the Commission Internationale de L'Eclairage (CIE) color box to be perceived as yellow.
- Lamp size shall be Par 36 or Par 46.
- Lamps shall be screw type or push-on type. If push-on type lamps are furnished, there shall be a means to secure the lamps and wiring leads to the sign to prevent separation due to vibration during travel or operation.
- Lamps shall be equipped with a minimum 360 degree upper hood or visor. Hood or visor shall extend a minimum of 1-1/2 inches past the front of the lamps on units designed without recessed lamps. On units designed with recessed lamps, the lamps shall be recessed a minimum of 1-1/2 inches.
- Lamps shall be field replaceable.
- Lamp intensity shall be such that on a clear night or sunny day, a driver shall be able to visibly recognize a legible flashing arrow from a minimum distance of 3/4 mile. Minimum dimming shall be 50 percent of full-rated lamp voltage. Lamps shall flash at a rate not less than 25 or more than 40 flashes per minute, with a minimum lamp "on time" of 50 percent of the cycle for the flashing mode and equal intervals of 25 percent for each sequential phase. Arrow board displays shall include:
 - o Left arrow (five lamps in arrowhead).
 - o Right arrow (five lamps in arrowhead).
 - o Double arrow (three lamps in arrow stem).
 - o Four corner signal (top and bottom lamps of both arrows).

Minimum Luminance Requirements

• Luminous Intensity: Arrow board shall be a minimum 1000 candela during the daytime and a minimum 600 candela at nighttime.

• Angularity: Minimum angularity shall be 22 degrees in the horizontal plane and 18 degrees in the vertical plane.

Arrow Panel Mounting

The mounting device shall be universal type adaptable to mount on pickups, trucks or sweepers.

- The arrow panel shall be lockable in an upright rearward-facing position for operation and in a horizontal facedown position when not in use. The arrow board shall withstand road speeds up to 70 mph in the stored position and 35 mph when deployed.
- The arrow sign panel shall be raised and lowered by a powered mechanism. The mechanism shall be operated either electrically, hydraulically or by another powered method. Controls for raising and lowering shall be located on the remote-control console in the cab. The panel shall not drift from either a raised or lowered position.
- Mounting hardware shall be provided which will allow the arrow board panel to be securely mounted to the bed of the vehicle so as to fold over the roof of the vehicle cab when in the stored position. Mounting shall be accomplished without drilling holes in the vehicle roof.
- The sign panel shall be completely assembled at time of delivery.

Circuitry and Controls

The sign shall be powered by the 12V DC battery of the vehicle.

- The lamps shall be electronically operated by means of solid-state circuitry.
- All electrical wiring shall be insulated and enclosed in a fibrous loom, plastic loom or
 flexible conduit for protection from external damage and short circuits. Wiring shall
 be securely fastened at sufficient intervals to prevent sagging and insure clearance of
 mechanical parts. Routing of the wiring shall not interfere with the normal operation
 and use or present a safety hazard. A sealed, splice-free modular wiring harness is
 acceptable. Rubber grommets shall be used wherever wires or harness pass through
 metal.
- The controller shall have green visual indication that the board is in the fully down and stowed position and a red visual indication light that the board is not in the fully down and stowed position. Both lights shall be appropriately labeled on the control console.
- The arrow board shall come complete with a remote-control console to be mounted in the vehicle cab. Each of the 4 arrow configurations detailed previously shall be capable of being selected from the remote-control console. Console shall come with mounting hardware suitable for floor or dash mounting.
- The arrow board panel shall be equipped with a light sensor or photocell that automatically adjusts the brightness of the display for day and night operation.
- All circuitry shall be completely solid state and properly fused. Modification to vehicle electrical system shall not be required for installation and operation.
- Unless otherwise specified on the solicitation, 15 feet of control cable equipped with
 one plug (male) end and one receptacle (female) for use as an extension shall be
 provided. All necessary fittings shall be provided for connecting the sign panel to the
 remote-control console and for connecting the two cables together to form a longer
 extension cable.
- Lamp Voltage Regulation: The effective voltage at the lamp shall not exceed the manufacturer's rated voltage.

Radio Frequency Interference (RFI): Radio Frequency Interference (RFI) Suppression
Arrow panel sign shall be designed to provide RFI suppression suitable for use with MoDOT vehicles and MoDOT transceivers that will operate in VHF high band (150 to 174 MHz).
Arrow Panel Sign electronics shall be unaffected by RFI energy generated and radiated by the (up to 100 watt output) transmitter portion of vehicle transceivers. When delivered by the vendor, the sign and all ancillary hardware furnished for installing on MoDOT vehicles shall comply with the above requirements

Line Item 3: Wireless Remote Control Exterior Work Light

The Wireless Remote Control Exterior Work Light shall be a minimum 65 Watt, 500,000 Candlepower light capable of directionally illuminating 1500 feet. Work light shall have 370-degree rotation and a minimum 135-degree vertical elevation/depression range. Work Light shall have two-speed operation. Work light shall come with both a hardwired console and a wireless full function remote control. Wireless remote control shall operate at a distance of up to 100' from vehicle. Work light shall come with a minimum 20' wiring harness and shall operate of off a standard 12 V vehicle power system. Work light shall include mounting hardware and brackets.

Safety Plaques or Decals

Product safety plaques or decals shall be furnished and affixed at the operator's station and at any hazardous area. The safety plaques or decals shall describe the nature of the hazard, level of hazard seriousness, how to avoid the hazard, and the consequence of human interaction with the hazard. Permanent plaques are preferred to decals.

Manuals

Equipment shall be delivered with current original manual(s) containing illustrated parts list, operating, calibration, and service instructions in English. The manual(s) shall be as detailed as possible outlining all necessary service and operating instructions for the equipment delivered. Manual(s) shall include necessary warnings and safety precautions. In addition to the original manual, vendor may provide an additional electronic media version of the current original manual.

Warranty

All exterior vehicle lighting inclusive ancillary hardware and warning light modules; siren and lighting control modules; speakers; vehicular mounted arrow boards inclusive of ancillary hardware and lamps; and wireless remote work lights shall be warranted to be free of manufacturing defects and failures for sixty (60) months from date of delivery. Warranty shall cover cost of materials, repair and/or replacement of defective products.

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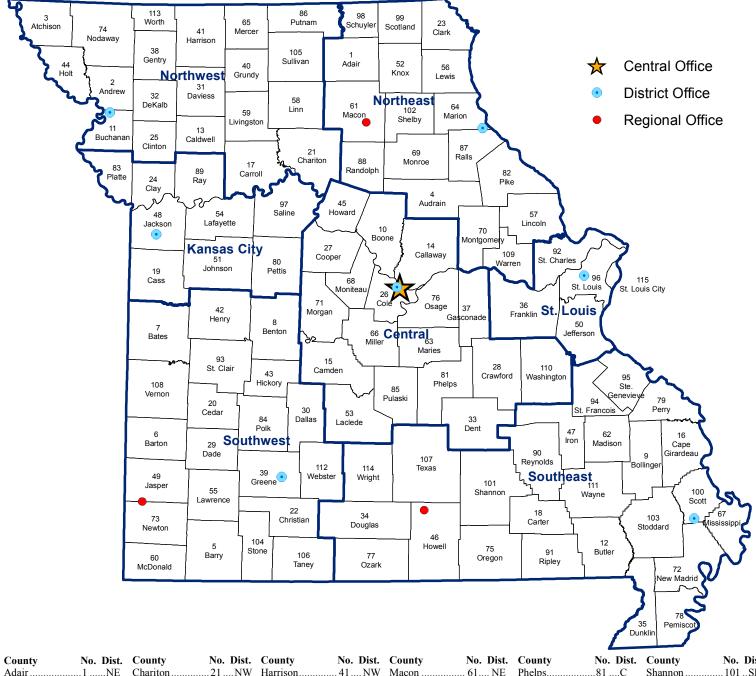
With your bid response, submit descriptive literature and specifications showing exact equipment to be furnished.

ne Item #	Description	Make/Model	Unit Price
1	Exterior Lighting /Audio Package and Control **See note below		
1a	Exterior Mount LED Bar		
1b	Exterior Mount LED Grill Modular - RED		
1c	Exterior Mount LED Grill Modular - AMBER		
1d	Exterior Mount LED Grill Modular - WHITE		
1e	Siren and Lighting Controls		
1f	Speaker		
1g	Replacement Plug and Play Warning Light Module - Red/White		
1h	Replacement Plug and Play Warning Light Module - Amber/White		
1i	Replacement Plug and Play Warning Light Module - Red/Amber		
2	Vehicular Mounted LED Flashing Arrow Panel		
3	Wireless Remote Control Exterior Work Light		
**NOTE	Exterior Lighting/Audio Package and Control Package based on combined price of the following: - one (1) each of items 1a, 1e and 1f - two (2) each of items 1b, 1c and 1d		

% discount off MSRP for all Data Book or Pricing Guide Options: - % Discount

Company ______ Signature ______

Missouri Department of Transportation District Map



County	110.	
Adair	1	NE
Andrew		
Atchison	3	NW
Audrian	4	NE
Barry	5	SW
Barton		
Bates	7	SW
Benton		
Bollinger	9	SE
Boone	10	C
Buchanan	11	NW
Butler	12	SE
Caldwell	13	NW
Callaway	14	C
Camden		
Cape Girardeau.	16	SE
Carroll	17	NW
Carter	18	SE
Cass		
Cedar	20	SW

••	- County	1101 22500	20000	204110	204111
Ξ	Chariton	21 NW	Harrison41NW	Macon 61 NE	Phelps81C
W	Christian	22 SW	Henry42SW	Madison 62 SE	Pike82NE
W	Clark	23NE	Hickory 43 SW	Maries 63 C	Platte83KC
Ξ	Clay	24KC	Holt44NW	Marion 64 NE	Polk84SW
V	Clinton	25NW	Howard 45 C	Mercer 65 NW	Pulaski85C
V	Cole	26 C	Howell 46 SE	Miller 66 C	Putnam86NW
V	Cooper	27C	Iron47SE	Mississippi 67 SE	Ralls87NE
V	Crawford	28 C	Jackson 48 KC	Moniteau 68 C	Randolph88NE
2	Dade	29 SW	Jasper 49 SW	Monroe 69 NE	Ray89KC
	Dallas	30 SW	Jefferson 50 SL	Montgomery 70 NE	Reynolds90SE
W	Daviess	31NW	Johnson 51 KC	Morgan 71 C	Ripley91SE
	Dekalb	32NW	Knox 52 NE	New Madrid 72 SE	St. Charles92SL
W	Dent	33C	Laclede 53 C	Newton 73 SW	St. Clair93SW
	Douglas	34 SE	Lafayette54KC	Nodaway 74 NW	St. Francois94SE
	Dunklin	35 SE	Lawrence 55 SW	Oregon 75 SE	Ste. Genevieve95SE
	Franklin	36 SL	Lewis 56 NE	Osage 76 C	St. Louis96SL
W	Gasconade	37C	Lincoln 57 NE	Ozark 77 SE	Saline97KC
	Gentry	38NW	Linn 58 NW	Pemiscot 78 SE	Schuyler98NE
2	Greene	39 SW	Livingston 59 NW	Perry 79 SE	Scotland99NE
V	Grundy	40 NW	McDonald60SW	Pettis 80 KC	Scott100SE

County	No.	Dist.
Harrison	41	NW
Henry	.42	SW
Hickory	. 43	SW
Holt		
Howard	45	C
Howell	46	SE
Iron	47	SE
Jackson	.48	KC
Jasper	.49	SW
Jefferson		
Johnson	. 51	KC
Knox	. 52	NE
Laclede	. 53	C
Lafayette	. 54	KC
Lawrence	. 55	SW
Lewis		
Lincoln	. 57	NE
Linn	.58	NW
Livingston	. 59	NW

Macon	61 NE	Pheli
Madison	62 SE	Pike
Maries	63 C	Platt
Marion	64 NE	Polk
Mercer	65 NW	Pula
Miller	66 C	Putn
Mississippi	67 SE	Ralls
Moniteau	68 C	Ranc
Monroe	69 NE	Ray.
Montgomery	70 NE	Reyr
Morgan	71 C	Riple
New Madrid	72 SE	St. C
Newton	73 SW	St. C
Nodaway	74 NW	St. F
Oregon	75 SE	Ste.
Osage	76 C	St. L
Ozark	77 SE	Salir
Pemiscot		Schu
D	70 CF	0 4

	County	No.	Dist
	Phelps	81	C
	Pike		
	Platte		
	Polk		
7	Pulaski		
	Putnam		
	Ralls		
	Randolph		
	Ray	.89	KC
	Reynolds		
	Ripley		
	St. Charles		
	St. Clair		
7	St. François		
	Ste. Genevieve		
	St. Louis		
	Saline		
	Schuyler		
	Scotland		

County	No.	Dist.
Shannon	.101	SE
Shelby	.102	NE
Stoddard	. 103	SE
Stone	. 104	SW
Sullivan	. 105	NW
Гапеу	.106	SW
Гехаs		
Vernon		
Warren		
Washington		
Wayne		
Webster		
Worth		
Wright		
St. Louis City		

