

ADVERTISEMENT FOR BIDS
NORTHWEST REGIONAL AIRPORT AUTHORITY
TRAVERSE CITY, MICHIGAN
CONTINUOUS FRICTION MEASURING EQUIPMENT (CFME) WITH VEHICLE

General Notice

The Northwest Regional Airport Authority (NRAA \ Owner) is requesting Bids for the following Acquisition:

CONTINUOUS FRICTION MEASURING EQUIPMENT (CFME) WITH VEHICLE

Bids for the Acquisition will be received at the **Cherry Capital Airport 2nd Floor Administration Offices** located at **727 Fly Don't Drive, Traverse City, MI 49686**, until **Friday, July 12, 2024 at 11:00AM** local time. At that time the Bids received will be “publicly” opened and read.

The Acquisition includes the following Work:

A one-ton passenger truck specifically modified to operate with FAA approved continuous friction measuring equipment.

Bids shall be submitted as:

2024 TVC CFME

Owner anticipates delivery for winter use no later than October 31, 2024.

Information and Bidding Documents for the Acquisition can be found at the following designated website:

<https://tvcairport.com/tvc-public-notice/>

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the NRAA as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Acquisition. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

Pre-bid Conference

A pre-bid conference for the Acquisition will NOT be held.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

Owner: **Northwest Regional Airport Authority**

By: **Bob Nelesen, PE**

Title: **Airport Engineer**

Date: **June 11, 2024**

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Agreement* – NRAA issued purchase order or contract
 - B. *Engineer or Airport Engineer* – Bob Nelesen PE, bob.nelesen@tvairport.com
 - C. *Equipment* – The vehicle and CFME specified
 - D. *Vendor* – The Successful Bidder with whom the NRAA provides a contract or purchase order.

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement. Owner recommends that Bidder register as a plan holder with the Airport Engineer, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.
- 2.04 Not used.
- 2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.
- 2.06 *Electronic Documents*
- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
 - 1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version **Reader DC** or later. It is the intent of the Owner that such Electronic Documents are to be exactly representative of the paper

copies of the documents. However, because the Owner cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 Bidder is to submit the following information with its Bid to demonstrate Bidder's qualifications to perform the Work:
 - A. Written evidence establishing its qualifications such as the current FAA approval for the CFME equipment.
 - B. A written statement that the Bidder has verified all aspects of the CFME have been verified to be compatible with the carrier vehicle.
 - C. Subcontractor and Supplier qualification information.
 - D. References from at least two airports of similar size or larger for the same or similar Equipment. (700,000 passengers).
 - E. A statement of any and all projects performed for the Owner by Bidder or Bidder's Subcontractor or Supplier for the Owner.
- 3.02 A Bidder's failure to submit required qualification information with its bid may disqualify Bidder from receiving an award of the Contract.
- 3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE

- 4.01 A pre-bid conference will not be conducted for this Project. All questions, clarifications, and inquiries shall be made to the Airport Engineer at least 7 calendar days prior to the bid due date.

ARTICLE 5—NOT USED

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

- 6.01 *Express Representations and Certifications in Bid Form, Agreement*
 - A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of the Contract Documents, preparation of the Bid, and certifications

regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

- B. If Bidder is awarded the Contract, Bidder will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing.
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **five percent (5%)** of Bidder's maximum Bid price and in the form of a Bid bond issued by a surety must be authorized to do business in the State of Michigan by the Department of Licensing and Regulatory Affairs ☐ Insurance Bureau, must be listed on the current U.S. Department of the Treasury Circular 570. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the

Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Equipment is to be: (a) substantially complete for winter use and delivered to the Cherry Capital Airport 3375 Wright Drive, Traverse City, MI 49686 (b) ready for final payment.
- 9.02 Bidder must set forth in the Bid the time by which Bidder must achieve Substantial Completion, subject to Article 4 of the Bid Form. The Owner will take Bidder's time commitment regarding Substantial Completion into consideration during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion within the time such Bidder has designated in the Bid. The Successful Bidder's time commitments will be entered into the Agreement or incorporated in the Agreement by reference to the specific terms of the Bid.
- 9.03 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion, or readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 7 calendar days before the bid due date. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective

Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

- 11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work within five days after Bid opening:
- A. **Vehicle dealer**
 - B. **CFME manufacturer**
 - C. **Electronics installer**
- 11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar Equipment and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form.
 - B. Not Used.
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

ARTICLE 13—BASIS OF BID

13.01 *Lump Sum*

- A. Bidders must submit a Bid on a lump sum basis as set forth in the Bid Form.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The Bidding Documents include one separate unbound copy of the Bid Form and the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 By submitting a bid, the Bidder waives any and all claims against the Owner related to the Owner's selection of the successful bidder.
- 14.03 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Acquisition title, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.
- 14.04 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted

prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.
- 17.02 Owner intends to use Passenger Facility Charge funding to acquire the Equipment, no AIP funds will be used.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. Bid prices will be compared after adjusting for differences in time of Substantial Completion (total number of calendar days to substantially complete the Work) designated by Bidders.

The adjusting amount will be determined at the rate set forth in the Agreement for liquidated damages for failing to achieve Substantial Completion, or such other amount that Owner has designated in the Bid Form.

1. The method for calculating the lowest bid for comparison will be the summation of the Bid price shown in the Bid Form plus the product of the Bidder-specified time of Substantial Completion in calendar days times the rate for liquidated damages in dollars per day.
2. This procedure is only used to determine the lowest bid for comparison and contractor selection purposes. The Contract Price for compensation and payment purposes remains the Bid price shown in the Bid Form.

18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder, including past or current experience with similar Equipment, financial ability to satisfactorily complete the Work, and references on completed projects with similar Equipment and may similarly consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

18.07 A Bidder who has demonstrated performance that is not responsible on current or past Owner projects may be determined by the Owner to be not responsible.

18.08 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

19.01 Performance and Payment bonds are not required.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT OR PURCHASE ORDER

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents.

ARTICLE 21—SALES AND USE TAXES

21.01 Owner is exempt from **Michigan** state sales and use taxes on materials and equipment to be incorporated in the Acquisition. Exemption certificates can be provided upon request to the Successful Bidder. Said taxes must not be included in the Bid.



To: xxx

PURCHASE ORDER

Description of Product	Quantity of Items	Price Per Item	Amount
CFME with Vehicle	One (1)		

Authorized by: _____

Dated: _____

Date of Board Approval (if applicable): 07/23/24 2024-XX

Vendor's Initials: _____

TERMS AND CONDITIONS:

**THE VENDOR BY PROVIDING GOODS TO THE NORTHWEST REGIONAL AIRPORT AUTHORITY (NRAA)
HEREBY AGREES TO ALL PROVISIONS LISTED BELOW:**

1. Non-Discrimination. The Vendor agrees not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, sex, age, height, weight, marital status, physical or mental disability, family status, sexual orientation, or gender identity. A breach of this covenant may be regarded as a material breach of this Purchase Order.
2. Assignment. This provision of goods as set forth in this Purchase Order shall not be assigned by the Vendor unless approved by NRAA.
3. Venue. Any and all suits for any and every breach of this Purchase Order shall be instituted and maintained in the Circuit Court for the County of Grand Traverse, State of MI.
4. Dispute Resolution. Prior to either party instituting any suit, any claim or dispute under the Purchase Order shall be submitted to non-binding mediation. The Vendor shall include a similar mediation agreement with all subcontractors and subconsultants under direct contract with the Vendor.
5. Independent Contractor. The relationship of the Vendor to the NRAA is that of an Independent Contractor. The Vendor and the personnel employed by the Vendor shall not be deemed to be agents or employees of the NRAA, shall not hold themselves out as employees of the NRAA and shall not be entitled to any fringe benefits the NRAA affords its employees.
6. Interpretation. This Purchase Order shall be governed by the laws of the State of Michigan both as to interpretation and performance.
7. Required Insurance. The Vendor and the Vendor's subcontractor shall provide an insurance certificate evidencing the following selected insurance prior to performing the training and support services under this Order:

		Required
General Liability - Comprehensive	\$ 1,000,000 per occurrence	<input checked="" type="checkbox"/>
Professional Liability -	\$ 2,000,000 per occurrence	<input type="checkbox"/>
Premises and Operations		<input type="checkbox"/>
Independent Contractors		<input type="checkbox"/>
Completed Operations Hazard		<input type="checkbox"/>
Contractual Liability		<input type="checkbox"/>
Explosion, Collapse or Underground Damage		<input type="checkbox"/>
Owners Protective		<input type="checkbox"/>
Environmental Pollution Liability	\$5,000,000 per occurrence	<input type="checkbox"/>
Automobile Liability	\$500,000 combined single limits	<input checked="" type="checkbox"/>
Owned, Non-owned &	\$250,000 each person	
Hired	\$100,000 property damage each occurrence	
Excess Liability	\$1,000,000	
Umbrella Form		
Employer's Liability	\$500,000	

Additionally, Vendor and Vendor's subcontractor shall provide the NRAA with an endorsement to its insurance policy stating that the NRAA is named as additional insured with the following language appearing either on the certificate or an attachment: *Northwest Regional Airport Authority, its board members, officers, employees and agents are named as additional insureds.* A minimum of 10 days advance written notice will be provided in the event of cancellation.

Vendor's Initials: _____

8. Workers Compensation. The parties agree to maintain at all times while Vendor is on site under this Purchase Order, suitable workers compensation insurance pursuant to Michigan law and will, upon receipt of this Purchase Order, provide a certificate of insurance or copy of state approval for self-insurance to the NRAA Chief Executive Officer.
9. Indemnification. To the fullest extent permitted by law, the Vendor shall defend, indemnify and hold the NRAA, its agents, officials and employees harmless from and against all claims, damages, losses and expenses, including reasonable attorney fees and defense costs, arising out of or connected in any way with the performance of this Purchase Order which is caused in whole or in part by the Vendor's negligent, careless or intentional acts or omissions, or that of any agent, employee, or subcontractor of the Vendor, excluding only those damages, liabilities or costs attributable to the sole negligence of the NRAA. Vendor agrees: (a) to defend, hold harmless and indemnify NRAA, its successors and customers against all claims, demands, losses, suits, damages, liability and expenses (including reasonable attorney fees) arising out of any suit, claim or action for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark, copyright or mask work right by reason of the manufacture, use or sale of the goods or services ordered, including infringement arising out of compliance with specifications furnished by NRAA, or for actual or alleged misuse or misappropriation of a trade secret resulting directly or indirectly from Vendor's actions; (b) to waive any claim against NRAA under the Uniform Commercial Code or otherwise, including any hold harmless or similar claim, in any way related to a claim asserted against Vendor or NRAA for patent, trademark, copyright or mask work right infringement or the like, including claims arising out of compliance with specifications furnished by NRAA; (c) to grant to NRAA a worldwide, nonexclusive, royalty-free, irrevocable license to repair and have repaired, to reconstruct and have reconstructed the goods ordered hereunder; and (d) assign to NRAA all right, title and interest in and to all trademarks, copyrights and mask work rights in any material created for NRAA under this Order.

The Vendor expressly acknowledges and agrees that this indemnification provision is intended to be as broad and inclusive as is permitted by law and that if any portion thereof is held invalid, it is agreed that the balance shall, notwithstanding, continue in full legal force and effect. This provision shall survive the termination of this Purchase Order and is not intended to waive the defense of governmental immunity that may be asserted by the NRAA in an action against it. The Vendor shall include a provision substantially similar to this paragraph in the contract between the Vendor and the Vendor's subcontractor performing the Service.

10. Third Party Beneficiaries. This Purchase Order confers no rights or remedies on any third party, other than the parties to this Purchase Order and their respective successors and permitted assigns.
11. Freedom of Information Act. The Vendor acknowledges that the NRAA may be required from time to time to release records in its possession by law. The Vendor hereby gives permission to the NRAA to release any records or materials received by the NRAA as it may be requested to do so as permitted by the Freedom of Information Act, MCL 15.231 *et seq.*
12. Ownership of Documents. All documents produced by Vendor for NRAA under this Purchase Order shall remain the property of NRAA and may not be used by Vendor for any other endeavor without the written consent of NRAA. Any reuse of documents without the written consent of NRAA shall be at Vendor's sole risk, without liability or legal exposure to NRAA, its officers, directors, employees, agents, or volunteers.
13. Billing/Payments. NRAA shall provide payment to the Vendor as set forth in Vendor's Purchase Quotation.
14. Incorporation of Other Documents. The following documents are incorporated herein and made a part hereof:
 - A. Instructions to Bidder.
 - B. Bid Form.
 - C. Performance Specification.
 - D. Bid Acceptance.
 - E. Notice of Acceptability.
 - D. Vendor's **Bid dated _____, 2024.** To the extent of a conflict between the terms of the Bid and this Purchase Order, including attachments A through E, the terms and conditions of this Purchase Order shall control.

15. Additional Provisions:

- A. VENDOR WARRANTS THAT ALL GOODS PROVIDED HEREUNDER OR PURSUANT HERETO WILL BE OF MERCHANTABLE QUALITY, FREE FROM ALL DEFECTS IN DESIGN, WORKMANSHIP AND MATERIALS. WHEN VENDOR HAS KNOWLEDGE OF A PARTICULAR PURPOSE FOR WHICH THE GOODS ARE PURCHASED, THEY WILL BE FIT FOR SUCH PARTICULAR PURPOSE. THE GOODS ARE PROVIDED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND/OR SAMPLES, DRAWINGS, DESIGNS OR OTHER REQUIREMENTS (INCLUDING PERFORMANCE SPECIFICATIONS) PROVIDED BY NRAA. THE WARRANTIES CONTAINED IN THIS SECTION SHALL BE IN ADDITION TO AND SHALL NOT BE CONSTRUED AS RESTRICTING OR LIMITING ANY WARRANTIES OR REMEDIES OF NRAA, EXPRESS OR IMPLIED, WHICH ARE PROVIDED BY LAW. ANY ATTEMPT BY VENDOR TO LIMIT, DISCLAIM OR RESTRICT ANY SUCH

WARRANTIES OR REMEDIES OF NRAA, BY NOTICE OR ACKNOWLEDGEMENT IN ACCEPTING OR PERFORMING THIS ORDER SHALL BE VOID.

- B. Vendor warrants title to all goods sold and services supplied. All materials, and any inventions (whether or not patentable), works of authorship, trade secrets, ideas, concepts, trade names and trade or service marks (collectively "Inventions") created or prepared for NRAA, shall belong exclusively to NRAA. Vendor hereby assigns all Inventions to NRAA and its assigns, except for any works for hire which do not require an assignment to vest ownership in NRAA. To the extent copyrights exist in any works of authorship, such works shall be deemed, to the extent legally permitted, to be works made for hire as that term is used in the Copyright Act of 1976. NRAA shall have the right, at NRAA's option and expense, to seek protection by obtaining patents, copyright registrations, trademark registrations, or other recordation, registrations, and filings related to proprietary or intellectual property rights. Vendor agrees at no charge to execute, and to cause its employees to execute, such documents including such further assignments, applications, and conveyances and to supply such information as NRAA shall request, in Order to permit NRAA to protect, perfect, register, record and maintain its rights in the Inventions and effective ownership of them throughout the world.
- C. NRAA reserves the right at any time to direct changes, or cause Vendor to make changes, to drawings and specifications of the goods or to otherwise change the scope of the work covered by this Order, including work with respect to such matters as inspection, testing, place or time of delivery, or quality control, and Vendor agrees to promptly make such changes; any difference in price or time for performance resulting from such changes shall be equitably adjusted by NRAA after receipt of documentation in such form and detail as NRAA may direct.
- D. Vendor agrees that NRAA shall have the right to inspect the goods and materials on delivery. NRAA's inspection of the goods, whether during manufacture, prior to delivery or after delivery, shall not constitute acceptance of any work-in-process or nonconforming finished and delivered goods. NRAA may inspect and reject all nonconforming goods and services after delivery without regard to whether payment has been made. NRAA may choose, at Vendor's risk and expense, to either hold nonconforming goods pending Vendor's instructions or ship them to Vendor's address shown on the face of this Order.
- E. To the extent NRAA rejects goods as nonconforming, Vendor shall either refund the purchase price of the goods, repair such goods, or replace such goods with conforming goods at the Vendor's sole cost and expense. NRAA shall hold nonconforming goods for disposition in accordance with Vendor's instructions at Vendor's risk. Vendor's failure to provide written instructions within ten (10) days, or such shorter period as may be commercially reasonable under the circumstances, after notice of nonconformity shall entitle NRAA, at NRAA's option, to charge Vendor for storage and handling, or to dispose of the goods, without liability to Vendor. Payment for nonconforming goods shall not constitute an acceptance thereof, limit or impair NRAA's right to assert any legal or equitable remedy or relieve Vendor's responsibility for latent defects.
- F. NRAA shall have no obligation to pay for any item until a correct invoice for the item is received at the "bill to" address shown on the face of this Order. Payment of invoices shall not constitute acceptance of the product and/or services and shall be subject to adjustment for errors, shortages, defects in the product and/or services, or other failure of Vendor to meet the requirements of the Order. NRAA may at any time set off any amount owed by NRAA to Vendor against any amount owed by Vendor or any of its affiliated companies to NRAA.
- G. All warranties shall survive the termination of this Purchase Order.
- H. In the event Vendor breaches the terms of this Purchase Order whereby the NRAA engages or employs attorneys to protect or enforce Vendor's rights hereunder and prevails in court, then the Vendor shall pay the NRAA's reasonable attorney fees, including the reasonable attorney fees of its in-house counsel, and court costs incurred
16. Authority to Execute. The parties agree that the signatories appearing above have authority and are duly authorized to execute this Agreement on behalf of the parties to the Agreement.
17. Suspension and Debarment. Vendor certifies, by entering into the Agreement, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from entering into the Agreement by any federal agency or department or any agency or political subdivision of the State of Michigan. The term "principal" for purposes of the Agreement means an officer, director, owner, partner, key employee, or other person with primary management or supervisory responsibilities, or a person who has a critical influence on or substantive control over the operations of the Vendor.

18. ~~Buy American: Unless otherwise approved in advance by the FAA, the NRAA will not acquire or permit any Vendor to acquire any steel or manufactured products produced outside the United States to be used for any expense which funds are provided for under the NRAA's CARES Act and CRRSA Grant Agreements.~~
19. Ban on Texting While Driving: In accordance with Executive Order 13513, Federal Leadership on Reducing Text Messaging While Driving, October 1, 2009, and DOT Order 3902.10, Text Messaging While Driving, December 30, 2009, all text messaging while driving when Vendor is performing any work for, or on behalf of, the Federal government, including, but not limited to, work relating to the CARES Act and CRRSA Grant Agreements, is expressly prohibited.
20. No Waiver. No waiver by the NRAA of any default by Vendor in the performance of any portion of this Purchase Order shall operate or be construed as a waiver of any future default, whether like or different in character.
21. Liquidated Damages. Vendor and Owner recognize that time is of the essence in the performance of the Contract, and that Owner will incur damages if Contractor does not substantially or finally complete the Acquisition\Work according to the requirements of Article 4 of the Bid Form. Because such damages would be difficult and costly to determine, Owner and Contractor agree that as liquidated damages for delay in completion (but not as a penalty) Contractor shall pay Owner \$500 for each day that expires after the Contract Time.
22. Required Contract Provisions:

GENERAL CIVIL RIGHTS PROVISIONS

The Vendor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Vendor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

A. Compliance with Nondiscrimination Requirements:

During the performance of this contract, the Vendor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Vendor"), agrees as follows:

1. **Compliance with Regulations:** The Vendor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Vendor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Vendor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Vendor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Vendor of the Vendor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Vendor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Vendor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a Vendor's noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the Vendor under the contract until the Vendor complies; and/or
 - b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The Vendor will include the provisions of paragraphs A.1 through A.5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Vendor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Vendor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Vendor

may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Vendor may request the United States to enter into the litigation to protect the interests of the United States.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of this contract, the Vendor, for itself, its assignees, and successors in interest (hereinafter referred to as the “Vendor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
 - 49 CFR part 21 (Non-discrimination in Federally-assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
 - The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
 - Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 et seq.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27;

 - The Age Discrimination Act of 1975, as amended (42 USC § 6101 et seq.) (prohibits discrimination on the basis of age);
 - Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
 - The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
 - Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 USC §§ 12131 – 12189) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
 - The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
 - Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
 - Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Guidelines for Contract Provisions for Obligated Sponsors and Airport Improvement Program Projects
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- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC 1681 et seq).

PERFORMANCE SPECIFICATIONS FOR CFME WITH VEHICLE

1. CONTINUOUS FRICTION MEASURING EQUIPMENT WITH VEHICLE PERFORMANCE STANDARD. The friction measuring equipment shall be integrated and coordinated into a drivable, registered and certificated vehicle. The vehicle must meet all applicable Federal and state laws and/or regulations for vehicles for use on public highways. This vehicle shall be of a standard factory production model passenger truck vehicle equipped with all necessary and required equipment for a fully functional Continuous Friction Measuring Equipment (CFME) approved in accordance with FAA AC 150/5320-12 current edition. The fixed brake slip CFME must meet the Standard Test method specifications given in ASTM E2340.

A. The Friction Measuring Equipment must do the following:

- (1) provide fast, continuous, accurate, and reliable friction measurements for the entire length of the runway, less the differences required for accelerating and decelerating the vehicle at the runway ends.
- (2) be designed to sustain rough usage, still function properly, and provide efficient and reliable methods of equipment calibration.
- (3) be capable of automatically providing the operator with a selection of average friction values for both a 500 foot (150 m) and one-third segment of runway length. In addition, it must be capable of providing data, whereby, the average friction value for any length of runway can be manually calculated.
- (4) be capable of producing a permanent trace of friction measurements versus pavement length at a scale of at least one inch (25 mm) equals 300 feet (90 m).
- (5) be capable of consistently repeating friction averages throughout the friction range on all types of pavement surfaces. Friction averages for each 500 foot (150 m) segment located on the pavement surface must be within a confidence level of 95.5 percent, or two standard deviations of ± 0.6 Mu numbers.
- (6) contain a self-wetting system that distributes water in front of the friction measuring wheel(s) at a uniform depth of 0.04 inch (1 mm). Water must be applied to the test surface just ahead of the test tire so as to provide the chosen nominal water film thickness across the full width of the test tire at any test speed. Regulation of rate of water flow must be within ± 10 %.
- (7) be able to conduct friction surveys at speeds of 40 and 60 mph (65 and 95 km/hr), within a tolerance of ± 3 mph (± 5 km/hr).
- (8) include a complete set of the latest operation and maintenance manuals, including guidelines for training airport personnel. The training manuals must include the current edition of AC 150/5320-12.
- (9) have electronic instrumentation (solid-state electronics), including a keyboard for data entry, that will enhance the information gathering and analysis capability of the equipment, and provide the operator more convenience in equipment operation and performance. The information gathered must be stored electronically for easy retrieval

and be readily visible to the operator of the vehicle. Each printout of the chart produced by the system electronics must include the following recorded information: runway designation and date; time of friction survey; a continuous trace of the friction values obtained for the entire runway length minus the acceleration/deceleration distances; printed marks depicting each 100 foot (30 m) increment of the runway length so easy reference can be made by the operator in identifying specific areas on the runway pavement surface; average friction value for 500 foot (150 m) and one-third segments of the runway length as preselected by the operator; and average vehicle speed for that segment.

B. The vehicle must:

- (1) be a standard production one-ton crew cab passenger truck such as Chevy 3500 LT, Ram 3500 Big Horn, Ford F-350 XL, GMC Sierra 3500 Pro.
- (2) be able to conduct friction surveys at speeds of 40 and 60 mph (65 and 95 km/hr), within a tolerance of ± 3 mph (± 5 km/hr). The vehicle, when fully loaded with water, must be capable of accelerating to these speeds within 500 and 1000 feet (150 and 300 m) from the starting position, respectively.
- (3) be equipped with electronic speed control.
- (4) be equipped with transceiver(s) necessary for communication with airport operations and air traffic control. (Frequencies include: 124.2, 122.95, 119.175, and 121.8 Mhz)
- (5) be equipped with a water tank constructed of strong lightweight material, with at least 320 gallons of capacity to complete a friction surveys, and all necessary appurtenances to deliver the required water flow rate to the friction measuring wheel(s).
- (6) be equipped with appropriate heavy duty shock absorbers and heavy duty suspension to adequately handle imposed loads.
- (7) Front and rear axle ratings shall be adequate for required loadings and hauling capability. The vehicle must not exceed the vehicle manufacturer's given gross vehicle weights and tire loading specifications when fully loaded. The vehicle shall have a GVWR required to safely and adequately handle and support the fully loaded vehicle.
- (8) Be equipped with 4WD transmission
- (9) be equipped with an air conditioner and defroster.
- (10) proper sized wheels and tires for the GVW rating of the unit being bid, in compliance with National Wheel and Rim Association.
- (11) Color must be red per paint code WA130X

2. TIRE PERFORMANCE STANDARD. The friction measuring equipment must be furnished with measuring tires which are designed for use in conducting friction surveys and which meet ASTM standard. E-1551 tires are preferred, but E-501 or E-524 can be accepted. Non-ribbed (smooth) tire(s) must be used to eliminate the effect of tire tread wear and provide greater sensitivity to variations in pavement surface texture. The tires must be furnished with split rims and the tubes

must have curved valve stems. The manufacturer of the friction equipment must provide the airport user with a calibrated dial pressure gauge.

A new test tire must not be used until it has been conditioned by running at fixed slip at the normal tire inflation pressure to obtain a smooth, uniform rubber tread surface free of any curing agents. For tires not conditioned and tested by the supplier, conditioning may typically be carried out by the operator per the supplier's recommendation.

3. ADDITIONAL VEHICLE STANDARDS

The CFME vehicle shall comply with OEM gross vehicle weight rating (GVWR) and/or gross axle weight rating (GAWR). Manufacture must provide documentation in the bid packet of loaded and unloaded weight distribution charts for the type of vehicle with equipment, full water tank, and passengers as follows;

- A.** Vehicle weight with no equipment
- B.** Vehicle weight with equipment and passengers, and
- C.** Vehicle weight with equipment, passengers, and liquid (water)

- D.** Additional Warranty: In addition to the warranties set forth in the Purchase Order, the Seller shall warrant their equipment as to the specified capacities and performance, and to be free from all defects in design, material and workmanship. All labor and transportation cost incurred as a result of a breach of this Warranty shall be at the expense of the Seller and all defective parts shall be replaced free of cost. THIS WARRANTY SHALL BE BINDING FOR A PERIOD OF TWO YEARS AFTER THE DATE THE FINAL REVIEW AND ACCEPTANCE HAS BEEN SIGNED BY THE NRAA AND THE SELLER, except those items of standard commercial design which carry the original manufacturers (OEM) standard warranty. ANY ATTEMPT BY SELLER TO LIMIT, DISCLAIM OR RESTRICT THIS WARRANTY AND ITS REMEDIES, BY NOTICE OR ACKNOWLEDGEMENT IN ACCEPTING OR PERFORMING SHALL BE VOID.

- E.** OEM. For all equipment or items, including the vehicle, under the Original Manufacturer's warranty, the Seller shall be solely responsible for engaging warranty work to the vehicle, items, or equipment or shall assist with assigning the warranties to the NRAA. If the Seller's modifications to the vehicle, equipment or items void or impact the warranty, the Seller shall be responsible for all costs and repairs associated with any work to the vehicle, equipment, or items that would have been covered by the warranty but for the Seller's modifications.

- F.** The vehicle shall be equipped as follows;
 - (1) Largest stock gasoline engine available
 - (2) Cruise control

- G.** All components and assemblies shall be free of hazardous protrusions, sharp edges, cracks or other elements which could cause injury to personnel or equipment. All oil, hydraulic and water lines and electrical wiring shall be located in protected positions,

properly attached to the frame or body structure and shall have protective loom or grommets at each point where they pass through structural members, except where a through-frame or body connector is necessary.

- H.** The vehicle shall carry a bumper-to-bumper warranty of at least two years, including but not limited to coverage for the engine, transmission, drive axles, electrical systems, and high-tech components of the vehicle.

- I.** The vehicle shall be equipped with:
 - 1) an automatic transmission.
 - 2) power disc brakes with four (4) wheel anti-lock brake system (ABS)
 - 3) One full-size spare tire and wheel assembly
 - 4) Trailering package with Class 5 hitch
 - 5) Factory tow hooks
 - 6) Mud flaps
 - 7) Spray-in bed liner

- J.** The interior of this unit shall be provided as follows:
 - (1) A tilt/telescoping steering column.
 - (2) Power Steering
 - (3) Power operated windows
 - (4) Heated and power operated side door mounted mirrors
 - (5) Front sun visors.
 - (6) All windows shall be tinted safety glass, DOT approved and stamped.
 - (7) Electric windshield wipers with intermittent delay swipe feature and artic type wiper blades.
 - (8) Largest capacity reservoir for windshield washer system.
 - (9) Bucket seats for the driver and passenger positions or 40/20/40 split bench seat
 - (10) The floor of the vehicle shall have all-weather mats
 - (11) Master connection point for radios
 - (12) Minimum 3000 Watt Inverter: 12-volt/120 VAC power supply
 - (13) A minimum 10-pound ABC rated fire extinguisher shall be mounted in the vehicle, mounted as to not interfere with access in or out of the vehicle as well as any equipment operations.

- K.** Instrumentation panel shall be lighted in color with full gauges. Available information shall include:
 - (1) Speedometer/odometer
 - (2) Tachometer
 - (3) Time of day
 - (4) Outside air temperature
 - (5) Fuel level gauge

- L.** Warning Icons required for:
 - (1) Left and Right Turn Indicators
 - (2) Parking brake applied
 - (3) Transmission range
 - (4) High Beam Indicator

- M.** All lighting on this vehicle shall conform to the Federal Aviation Administration Advisory Circular 150/5210-5D and FMVSS. All lighting shall be 12 volts, and shall include, but not be limited to, the following:
 - (1) Two front mounted headlights with integral turn signals per FMVSS.
 - (2) Tail, stop, turn signal lights per FMVSS.
 - (3) Roof-mounted stainless steel construction light bar with; two (2) internally controlled 60W LED work lights mounted on each side of the vehicle and controlled from the drivers' position. One (1) Light Emitting Diode amber strobe light shall be attached to the light bar. Strobe light shall activate when the ignition switch is in the "On" position and have a manual override switch to deactivate the lights by the operator's choice.
 - (4) Interior dome light.
 - (5) Variable intensity instrument lighting
 - (6) Engine compartment lights are required.
 - (7) An independent 12-volt auxiliary battery and charging system shall be included securely mounted in the vehicle for operations of the CFME.
 - (8) The vehicle shall be with an industrial hardened system electronics vehicle control unit (VCU).

- N.** These items are to be included in the interior of the vehicle:
 - (1) Dash mounted display providing speed and MU values for real time test monitoring
 - (2) Pavement temperature sensor
 - (3) Ambient air temperature sensor

- O.** Each bid must include the vehicle manufacturer's certification that the vehicle meets or exceeds the Federal Motor Vehicle Safety Standards and Regulations (FMVSS) for a Standard Production Passenger Vehicle.

- P.** The interior of the CFME is to be laid out for easy one-person operation and access to system functions.

4. STRICT COMPLIANCE. Strict compliance with each and every one of the standards set forth in paragraphs 1 and 2 is required. The NRAA's use of the Vehicle not in strict compliance with each and every standard set forth in paragraphs 1 and 2 shall not be deemed a acceptance of the Vehicle's failure to comply or a waiver of the Standard. A vehicle not in strict compliance with the standards is nonconforming.

5. TRAINING. Training shall include as a minimum the following: Training shall be performed by factory trained, authorized and certified technicians. The training shall be performed in person at the Buyer's site and shall include multiple sessions of classroom and operational training to accommodate all airport operations employees, and an additional training session for mechanics training on the CFME maintenance requirements. The training shall be in accordance with FAA Advisory Circular 150/5320-12 (current edition).

A. Classroom Instruction:

- (1) Purpose of training program
- (2) General discussion on pertinent FAA Part 139 Regulations
- (3) General discussion on pertinent FAA Advisory Circulars
- (4) General discussion on pertinent ASTM Standards
- (5) General overview of the training program
- (6) Review the requirements of FAA Advisory Circular 150/5320-12 (current edition)
- (7) Coefficient of friction definition
- (8) Factors affecting friction conditions
- (9) ASTM standards for CFME
- (10) ASTM standards for friction measuring tires
- (11) Operation of CFME
- (12) Programming the computer for FAA and ICAO formats
- (13) Maintenance of the CFME
- (14) Procedures for reporting friction / mu numbers
- (15) Preparation and dissemination of NOTAMs
- (16) Orientation to the Calibration Operation and Maintenance of the CFME

B. Operational Instruction:

- (1) Operation of the CFME
- (2) Vehicle Instruments and controls
- (3) Vehicle limitations

6. SUPPORT

Warranty and support services shall be provided from U.S. based facilities. The Equipment shall be supported during the operational life of the Equipment or for a period of ten (10) years, whichever is longer, from the date of delivery of the Equipment. The support shall include but not be limited to technical service as may be requested by the NRAA and spare parts as may be required to be ordered to support the operation of the Equipment. In the event a part is discontinued, not less than six (6) months' notice shall be given to the NRAA of the decision to discontinue and thereafter, Seller shall either (i) make available to the NRAA all drawings, specifications and know-how which will enable the NRAA to manufacture or procure the items under a royalty-free license, which is hereby granted, or (ii) provide the NRAA with another qualified source of the part(s) without interruption of supply. All technical support shall be at the sole cost and expense of the Seller. All parts required as a result of breach of the warranties or as a result of a non-conformity shall be at the expense of the Seller.