

**BID FORM**

MISSOURI DEPARTMENT OF TRANSPORTATION  
PROCUREMENT DEPARTMENT  
2309 BARRETT STATION ROAD  
BALLWIN, MO 63021

REQUEST NO.	<b>D607-114-RW</b>		
DATE	March 16, 2007		
PAGE NO.	1	NO. OF PAGES	17

SEALED BIDS, SUBJECT TO THE CONDITIONS ON THE REVERSE SIDE HEREOF WILL BE RECEIVED AT THIS OFFICE UNTIL **April 4, 2007 @ 1:00 p.m. CST** AND THEN PUBLICLY OPENED AND READ FOR FURNISHING THE FOLLOWING SUPPLIES OR SERVICES.

**QUOTATIONS TO BE BASED F.O.B. MISSOURI DEPARTMENT OF TRANSPORTATION**  
**DELIVERY LOCATION: OPERATIONS COMPLEX**  
**2309 BARRETT STATION RD.**  
**BALLWIN, MO. 63021**

**BUYER:** Terri Mount **BUYER TELEPHONE:** 314-301-1431

**SUPPLIES OR SERVICES**

District 6 of the Missouri Department of Transportation wishes to purchase one (1) each Low-speed Inertial Profiling System (IPS) to measure longitudinal pavement profiles. The system shall be able to calculate the California Profilograph Index (PI), Ride Number (RN), and the International Roughness Index (IRI). System includes IPS vehicle and transport vehicle. IPS System, vehicle and transport vehicle to meet or exceed attached specification for all products. Indicate "meets, or does not meet" per each paragraph in product specification and submit with bid.

**PRICING: IPS SYSTEM** \$ \_\_\_\_\_

**IPS VEHICLE** \$ \_\_\_\_\_

**TRANSPORT VEHICLE** \$ \_\_\_\_\_

**TOTAL COST** \$ \_\_\_\_\_

**Note to Respondent:** A vendor must be in compliance with the laws regarding conducting business in the State of Missouri. The compliance to conduct business in the state shall include but may not be limited to: Registration of business name, vendors MUST submit a bid/proposal that correctly and accurately identifies the company name that is registered to do business in the State of Missouri. The Missouri Department of Transportation reserves the right to reject any or all bids, and to accept or reject any items thereon and to waive technicalities. All bids must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled. No bids by telephone, telegram, or telefax will be accepted.

*In compliance with the above invitation for bids, and subject to all conditions thereof, the undersigned offer and agrees to furnish and deliver any or all the items on which prices were quoted within 20 days after receipt of notification.*

<b>Date:</b> _____	<b>Firm Name:</b> _____
<b>Telephone No.:</b> _____	<b>Address:</b> _____
<b>Fax No.:</b> _____	<b>Company Officer:</b> _____
<b>Federal ID #</b> _____	<b>Title</b> _____
	<b>Type/Print Name</b> _____

## STANDARD SOLICITATION PROVISIONS

- a. The Missouri Department of Transportation (MoDOT) reserves the right to reject any or all bids/quotes/proposals, and to accept or reject any items thereon, and to waive technicalities. In case of error in the extension of prices in the bid/quote/proposal, unit prices will govern.
- b. All bids/quotes/proposals must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
- c. By virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown, within the State of Missouri.
- d. Time of delivery is a part of the consideration and, if not otherwise stated in the solicitation documents, must be stated in definite terms by the Bidder/Offeror and must be adhered to. If time varies on different items, the Bidder/Offeror shall so state.
- e. If providing bids/quotes/proposals for commodities, the Bidder/Offeror will state brand or make on each item. If bidding or proposing other than the make, model or brand specified, the manufacturer's name, model number or catalog number must be given.
- f. **For bids/proposals of \$25,000 or more**, no bids/proposals by telephone, telegram or telefax will be accepted. If provided, these bids/proposals should be returned in the MoDOT solicitation return envelope.
- g. If a solicitation return envelope is provided by MoDOT, the bid/quote/proposal should be returned in the envelope provided with the Bid/RFQ/RFP Request Number plainly indicated thereon.
- h. The date specified for the returning of bids/quotes/proposals is a firm deadline and all bids/quotes/proposals must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting proposals. All proposals arriving at the designated office after the deadline specified will be rejected.

## GENERAL TERMS AND CONDITIONS

### General Performance

- a. This work is to be performed under the general supervision and direction of the Missouri Department of Transportation (MoDOT) and, if awarded any portion of the work, the Contractor agrees to furnish at his own expense all labor and equipment required to complete the work, it being expressly understood that this solicitation is for completed work based upon the price(s) specified and is not a solicitation for rental of equipment or employment of labor by MoDOT, and MoDOT is to have no direction or control over the employees used by the Contractor in performance of the work.

### Deliveries

- a. Unless otherwise specified on the solicitation documents or purchase order, suppliers shall give at least 24 hours advance notice of each delivery. Delivery will only be received between the hours of 8:00 a.m. to 3:00 p.m., Monday through Friday. Material arriving after 3:00 p.m. will not be unloaded until the following workday. No material will be received on Saturday, Sunday or state holidays.
- b. If the prices bid herein include the delivery cost of the material, the Contractor agrees to pay all transportation charges on the material as FOB - Destination. Freight costs must be included in the unit price bid and not listed as a separate line item.
- c. Any demurrage is to be paid by the Contractor direct to the railroad or carrier.

## Nondiscrimination

- a. The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. All solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a sub-contract, including procurements of materials or leases of the Contractor's obligations under this contract and the Regulations, will be relative to nondiscrimination on the grounds of race, color, or national origin.
  - 1) Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MoDOT 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/proposal, the Bidder/Offeror 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 proposal and/or submitted pricing, and (3) the MHTC's acceptance of the proposal and/or bid by purchase order or post-award contract.
- 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 purchase order and/or notice to proceed.
- d. The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the MHTC, by a modified purchase order prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

## Subcontracting

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MoDOT. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MoDOT and accompanied by documentation showing that the organization which will perform the work is particularly experienced and equipped for such work.
- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.

- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

#### Invoicing and Payment

- a. MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Federal Excise Tax Exemption Certificate will be furnished to the successful Bidder/Offeror upon request.
- b. 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.
- c. 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.
- d. 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.
- e. The MHTC reserves the right to purchase goods and services using the state-purchasing card.

#### 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.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri 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 MoDOT a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
  - 1) 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 MoDOT a copy of their current Transient Employer Certificate from the Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
- c. 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.

#### Preferences

- a. In the evaluation of bids/quotes/proposals, preferences shall be applied in accordance with Chapter 34 RSMo. Contractors should apply the same preferences in selecting subcontractors.
- b. By virtue of statutory authority, RSMo. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.

- 1) If attached, the document entitled "**PREFERENCE IN PURCHASING PRODUCTS**" should be completed and returned with the solicitation documents.
- 2) If attached, the document entitled "**MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT**" should be completed and returned with the solicitation documents. **Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more.**
- c. In the event of a tie of low bids, the MHTC reserves the right to establish the method to be used in determining the award

#### Remedies and Rights

- a. No provision in the contract shall be construed, expressly or implied, as a waiver by the MHTC of any existing or future right and/or remedy available by law in the event of any claim by the MHTC of the Contractor's default or breach of contract.
- b. The Contractor agrees and understands that the contract shall constitute an assignment by the Contractor to the MHTC of all rights, title and interest in and to all causes of action that the Contractor may have under the antitrust laws of the United States or State of Missouri for which causes of action have accrued or will accrue as the result of or in relation to the particular equipment, supplies, and/or services purchased or produced by the Contractor in the fulfillment of the contract with the MHTC.
- c. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request MoDOT to enter into such litigation to protect the interests of the MHTC, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

#### Cancellation of Contract

- a. The MHTC may cancel the contract at any time for a material breach of contractual obligations or for convenience by providing the 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.
- b. If the MHTC cancels the contract for breach, the MHTC reserves the right to obtain the equipment, supplies, and/or services to be provided pursuant to the contract from other sources and upon such terms and in such manner as the MHTC deems appropriate and charge the Contractor for any additional costs incurred thereby.

#### Bankruptcy or Insolvency

- a. Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntary or involuntary, or upon the appointment of a receiver, trustee, or assigned the benefit or creditors, the Contractor must notify MoDOT immediately. Upon learning of any such actions, the MHTC reserves the right, at its sole discretion, to either cancel the contract or affirm the contract and hold the Contractor responsible for damages.

#### Inventions, Patents, and Copyrights

- a. The Contractor shall defend, protect, and hold harmless the MHTC, its officers, agents, and employees against all suits of law or in equity resulting from patent and copyright infringement concerning the Contractor's performance or products produced under the terms of the contract.

#### Inspection and Acceptance

- a. No equipment, supplies, and/or services received by MoDOT pursuant to a contract shall be deemed accepted until MoDOT has had reasonable opportunity to inspect said equipment, supplies, and/or services.

- b. All equipment, supplies, and/or services which do not comply with the specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the Contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
- c. The MHTC reserves the right to return any such rejected shipment at the Contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received.
- d. The MHTC's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the MHTC may have.

**Warranty**

- a. 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 MoDOT, (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.
- b. Such warranty shall survive delivery and shall not be deemed waived either by reason of the MHTC's acceptance of or payment for said equipment, supplies, and/or services.

**Status of Independent Contractor**

- a. The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not rep-

**SPECIAL TERMS AND CONDITIONS**

**Insurance**

- a. The Contractor shall purchase and maintain such insurance as will protect him from claims under workmen's compensation acts and other employee benefit acts, from claims for damages because of bodily injury, including death, and from claims for damages to property which may arise out of or result from the Contractor's operations under this Contract, whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by any of them.
- b. This insurance shall be written for not less than any limits of liability specified as part of this contract, or required by law, whichever is the greater, and shall include contractual liability insurance as applicable to the Contractor's obligations under this contract. Unless otherwise specified, insurance limits shall be as follows:
  - 1) Workmen's Compensation: Workers Compensation Insurance, including "Occupational Disease Act" requirements, must be maintained **if** required by law.
  - 2) Public Liability (includes property damage and personal injury):
    - i. Not less than \$400,000 for any one person in a single accident or occurrence.
    - ii. Not less than \$2,500,000 for all claims arising out of a single occurrence.
  - 3) Special Hazard Insurance: As required.
  - 4) Builder's Risk: Not less than the full Contract amount.

resent 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.

**Indemnification**

- a. The Contractor shall be responsible for injury or damages as a result of any services and/or goods rendered under the terms and conditions of this Agreement.
- b. In addition to the liability imposed upon the Contractor on the account of personal injury, bodily injury, including death, or property damage, suffered as a result of the Contractor's performance under this Agreement, the Contractor assumes the obligation to save harmless the Commission, including its agents, employees and assigns, and to indemnify the Commission, including its agents, employees and assigns, from every expense, liability or payment arising out of such wrongful or negligent act or omission, including legal fees.
- c. The Contractor also agrees to hold harmless the Commission, including its agents, employees and assigns, from any wrongful or negligent act or omission committed by any subcontractor or other person employed by or under the supervision of the Contractor for any purpose under this Agreement, and to indemnify the Commission, including its agents, employees and assigns, from every expense, liability or payment arising out of such wrongful or negligent act or omission.

**Required Specifications**

- a. All materials, equipment, and/or services bid upon must comply with the attached MoDOT Specification #D607-101-RW and any other provisions outlined in the solicitation documents.

**Information and Reports**

- a. The Contractor shall provide all information and reports required by the Regulations, or Directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Missouri Department of Transportation or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or Directives. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information the Contractor shall so certify to the Missouri Department of Transportation, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information..

**Permits, Licenses and Safety Issues**

- a. The contract price shall include any necessary permits and licenses required by law incidental to the work. Local ordinances requiring building permits are not applicable to state agencies.
- b. The Contractor will comply with local laws involving safety in the prosecution of the work.

**Award**

Award of this bid/quote/proposal will be made on an "All or Nothing" basis using the "lowest and best" principle of award.

**Notice to Proceed**

- a. Within **30 days** after the execution of the contract, a "**Notice to Proceed**" will be issued by the Department. A purchase order will be at-

## D607-114-RW PROFIL0GRAPH

tached to the "Notice to Proceed," which will specify the date or dates that the Contractor can start delivery, roadway or stockpile delivery and will also include the completion dates. These dates will be in accordance with the dates shown in the proposal.

- b. The following days shall be construed as **official holidays** under the terms of the contract:

January 1	New Year's Day
Third Monday in January	Martin Luther King, Jr.'s Birthday
February 12	Lincoln's Birthday
Third Monday in February	Washington's Birthday
May 8	Truman's Birthday
Last Monday in May	Memorial Day
July 4	Independence Day
First Monday in September	Labor Day
Second Monday in October	Columbus Day
November 11	Veteran's Day
Fourth Thursday in November	Thanksgiving Day
December 25	Christmas Day

- c. When any of the above **holidays falls** on a **Sunday**, the holiday will be observed on the following **Monday**; when any of the above **holidays falls** on a **Saturday**, the **holiday** will be observed on the immediately preceding **Friday**.

### Temporary Suspension of Work

- a. The **District Engineer** shall have authority to suspend work wholly or in part for such period or periods as may be deemed necessary when weather or other conditions are such that in the opinion of the engineer, the work may be done at a later time with advantage to the Department or for failure on the part of the Contractor to comply with any of the provisions of the Contract.
- b. If the Department suspends the work for its own advantages and not because of the Contractor's failure to comply with the Contract, the Contractor will be allowed an equal number of calendar days after the completion date for the completion of the work. The Department may at its discretion give the Contractor an extension of time for completing the work where the Contractor incurs delays for causes beyond his control.
- c. Normal rainfall is not considered a cause qualifying for an extension of time. Claim for extension of time for all causes must be submitted by the Contractor in writing within **30 Days** after the claimed cause for the delay has ceased to exist.

### Cancellation of Contract

- a. If the Contractor/supplier fails to carry out the performance of the work with sufficient workmen and equipment to insure the completion of the delivery within the time specified or becomes insolvent or is adjudicated a bankrupt or commits any act of bankruptcy or insolvency or allows any final judgment to stand against him for a period of ten (10) days, the Missouri Department of Transportation may give notice in writing by registered mail to the Contractor/supplier and the surety of such delay, neglect or default.
- b. If, within ten (10) days after such notice the Contractor/supplier does not proceed to remedy to the satisfaction of the Department's representatives the faults specified in said notice, or the surety does not proceed to take over the deliveries, the Department shall have full power and authority, without impairing the obligation of the Contractor/supplier under the contract or the surety under the bond, to take over the completion of the work and arrange for the shipment of any materials necessary to complete the work and the Contractor/supplier and the surety will be responsible for any additional costs incurred by the Department in obtaining the completion of the deliveries.

### 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 one-hundred dollars (\$100.00) per day, per item**, 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.

### Environmental Issues

- a. Attention of the bidder is invited to the **Land Reclamation Act, Chapter 444, Laws of 1971, (House Bill 519)** and the necessity for compliance if applicable.
- b. The Contractor shall take necessary precautions and shall schedule and conduct his operations so as to avoid or minimize siltation of streams while removing gravel there from.
- c. The material to be supplied under the contract will comply with the quality and gradation requirements of the **Missouri Standard Specifications for Highway Construction, Edition of 2004**, and any revisions thereto, unless modified by these specifications.

# PREFERENCE IN PURCHASING PRODUCTS

**DATE:** \_\_\_\_\_

The bidder's attention is directed to Section 34.076 RSMo. 1986 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids received will be evaluated on the basis of this legislation.

**All bidders must furnish the information requested below.**

FOR CORPORATIONS:

State in which incorporated \_\_\_\_\_

FOR OTHERS:

State of domicile \_\_\_\_\_

FOR ALL BIDDERS:

List address of Missouri offices or places of business

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(MUST BE COMPLETED AND SIGNED)

**FIRM NAME:**

\_\_\_\_\_

**ADDRESS:**

\_\_\_\_\_

**CITY:STATE:ZIP:**

\_\_\_\_\_

**BY:**

\_\_\_\_\_

**NOTE: For bid to be considered, the attachment entitled "Preference in Purchasing Products" must be on file in this office and must be dated in the current calendar year.**

**IF NOT SUBMITTING A BID, PLEASE COMPLETE AND RETURN THE FOLLOWING “NO BID FORM” TO ASSIST THE PROCUREMENT STAFF IN OUR PROCESS EVALUATION.**

THANK YOU

**NO BID**

DATE: \_\_\_\_\_

TO: Missouri Department of Transportation- District 6  
General Services (Procurement) Divison  
2309 Barrett Station Rd.  
Ballwin, MO. 63021  
(314) 301-1437- Fax #

FROM: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Our company is submitting “NO BID” on RFB # \_\_D607-114-RW\_\_ for the reason(s) indicated below:

- Product or service is not available or cannot meet the required specifications.
- Other obligations-cannot make required deadline.
- The delivery point or work location is outside of our territory or coverage/service area.
- Other-Please explain below:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Company Contact Person:

\_\_\_\_\_ Phone# \_\_\_\_\_

- Please keep our name on the bidder’s list for future opportunities for this product/service.
- Please remove our name from your bidder’s list for this product or service.

**FAILURE TO RETURN A QUOTE OR THIS FORM MAY RESULT IN REMOVAL FROM OUR VENDOR DATABASE FOR FUTURE OPPORTUNITIES.**

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**MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT**

The bidder’s attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34/359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding **and** prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract **and** to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you **must** complete this form as directed below.

**Failure to complete and return this document with this bid will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis. Please read the certification appearing below on this form.**

- [ ] If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the “United States” as defined in Section 34.350, RsMO, check the box at left.
- [ ] If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the “United States” as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:  
\_\_\_\_\_
- [ ] If any or all of the goods or products specified in the attached bid which the bidder proposes to supply to the State are **not** manufactured or produced in the “United States” as defined in Section 34.350, RsMO, then: (a) check the box at left; (b) list below, by item (or item number), the country other than the United States where each good or product is manufactured or produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the corresponding items (or item numbers) in the spaces provided.

Item (or item number)	Location Where Item Manufactured or Produced

(attach an additional sheet if necessary)

- [ ] The following specified goods or products cannot be manufactured or produced in the United States in sufficient quantities or in time to meet the contract specifications. Items (or item numbers): \_\_\_\_\_
- [ ] The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers): \_\_\_\_\_

**CERTIFICATION**

**By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document is true, correct and complete, and may be**

relied upon by the State in determining the bidders qualifications under and in compliance with the Missouri Domestic Products Procurement Act.

### **BID SUBMITTAL INSTRUCTIONS**

#### **BID SUBMITTAL:**

Your written bid must be mailed in ***a sealed*** envelope or box, or else delivered by hand or courier service (UPS, Federal Express, DHL, etc.) to be *received on or before the date and time specified on the front page of this bid document*, at the office of:

Ms. Terri Mount  
Missouri Department of Transportation  
General Services - Procurement  
2309 Barrett Station Rd.  
Ballwin, MO. 63021

All documents must be sealed and the outmost wrapping should be clearly marked "**PROFILOGRAPH**".

**The specified for the returning of bids is a firm deadline and all bids must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting bids. All bids arriving at the designated office after the deadline specified will be rejected.**

#### **PRICES:**

Prices MUST remain firm for the entire contract period stated herein.

#### **COMPLIANCE WITH BID REQUIREMENTS:**

Failure to comply with the requirements published in this bid may result in the bid being subject to rejection. Product that does not meet specifications will cause all of the shipments to be returned at the bidders expense.

#### **NON-EXCLUSIVITY:**

The Missouri Department of Transportation reserves the right to obtain like or similar products of this or other manufacturers when use of such products is deemed in the best interest of MoDOT.

#### **VENDOR NAME REGISTRATION:**

On all bid documents, the bidder must use the firm name under which he/she is registered to do business in the state of Missouri. The bidder must ensure that his/her firm name is registered with the office of the Secretary of State.

#### **ADDITIONAL DOCUMENT SUBMITTAL REQUIREMENTS:**

For the bid to be considered the two (2) attachments "Preference in Purchasing Products" and "Missouri Domestic Product Procurement Act" must be submitted to this office prior to any contract being awarded for this bid.

#### **PRODUCT INFORMATION:**

Submit all product information, warranties, make, model , manufacturer of product with bid.

**The Bidder understands that this agreement involves state funds and the bidder awarded the contract will be required to comply with the Executive Order 94-03 of the Governor of the State of Missouri dated January 14, 1994. This order stipulates that there shall be no discriminatory employment practices by the contractor or his subcontractors, if any, based on race, color, religion, creed, national origin, sex or age. The contractor or his subcontractors , if any, shall give written notice of their commitments under this clause to any labor union with which they have bargaining or other agreements.**

**SPECIFICATIONS**  
**D607-114-RW Profiler**

The objective of this specification is to define the requirements of the Missouri Department of Transportation (MoDOT) for the purchase of a low-speed inertial profiling system (IPS) to measure longitudinal pavement profiles. The system shall be able to calculate the California Profilograph Index (PI), Ride Number (RN), and the International Roughness Index (IRI).

**Reference**

AASHTO PP50-02 – *Standard Equipment Specifications for and Inertial Profiler*

**General Requirements**

The IPS system shall function independent of vehicle suspension dynamics and vehicle speed within the operating range of 5 – 25 mph.

The IPS computer shall have the capability to process the collected data, to display and print the derived profile(s), and report the profilograph index (PI), roughness number (RN), and International Roughness Index (IRI). The IPS system shall report all parameters in English units by default, but have the option of reporting in SI units.

The IPS shall be equipped with various sensors, interface hardware, computer hardware and software that, working together, perform the measurement and recording of the longitudinal profile. The profile of the traveled trace(s) is the combination of a processed elevation and the distance traveled. The roughness of each profile trace shall be produced using any arbitrary interval selected for the calculation. A plot of roughness using any base length for averaging shall also be printable.

The IPS system shall be capable of outputting the profile as a temporary display, a printed record or a data file. The data shall be stored in memory during the test. After the test, the data shall be transferable onto a high-density removable media (128 MB or greater) and downloaded to a PC by USB port.

The data shall be saved and recorded so that road profiles obtained with this system shall be independent of the measuring speed (within operating range) and the type of vehicle used. After the post processing software is utilized, the measured profiles must show variations in elevation and slope as they relate to roughness, but must not include the gradual elevation changes or the fine texture of the pavement itself. In addition, profile plots must be capable of being displayed on a computer monitor and/or printed as hard copy. Any section of the profile must be viewable, using user selectable vertical and horizontal scale factors.

**Vehicle Requirements**

The following items outline the requirements for the IPS vehicle:

- Four-wheeled, rugged, all-terrain vehicle
- Canopy or hard top roof with a safety roll over bar
- Front windshield
- Gasoline powered engine with a minimum of 10 horsepower
- Seating for an operator and passenger
- High-visibility 360 degree gold strobe with telescoping pole
- Headlights and taillights

**Distance/Data Acquisition System (DAS)**

All real-time data collection shall be provided by the hardware and software components of the Distance/Data Acquisition Subsystem (DAS) interfaced to the Processing Subsystem. The DAS shall provide all interfaces to collect data, derive distance, speed and location, and to develop profile data from the transducers mounted on the vehicle. It shall activate the tests, process the trigger signals, and process operator inputs from the keyboard and shall pass information on the feature and its location to the processing unit for display and logging.

Functional Software Modules - The system computer shall contain all the necessary software modules to perform all tasks necessary. These functions include, but not limited to the following:

Auto Execution – configures system equipment, loads the main control program of the system computer, and start up all required operations.

Program Initialization – performs startup initialization, activates the DAS, initializes program control parameters and system self-check, and activates a startup that requires no operator input.

Operation Selection - displays a main menu of system operation functions that can be performed when selected by the operator. The main menu selection instructions shall be displayed to the operator along with main menu choices. The selection shall be provided via the computer keyboard or other input device (ie., Transreflective Touch-screen).

System Operation Functions – The system computer shall provide a set of system operation functions selected by the operator main menu. The system operation functions shall provide everything necessary for the operator to perform data collections in a user-friendly manner. These functions include data collection and management, data entry, data manipulation (operated selected filters), and data display.

ID's and Parameters – The user shall be able to change and save calibration data, ID's for the vehicle, driver and operator, date and time, test location data, and information about the system computer files on disk. The system shall contain provisions to accept up to 16 variables for the operator prior to the beginning of testing of a roadway section. The software shall ensure that the operator enters all required variables. Required numeric variables shall default to ASCII zeros. Alpha variables shall default to blanks. The variable data shall be saved in the files along with the test data for further post processing.

### **Computer Hardware**

The following items outline the requirements for the IPS computer hardware:

- IBM compatible system
- 20 GB harddrive, minimum
- 128 MB of RAM, minimum
- Rugged laptop computer with a transreflective-touch screen or functionally equivalent screen
- High speed thermal strip plotter or equivalent for plotting pavement profile at job site on a continuous roll
- All electronic components housed in water and dust tight case
- Components case mounted with shock absorbers in the rear compartment of the vehicle or otherwise embedded in vehicle so as to allow use of the rear compartment for storage or other suitable use
- Field replacement of any component by the operator shall not require re-calibration of the system except as recommended by the manufacturer's for performing the usual calibration procedures under normal operating conditions
- Capable of connecting a second sensor that can be field installed to profile both wheel tracks simultaneously
- Second Sensor Can Be Field Installed

### **Computer Software**

The following items outline the requirements for the IPS computer software:

- Minimum Windows XP Professional Operating System
- Real Time Profile Display
- Calculates International Roughness Index (IRI)
- Calculates Ride Number (RN)
- Calculates Profile Index (PI)
- Plots True Profile
- Plots California Profilograph Profile
- Simulates Rolling Straightedge Profile And Marks "Out-Of-Spec" Features
- Equipped With Variable High And Low Pass Filter Options
- Contains Automatic Bump Detection Feature
- Method of marking or recording various points of interest or events in the measuring process, such as bridges, intersections, etc.
- Capable Of Displaying "True" Profile, Rolling Straightedge, And California-Type Profilograph Profile On Screen
- Identifies Location Of "Out-Of-Specification" Bumps
- Equipped With The Following Export File Options:
- Profile Elevation Points, ERD Format
- Generated Report Tables, All Fields Selectable
- Output To ASCII File
- Selectable Field Delimiter

### **Data Collection System:**

The longitudinal pavement profile shall be measured using an inertial profiler where the following three primary transducers are required:

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Scanning line laser capable of producing a minimum of 100-point trace.

Height sensor which measures the distance between a vehicle reference point and the pavement while the vehicle is traveling;  
Accelerometer which measures the vertical acceleration of the vehicle as it bounces in response to the pavement profile;  
Distance sensor that provides a location reference for the vehicle as it travels.

The run-time software and post processing software shall be used to combine these three measurements so that the effects of the vertical vehicle movement are eliminated, leaving the pavement profile of the traveled pavement. Each height sensor shall have an accelerometer to determine its reference plane.

Distance Transducer - A vehicle-mounted distance transducer shall be provided to produce a pulse for units of distance traveled by the vehicle on the roadway. (Optionally an electronic interface shall be provided for vehicles with electronic odometer pulse signals.) The DAS shall accept these pulses and in combination with the DAS software shall determine distance traveled and vehicle speed. The system shall process the signals and record the data from the unit. The calibration procedure shall establish and record the data to allow the recorded distance pulses to be interpreted into the desired measurement units selected by the operator. The measured distance shall be accurate to 0.1% per mile for test vehicle speeds up to the maximum specified for the equipment utilized.

Height Sensor - The reference height of the vehicle above the pavement shall be obtained through a non-contact height sensor module. Provisions shall be made to allow an accelerometer to be mounted to the sensor case. The sensor module shall communicate with and receive power from the DAS.

The height sensor shall have a resolution of at least 0.001 inches. The height sensor shall operate at a sufficient sampling rate to provide accurate coverage at the maximum operating speed for equipment utilized. Moisture (except freestanding), temperature, coarse pavements or color changes in the pavement shall not affect the functionality of the sensor. The samples shall be stored referenced to time and/or distance so that it may be aligned with the accelerometer and position data to provide a longitudinal profile.

Vertical Acceleration Sensor - The displacement of the vehicle in the vertical direction that is used to calculate elevation shall be sensed using an accelerometer. The DAS shall provide hardware and software to amplify and filter/integrate the signal as required to obtain the data required for storage and for further post processing into the required values. A minimum of one accelerometer shall be mounted in vertical alignment with each height sensor. It shall be rigidly mounted to height sensor with its sensitive axis perpendicular to the pavement surface. The bandwidth and precision of the accelerometer must be commensurate with that required of the final profile given the operating speed range of the test vehicle. The vertical accelerometer shall have a resolution of at least 0.0001 G.

In addition, an automated triggering system shall be provided that detects a reference mark to start, stop, and event mark the data collection process. The triggering system shall be capable of repeatability within 6 inches over the range of operating speeds.

The following items outline other requirements for the IPS data collection system:

- Profile wavelength range: 6 inches to 200 feet, when operated between 5 and 20 mph.
- Capable of measuring profile on pavement with an IRI range of 5 to 300 inches per mile.
- Obtain and store profile measurement data at selected longitudinal distance intervals of the distance transducer.
- Determine profile value (sampling interval) every 2 inches or less at the maximum collection speed of the vehicle.
- Distances measured in feet, meters, kilometer, and miles in an incrementing or decrementing mode from an arbitrary starting point and relate the distance to any test point. The system shall also be able to report in stations for ease on construction projects.
- Operation temperature range shall be 35 to 100 degrees F, while storage (non-operating) temperature range shall be 0 – 140 degrees F.
- Operating humidity range shall be 8% to 90% (non-condensing), non-operating humidity range shall be 5% to 100% (non-condensing).
- Power consumption of all installed equipment shall not exceed the capacity of the equipment providing operating power. Complete discharge of this system shall not impact the vehicle's regular electrical system.

### Calibration

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The operational system software shall allow the operator to perform a distance sensor calibration and use the calculated factor to perform the operational distance measurements. The calibration software shall also allow the operator to save the factor calculated or change the calibration factor to other than the calculated value. The operator shall only need to enter the distance traveled in feet, meters, kilometers, or miles and not make any calculations to determine the calibration factor.

The calibration software shall also allow the operator to perform a profile system calibration. This includes the verification of the height sensor using at least 4 gauge blocks provided by the supplier. The autocalibrating function of the accelerometer shall be supported as required. The values determined in calibration shall be stored and recorded as above for use in data processing.

The equipment shall have built-in provisions to facilitate the calibration of each transducer signal. Any external devices required for calibration shall be included with the equipment. In addition, it shall have an alarm system that alerts the operator if speed, height, or acceleration signals are out of range. These systems, in conjunction with a calibration protocol specified by the supplier, shall assure the accuracy of the data.

### **Roadway Testing**

The operational system software shall provide all necessary functions for the operator to select and perform roadway testing for a specific location. The beginning and end points as well as any sectioning shall be automatically detected and stored along with the primary data. The testing software shall perform testing as required by the operator. The software shall also detect abnormal conditions in the test cycle and report the condition to the operator. The testing software shall save the test result data and measured cartographic features generated by the DAS in memory during testing and output them to the monitor, or printer for review. The results may also be transferred to removable media if selected by the operator.

The test software shall activate the testing using the timing and control parameters stored by the test control setup software. The software shall monitor the signals to verify that the testing is being performed properly and indicate detectable errors.

The test software shall receive, display, and store raw data received from the vehicle mounted transducers. The test software shall receive, display, and store with each test the corresponding distance and test speed. The current distance measurement shall be displayed constantly on the monitor when in test mode.

The test software shall output collected data as well as an operator-selected profile index to the monitor in real-time. It shall also accept operator data in real-time as the vehicle moves down the highway.

The test software shall receive, display, and store pertinent feature data (entered by keyboard, etc.) relating to the test site observed during testing of a roadway, e.g., posted speed limit changes, surface changes, bridges, etc. The corresponding reference point shall be stored at the time of the feature data entry.

The system shall be capable of calculating, displaying, and storing the average roughness value obtained from the stored data. The system shall be capable of collecting at least 10 miles of profile data. Additionally, the system shall be capable of putting the accumulated roughness test results through mathematical equations and printing results when enabled by the operator. These processes shall not necessarily be done in real time but in post processing. The vehicle system shall be capable of performing all required post processing operations.

The system operational software shall provide a system shutdown that shall be operator activated via the keyboard. Prior to shutting down, the system shall save all active parameters to a disk file for retrieval the next time the system is started up. Preferably, the system shall also store a back-up file of the previous shutdown that can be retrieved in an emergency. These files shall be updated at each shutdown.

### **Mounting and Installation of Equipment**

The supplier shall provide all parts and labor necessary for the installation of the equipment. Installation of the new equipment shall include a mounting arrangement that can be easily used by the driver or passenger operator as designated.

Careful consideration shall be given to the mounting and location of equipment. Mounting of equipment shall be made in a manner to withstand normal vibrations that occur while traveling at the normal operating speeds for the equipment utilized. The location of equipment shall be accessible to the operator and not impede safety.

Electronic components shall be restrained where possible with tie downs or other applicable methods.

**System Accuracy**

Profile Precision - The precision meet the requirements of AASHTO PP 51-02.

Profile Bias - The bias shall meet the requirements of AASHTO PP 51-02.

**Manuals**

Upon delivery of the system, the following shall be required:

- 1) Three (3) copies of the operating procedures for all operational software.
- 2) Three (3) copies of the schematics, block diagrams and wiring diagrams covering electronic circuitry of the installed system.
- 3) Three (3) complete parts lists detailing the components of all equipment used.

**Training**

Vendor shall provide two (2) days of training at MoDOT facilities. Location TBA.

**Support**

Vendor shall provide a minimum of two (2) years of technical support on vehicle, computer hardware, computer software, and all system support from date of acceptance by MoDOT.

**Warranties**

The equipment supplier shall warrant all components of the system for a period of not less than two (2) years from date of acceptance to be free from defects in material and workmanship.

**Transport Trailer**

**Chassis And Box**

- Fully Enclosed White Trailer
- Overall Length: 17' Maximum
- Overall Width: 8'5" Maximum
- Overall Height: 8'6" Maximum
- Interior Length: 13'6" Minimum
- Interior Height: 6'6" Minimum
- Side Door Located On Passenger Side Near Front Of Trailer:
- Tandem Axles, 2,500 lbs. Minimum Capacity Each. Electric Brakes On Each.
- Single Drop-Down Rear Door:
- Rear Door Width: 6' Minimum:
- Rear Door Height: 6' Minimum:
- Hitch Weight: 295 LBS. Minimum:
- Hitch Height: 16"
- Hitch Ball Size: 2 5/16"
- Platform Height: 17" Maximum
  
- Gross Vehicle Weight Requirements: 3,500 Lbs,
- Payload Capacity: 1,710 Lbs. Minimum
- Frames Constructed From 3" Steel Tubes
- Floor Constructed With Supports At A Maximum Of 24" On Center Covered By A Minimum of 3/4 " Plywood
- Side Walls Constructed With Supports At A Maximum Of 16" On Center Covered By A Minimum of 3/8" Plywood
- EZ Lube Hubs With Grease Caps
- 5,000 Lb. Tongue Jack With Drop Leg And Side Wind
- Tires And Wheels: 15" Radial Trailer Type. Rated For Capacity Of Axle Assembly
- Manufacturer's/Supplier's Logo Will Not Be Applied To The Trailer
- Trailer And Connector Shall Be Standard 6-Pin Round Design
- Lashing Rings And Ratchet Cargo Straps Will Be Provided To Secure Lightweight Profiler

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- Conspicuity Sheeting That Complies With NHTSA And DOT-C2 Shall Be Applied To Sides And Rear Of Trailer. Reflectors Will Not Be Accepted

### **Lighting:**

- 12-Volt Break-A-Way Switch With Battery And Charger
- A Minimum Of Four Interior Lights (Two On Each Side Wall Near The Ceiling) With Common Switch Located Near Passenger Side Door
- Exterior Lighting
- One Amber Light On Each Upper Front Corner, Sealed Clearance Light With Built-In Class A Reflector With Necessary Mounting Grommet
- One Amber Light On Each Lower Outside Front Corner, Sealed Clearance Light With Built-In Class A Reflector With Necessary Mounting Grommet
- One Amber Light On Each Lower Outside Front Corner, Sealed Clearance Light With Built-In Class A Reflector With Necessary Mounting Grommet
- Three Red Lights On Rear In A Horizontal Line At Top. Sealed Clearance Light With Built-In Class A Reflector With Necessary Mounting Grommet
- One Red Light On Each Lower Outside Corner. Sealed Clearance Light With Built-In Class A Reflector With Necessary Mounting Grommet
- Turn Signal, Stop, Taillights Shall Be Flush Mount, Completely Sealed With Bulb Shock Mounted With Necessary Mounting Grommet
- License Light Shall Be Sealed With Necessary Mounting Plug.