



REQUEST FOR QUOTATION

(RFQ 2023-0020) FOR

ONE (1) FRICTION GRIP TESTER

Issuance Date: September 20, 2023

Due Date: October 20, 2023 at Close of Business (COB)

(5:00 PM EST)

Vendor must fill in the information below:

Company Name: _____
Address: _____
City/State/Zip: _____
Contact Name: _____
Title: _____
Contact Phone & Cell: _____
Fax: _____
Email: (Point of Contact): _____

☐ **NO RESPONSE** – To submit a NO RESPONSE, please complete and return this page.

The address for submission of this RFQ is as follows:

Mailing Address

Mrs. Christy Dixon
Savannah Airport Commission
400 Airways Avenue
Savannah, GA 31408

RFQs must be date and time stamped by the Savannah Airport Commission ("SAC", or "Commission") no later than the due date and time specified for RFQs to be considered. It is the sole responsibility of the Vendor to make sure the submitted RFQ is received in the SAC Administration Department by the due date and time. The Commission assumes no responsibility for delivery of RFQs.

1.0 INTRODUCTION

- 1.1 **Purpose:** The purpose of these specifications is to describe the requirements to procure **One (1) Friction Grip Tester** to be new without repair, including all the interior and exterior trim and appointments listed by the manufacturer as standard equipment. The Friction Grip Tester must meet all requirements and specifications per the Federal Aviation Administration (FAA) Approved CFME. **Requirements and specifications are listed in Exhibit B, pp. 14-17.** A copy of the bidder's specifications for this equipment must be submitted with each bid.

The successful bidder must have a parts and service available in the Savannah, Georgia area.

Any manufacturer's name, trade name, brand name, or model number used in these specifications are for the purpose of describing and establishing general quality levels. Such references are not intended to be restrictive. The bidder's proposal shall meet or exceed all requirements of the listed specifications.

- 1.2 **Pre-Conference:** N/A

- 1.3 **Receipt for RFQ and Addendum(s):** It is the sole responsibility of the Vendor to ensure that they have received the entire RFQ or any Addendum(s) issued. The Commission reserves the right to, and may amend, modify or cancel this RFQ at any time, at its sole discretion. In the event it becomes necessary to revise or supplement any part of this RFQ, written addenda will be emailed to the Vendors using the contact information provided to SAC. It is the Vendors responsibility to check their email daily, and as such, the Vendor will be held accountable for any clarifications or amendments to the RFQ. ***Vendors are required to acknowledge receipt of any Amendments to this RFQ by signing and returning the Acknowledgement of Addendum Form with the RFQ submittal.***

- 1.4 **RFQ Submittal:** One complete hard copy of the RFQ with responses must be received in the SAC Administration Offices by the due date and time specified to be considered.

- 1.5 **RFQ Opening:** The opening of this RFQ will take place at the Savannah Airport Commission. RFQ information will not be available until after an award has been made. Once an award is made, the awarded Vendor(s) will be notified via email or U.S. Postal Service.

- 1.6 **Contract Term:** N/A

- 1.7 **Force Majeure:** If by reason of Force Majeure, either party hereto shall be rendered unable wholly or in part to carry out its obligations under this Agreement then such party shall give notice and full particulars of Force Majeure in writing to the other party within a reasonable time after occurrence of the event or cause relied upon, and the obligation of the party giving such notice, so far as it is affected by such Force Majeure, shall be suspended during the continuance of the inability then claimed, except as hereinafter provided, but for no longer period, and such party shall endeavor to remove or overcome such inability with all reasonable dispatch.

- 1.8 **Certification:** N/A

- 1.9 **Prices to be Firm:** Prices offered will remain firm for 90 days after the closing date of this RFQ and throughout the purchasing period.

- 1.10 Cancellation:** In the event of equipment/service failure or default of the Vendor, the contract may be cancelled by SAC with a (30) day written notice, unless otherwise specified. The Vendor will be given an opportunity to cure the default within the 30-day written notice period.
- 1.11 GA Statewide Contracts:** N/A
- 1.12 Payment Terms:** Payment terms are net 30 days upon receipt of goods and validation of services by the Commission. All invoices must reference the purchase order number and will be addressed to SAC's Accounting Department @ accountspayable@flsav.com. The Commission will not provide prepayment for any order.
- 1.13 Time of Delivery:** The bidder must specify the timeframe of delivery or specify the time-frame for equipment/vehicle to be ready for pick-up in **Exhibit A, page 13** of this RFQ.
- 1.14 Delivery Point:** The preferred delivery point or preferred pick-up location must be clearly notated in the response to this RFQ. The specified delivery address of the equipment is 640 Gulfstream Road, Savannah, GA. 31408.
- 1.15 Contract PO Document:** The Commission will consider its executed Purchase Order (PO), or executed contract between the Vendor and SAC as the primary and binding contract document between SAC and the awarded Vendor.
- 2.0 SCOPE**
- 2.1** General requirements of the units must meet or exceed the following specifications.
- 2.2 Detailed Specification and Standards:** Requirements and specifications for the Friction Grip Tester can be found in Attachment B, pp 14-17.

- 3.0 Terms and Conditions:** By signing this document, the Vendor agrees to abide by all the terms and conditions contained in this RFQ. Any exceptions to the requirements of this RFQ, or the SAC terms and conditions of this RFQ will be noted in writing, with detailed explanation, and included with the RFQ submittal by using the attached exceptions sheet. The contractor acknowledges that taking exceptions to this RFQ may subject the response submittal to be rejected.
- 3.1 Discussions and Questions:** All questions must be submitted in writing and directed to the Savannah Airport Commission's Purchasing Department at cdixon@flysav.com to be considered.
- 3.2** The Vendor will not attempt to discuss any aspects of the request with any other party except for the email address described in 3.1 of this RFQ. No verbal agreements will be considered during the bid/quote process. The Commission reserves the right to reject the bid/quote of any Vendor violating this provision.
- 3.3 Supplemental Agreements:** The awarded vendor may enter into a separate supplemental agreement to further define the level of service requirements over and above the minimum defined in this contract (i.e. invoice requirements, ordering requirements, specialized delivery, etc). Any supplemental agreement developed as a result of this contract is exclusively between the participating entity and awarded vendor.
- 3.4 Completeness:** All requested information and required forms must be completed, signed, and submitted with this document to constitute a proper bid/quote. The entire package must be returned, complete with all required forms, signature, and information. Failure to complete or comply with any part of the specifications or requirements in this RFQ may constitute a basis of rejection. It is within the right of the Commission to reject any RFQ submittal in this solicitation document.
- 3.5 Quotation and Quotation Forms Required:**
- (a) The full solicitation will be submitted and completed in its entirety.
 - (b) The first item to be completed in your response will be the Disadvantaged Business Enterprise (DBE) Form located in Section 6.0 (page 10) of this RFQ. If your company is not a DBE, please check the box noted as non-applicable. If your company is DBE, please complete the DBE Form, while also including your DBE Certificate along with the form in this section.
 - (c) The second item to be completed in your response will be the Vendor Certification Form in Section 8.0 (page 12) of this RFQ. Please complete the form in its entirety.
 - (d) The third item to be completed in your response will be the Unit Pricing Sheet (Exhibit A), located on page 13 of this RFQ.
 - (e) The fifth item in your response will be the Acknowledgement of Addendum Form, (page 18). If applicable, please sign and complete the form in its entirety. If there is not an associated addendum with this RFQ, the Addendum Form is not required to be submitted. The form must be submitted if there is an associated addendum.

3.6 RFQ Procurement Schedule

3.7	RFQ Opens	Wednesday, September 20, 2023
	Questions From Bidders Are Due	No Later Than (NLT) 5pm on October 3, 2023
	SAC Issues Last Addendum to Answered Questions (if applicable)	October 6, 2023
	Bidder' Final Responses Are Due to SAC	COB, October 20, 2023
	SAC Evaluates Responses	October 23, 2023 – November 30, 2023
	SAC Makes Contact With the "Successful Bidder"	NLT December 1, 2023
	SAC Makes Contact With the "Unsuccessful Bidder(s)"	NLT December 1, 2023

Vendors or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting bids/quotes. Vendors are cautioned not to obliterate, erase, or strike-over any printed material as set forth in this RFQ. In quoting prices, wherever the Vendor has made an error and has corrected, all such corrections should be initialed by the person signing this RFQ. If errors occur in the extension of prices in the RFQ, the unit prices will govern. Failure to comply with this provision may result in rejection of Vendor's submittal. All documents submitted must be legible.

- 3.8 Changes/Modifications:** No changes or modifications will be made to any Savannah Airport Commission forms or your request may be considered null or void. If changes or modifications are noted by SAC, the bid submitted by Vendor may be rejected.
- 3.9 Compliance with Laws:** The Vendor will obtain and maintain all licenses, permits, liability insurance, workman's compensation insurance, and maintain compliance with any other federal, state, or local requirements during the term of the contract with SAC.
- 3.10 Specifications:** Whenever mention is made of any article, material, or workmanship to be in accordance with any laws, ordinances, codes, regulations, etc., these requirements will be construed to be the minimum requirements of these specifications.
- 3.11 Multiple Request:** Depending upon product/service being requested, the Vendor may be required to submit more than one RFQ response. Any alternate responses to the RFQ must be brought to the Savannah Airport Commission's attention and noted on submitted documentation as a separate and alternative request.
- 3.12 Invoicing:** The Commission normally will pay properly submitted Vendor invoices within thirty (30) days of receipt providing goods and/or services have been delivered, installed (if required), and accepted as specified. Invoices presented for payment must be submitted in accordance with instructions contained on the purchase order (PO) with reference to the PO number and submitted to the correct address for processing.
- 3.13 Description of Materials:** Requests for materials, supplies, or office machinery equipment should be accompanied by copies of detailed factory specifications, ratings, technical data, including accurate descriptions on which requests are based.
- 3.14 Brand Name:** If and wherever brand names, make, manufacturers, trade names, Vendor catalogs, or model numbers are stated, they are for the sole purpose of establishing a grade or quality of material.

- 3.15 "OR EQUAL" Interpretation:** It is the Vendor's responsibility to prove to SAC that each item offered by the Vendor is equal to the grade or quality of material specified. The Vendor will clearly indicate the product, including brand, catalog, model number, etc. being offered and will supply sufficient data in detail to enable an intelligent comparison to be made with the brand or manufacturer specified. Failure to submit the required information may be sufficient grounds for rejection of bid/quote. The Commission will be the sole judge concerning the merits of the RFQ response submitted.
- 3.16 Quality:** All equipment/materials used for the manufacture or construction of any supplies, materials, equipment, or service will be new unless otherwise specified. All materials will be of the best quality, and to the highest grade of workmanship that meet the specs in this document. Materials or service must comply with all applicable Federal, State, or OSHA requirements.
- 3.17 Acceptance of Material:** The equipment/materials delivered will remain the property of the Vendor pending physical inspection and acceptance to the satisfaction of SAC. In the event the material supplied to SAC is found to be defective or does not conform to specifications, the Commission reserves the right to cancel the order upon written notice to the Vendor and return the product(s) to the Vendor at the Vendor's expense, and to invoke the provisions of the section titled "Default".
- 3.18 Default:** Any contract made between SAC and the Vendor maybe cancelled by SAC in whole or in part via written notice, upon the vendor's non-performance or violation of contract terms. An award may be made to the lowest quoting vendor for material or services specified, and purchases may be made on the open market. The defaulting vendor will be liable for costs to the Commission in excess of the defaulted contract prices. The Vendor will continue the performance of this contract to the extent any part is not terminated under the provisions of this clause.
- 3.19 Guarantee:** The vendor will unconditionally guarantee the equipment/materials and workmanship on all materials and/or equipment for the vendor's specified guaranteed period, unless otherwise stated. Within the guarantee period, if any defects occur which are due to faulty material and/or services to the complete satisfaction of the Commission. These repairs, replacements, or adjustments will be made only at a time less detrimental to the operation of the Commission's business.
- 3.20 Add/Delete Items:** During the term of the contract, items and or services may be added and/or deleted to the contract upon agreement between the successful Vendor and SAC.
- 3.21 Additional Information:** Prior to the final selection, Vendors may be required to submit additional information which may be necessary to further evaluate the Vendor's response and/or qualifications. If such information is required, the Vendor will be notified and will be permitted approximately seven (7) days to submit the information requested.
- 3.22 Reimbursement:** The Commission will not reimburse the Vendor for any costs associated with the preparation and submittal of any RFQ response, or for any travel and/or per diem costs that are incurred.
- 3.23 Gratuity:** The Vendors will not offer gratuities, favors, or anything of monetary value to any official, employee or agent of the Commission as a means of influencing consideration of this RFQ.

- 3.24 Submitted Material:** All requests, responses, inquiries, or correspondence relating to, or in-reference to this document submitted by Vendors will become the property of the Commission when received. Once an award is made, all excess copies the Vendor's request may be destroyed.

4.0 SPECIAL CONDITIONS:

- 4.1 Mandatory Requirements:** The Commission has established certain requirements with respect to solicitations to be submitted by Vendors. Whenever the terms "must", "will" or "is" are used in the package, the specifications being referred to is a mandatory requirement. Failure to meet any requirement(s) may cause rejection of the Vendor's submittal.
- 4.2 Tax Exempt:** The Commission is exempt from State Sales Tax. If a tax- exempt certificate is necessary, please contact the SAC Purchasing Department.
- 4.3 Demonstrated Capability:** N/A
- 4.4 References:** N/A
- 4.5 Indemnification:** Seller/Vendor agrees for itself and its contractors, subcontractors, suppliers, employees, agents, servants, patrons, customers, visitor and licenses to indemnify, protect, save and hold harmless the SAC, its members, directors, officers, employees, and agents against any expense, loss or liability paid, suffered or incurred, including any environmental fines and/or penalties, as a result of any breach by Seller/Vendor, Seller/Vendor's agents, servants, employees, patrons, contractors or subcontractors, suppliers, customers, visitors or licenses of any covenant or condition of any agreement with Buyer/SAC or as a result of the seller's/buyer's work or a product or service provided by seller/vendor or the seller's/Vendor's use, occupancy or presence on SAC's property or the carelessness, negligence or improper conduct of seller/Vendor, seller's/Vendor's contractors, subcontractors, suppliers, employees, agents, servants, patrons, customers, visitors, or licenses. Such indemnification will be to the extent caused in whole or in part by negligent acts or omissions by the Seller/Vendor, its contractors, subcontractors, suppliers, employees, agents, servants, patrons, customers, visitors or licensees. Seller/vendor agrees to defend buyer/SAC from any legal or equitable actions brought against buyer/SAC based on the work or a product or service provided by seller/vendor or the carelessness, negligence or improper conduct of Seller/Vendor, Seller's/Vendor's contractors, subcontractors, suppliers, employees, agents, servants, patrons, customers, visitors, or licenses.
- 4.6 Basis of Award:** The basis of evaluation will be low bid/quote considering that all specifications are met. All other vendor accommodations that best suits the needs of the Commission will also serve as the basis of the award. Vendor availability to seek or exceed SAC's specifications and requirements will be considered. Any contract awarded as a result of a selection process is to be awarded to the most responsive and responsible Vendor whose bid is evaluated to be the most advantageous to the Commission, considering price and other factors such as delivery time.
- 4.7 Changes and Alterations:** The Commission reserves the right to make any alterations in the RFQ and/or contract as may be necessary due to changing conditions found during the project. The Vendor will not claim forfeiture of contract by reasons of such changes by the SAC representative. If such changes increase or decrease the amount of the work or materials, the Vendor will be paid according to the quantity of product delivered at the prices

established for such work under the contract. Any alterations or changes that diminish the scope of work or materials will not constitute a claim for damages or for the loss of anticipated profits. Any alterations from the original job estimate provided by vendor must be submitted in writing and must be approved by the designated SAC Representative.

4.8 Bonding: N/A

4.9 Statutory Affidavit: N/A

4.10 Cure and Cover Clause: If a successful Vendor fails, or SAC concludes that there is a reasonable likelihood that the Vendor will not be able to timely perform its obligations under this RFQ and/or contract, SAC may (in addition to any other contractual, legal, or equitable remedies) proceed to take any of the following actions after a five (5) day written notice to the Vendor.

- (a) Withhold any monies then or next due to the Vendor; or
- (b) Terminate the contract and obtain the deliverables (or equivalent) or portion thereof (or equivalent) from a third party, pay the third party for the same, and withhold the amount so paid from any money then or thereafter due party Vendor and hold Vendor liable for any amounts paid to the third party (or parties) to the extent that withholding payments to the Vendor does not cover SAC's cost of cover.

4.11 The Savannah Airport Commission Reserves the Right:

- (a) to reject any or all RFQs or any part thereof; and
- (b) to waive any irregularities and/or technicalities on the RFQ; and
- (c) to accept the Vendor that is in the best interest of SAC; and
- (d) to obtain clarification or additional information; and
- (e) to purchase either selected items, or to not select any Vendor or purchase any goods and/or services resulting from this request; and
- (f) to reject any Vendor who has previously failed to perform properly or complete on time projects of a similar nature, or
- (g) to reject any Vendor whom investigation shows Vendor is not in a position to perform the project and/or service as specified in this RFQ.

SECTION 5.0 – VENDOR'S PROFILE

Please provide the following information about your company below:

- Company's official registered name.
- Define your standard terms of payment.
- Please provide warranty information on the equipment.

SECTION 6.0 – DISADVANTAGED BUSINESS ENTERPRISE

All businesses listed **must be certified** by a federally-recognized or state-level certifying agency (such as USDOT, State DOT, SBA 8(a) or GMSDC) that utilizes known certification standards **prior** to the due date of this bid. **Proof of certification from a certifying agency is required to accompany this bid.** To expedite verification, please provide accurate phone numbers and ensure firms understand contact will be made following bid submittal.

Name of Business: _____ Associated NAICS: _____
Associated Project Title: _____

NOTE: Proof of Disadvantaged Business Enterprise Certification must be attached.

Business Name	Email	Address	Address (City, State)	Work Category	Certification of Disadvantaged Group	Certifying Agency? (City of Sav. or Other)

Printed name (company officer or representative): _____

Signature: _____ Date: _____

Title: _____

Telephone: _____

☐ Not Applicable

SECTION 7.0 – SAVANNAH AIRPORT COMMISSION INSURANCE REQUIREMENTS

- A. With no intent to limit Vendor's liability or the indemnification provisions set forth herein, Vendor will procure and maintain during the term of this Agreement the following minimum limits:
1. General Liability Insurance - no less than One Million (\$1,000,000) Dollars each occurrence, Combined Single Limit ("CSL"), bodily injury and property damage, including Employer's non-ownership liability, patent infringement and intellectual property rights protection, and hired auto coverages as applicable, which will not be subject to cancellation or change until after thirty (30) days written notice will have been given to Commission, as well as:
 2. Umbrella - \$5,000,000 (covers all liability lines).
 3. Worker's Compensation in compliance with Georgia Statutory Limits, including all States Endorsements.
- B. Vendor must maintain on file in the Commission office during the term of this agreement an original signed copy of Vendor's Certificate of Insurance reflecting the above limits and naming the Mayor and Aldermen of the City of Savannah and the Savannah Airport Commission, its directors, officers, employees, and agents as additional insured, and will be delivered to Commission by Vendor within ten (10) days of request by Commission.
- C. Indemnification
- Vendor will protect, defend, and indemnify Commission and its officers, agents and employees from and against any and all liabilities, losses, suits, claims, judgments, fines or demands arising by reason of injury or death of any person, or damage to any property, including all reasonable costs for investigation and defense thereof (including but not limited to attorney fees, court costs, and expert fees), of any nature whatsoever arising out of or incident to this Agreement and/or the use or occupancy of the Commission or the acts or omissions of Vendor's officers, agents, employees, Vendors, sub-Vendors, licensees, or invitees regardless of where the injury, death or damage may occur unless such injury, death or damage is caused by the sole negligence and the willful misconduct of the Commission or any of its officers, employees, Vendors or agents. The Commission will give to Vendor reasonable notice of any such claims or actions. The Vendor will also use counsel reasonably acceptable to Commission in carrying out its obligations hereunder. The provisions of this Section will survive the expiration or early termination of this Agreement.
- D. All insurance policies will contain a standard cross-liability provision and will stipulate that no insurance held by Commission will be called upon to contribute to a loss covered thereunder. Commission will have no liability for any premiums charged for such coverage, and the inclusion of Commission as an additional insured is not intended to and will not make Commission a partner or joint venture partner with Vendor in Vendor's operations on the premises. Such policies will also insure Vendor against the risks to which it is exposed as the Vendor of the business authorized under this Agreement, will be for full coverage and will contain provisions on the part of the respective insurers waiving the right of such insurers to subrogation.

SECTION 8.0 – VENDOR CERTIFICATION

By responding to this RFQ, the offeror understands and agrees to the following:

- E. That the submitted solicitation constitutes an offer, which when accepted in writing by SAC, and subject to the terms and conditions of such acceptance, will constitute a valid and binding contract between the undersigned and SAC; and
- F. That the Vendor has read the specifications and requirements shown or referenced in this RFQ and that the Vendor's response is made in accordance with the provisions of such specifications and requirements; and
- G. That the Vendor guarantees and certifies that all items included in the Vendor's response must meet or exceed any/all such stated requested specifications and requirements; and that if rewarded a contract, the Vendor will deliver goods/services that meet or exceed the requested specifications and requirements.
- H. That the response is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a request for the same materials, supplies, equipment, or services and is in all respects fair and without collusion or fraud. The Vendor understand and agrees that collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards; and
- I. The Vendor response must be complete, signed in all spaces provided; returned in its entirety, and submitted with all required information, attachments, and forms to receive consideration for award.
- J. Bidder's Prices are guaranteed for **90 days**

Vendor Name:

Address:

Contact Name/Title:

Contact Phone & Cell

Fax:

Email:

Authorized Signature:

Printed Name of Signature:

Title:

Emergency Contact:

EXHIBIT B: REQUIREMENTS AND SPECIFICATIONS



U.S. Department
of Transportation

**Federal Aviation
Administration**

Advisory Circular

Subject: Change 1 to MEASUREMENT,
CONSTRUCTION, AND MAINTENANCE OF SKID-
RESISTANT AIRPORT PAVEMENT SURFACES

Date: 04/16/04
Initiated by: AAS-100

AC No: 150/5320-12C
Change: 1

1. **PURPOSE.** This change updates information regarding FAA qualified Continuous Friction Measuring Equipment.
2. **PRINCIPAL CHANGES.** The following editorial changes have been made:
 - a. Table 3-2. Friction Level Classification For Runway Pavement Surfaces revised to change name from K.J. Law Runway Friction Tester to Dynatest Consulting, Inc., Runway Friction Tester.
 - b. Appendix 4. FAA-Approved CFME revised to change name from K.J. Law Engineers, Inc., to Dynatest Consulting, Inc., which includes their address.
 - c. Appendix 4. Changes have been made to reflect updated information for manufacturers.

PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
22	3/18/97	22	4/16/04
Appendix 4 pg. 1 (and 2)	3/18/97	Appendix 4 pg. 1 (and 2)	4/16/04

DAVID L. BENNETT
Director, Office of Airport Safety and Standards

Section 3. Conducting Friction Evaluations with CFME

3-14. PRELIMINARY STEPS. Friction measurement operations should be preceded by a thorough visual inspection of the pavement to identify deficiencies as outlined in paragraph 3-4. Careful and complete notes should be taken not only of the CFME data but of the visual inspection as well. The airport operator should assure that appropriate communications equipment and frequencies are provided on all vehicles used in conducting friction surveys and that all personnel are fully cognizant of airport safety procedures. Personnel operating the equipment should be fully trained and current in all procedures. The CFME should be checked for accurate calibration and the vehicle checked for adequate braking ability.

3-15. LOCATION OF FRICTION SURVEYS ON THE RUNWAY. The airport operator, when conducting friction surveys on runways at 40 mph (65 km/h), should begin recording the data 500 feet (152 m) from the threshold end to allow for adequate acceleration distance. The friction survey should be terminated approximately 500 feet (152 m) from the opposite end of the runway to allow for adequate distance to safely decelerate the vehicle. When conducting friction surveys at 60 mph (95 km/h), the airport operator should start recording the survey 1,000 feet (305 m) from the threshold end and terminate the survey approximately 1,000 feet from the opposite end of the runway. Where travel beyond the end of the runway could result in equipment damage or personal injury, additional runway length should be allowed for stopping. The lateral location on the runway for performing the test is based on the type of aircraft operating on the runway. Unless surface conditions are noticeably different on either side of the runway centerline, a test on one side of the centerline in the same direction the aircraft lands should be sufficient. However, when both runway ends are to be evaluated, vehicle runs can be made to record data on the return trip (both ways).

The lateral location on the runway for performing friction surveys is based on the type and/or mix of aircraft operating on the runway:

a. **Runways Serving Only Narrow Body Aircraft.** Friction surveys should be conducted 10 feet (3 m) to the right of the runway centerline

b. **Runways Serving Narrow Body and Wide Body Aircraft.** Friction surveys should be conducted 10 and 20 feet (3 and 6 m) to the right of the runway centerline to determine the worst case condition. If the worst case condition is found to be consistently limited to one track, future surveys may be limited to this track. Care should be exercised, however, to account for any future and/or seasonal changes in aircraft mix.

3-16. VEHICLE SPEED FOR CONDUCTING SURVEYS. All of the approved CFME in Appendix 4 can be used at either 40 mph (65 km/h) or 60 mph (95 km/h). The lower speed determines the overall macrotexture/contaminant/drainage condition of the pavement surface. The higher speed provides an indication of the condition of the surface's microtexture. A complete survey should include tests at both speeds.

3-17. USE OF CFME SELF-WETTING SYSTEM. Since wet pavement always yields the lowest friction measurements, CFME should routinely be used on wet pavement which gives the "worst case" condition. CFME is equipped with a self-wetting system to simulate rain wet pavement surface conditions and provide the operator with a continuous record of friction values along the length of the runway. The attached nozzle(s) are designed to provide a uniform water depth of 1 mm (0.04 inch) in front of the friction measuring tire(s). This wetted surface produces friction values that are most meaningful in determining whether or not corrective action is required.

3-18. FRICTION SURVEYS DURING RAINFALL. One limitation in using the self-wetting system on a friction measuring device is that it cannot by itself indicate the potential for hydroplaning. Some runways have depressed areas which pond during periods of moderate to heavy rainfall. These areas may exceed considerably the water depth used by the self-wetting system of the friction measuring device. Therefore, it

is recommended that the airport owner periodically conduct visual checks of the runway surface during rainfall, noting the location, average water depth, and approximate dimensions of the ponded areas. If the average water depth exceeds 1/8 inch (3 mm) over a longitudinal distance of 500 feet (152 m), the depressed area should be corrected to the standard transverse slope. If possible, the airport owner should conduct periodic friction surveys during rainfall through the ponded areas.

3-19. FRICTION LEVEL CLASSIFICATION. Mu numbers (friction values) measured by CFME can be used as guidelines for evaluating the surface friction deterioration of runway pavements and for identifying appropriate corrective actions required for safe aircraft operations. Table 3-2 depicts the friction values for three classification levels for FAA qualified CFME operated at 40 and 60 mph (65 and 95 km/h) test speeds. This table was developed from qualification and correlation tests conducted at NASA's Wallops Flight Facility in 1989.

TABLE 3-2. FRICTION LEVEL CLASSIFICATION FOR RUNWAY PAVEMENT SURFACES

	40 mph			60 mph		
	Minimum	Maintenance Planning	New Design/ Construction	Minimum	Maintenance Planning	New Design/ Construction
Mu Meter	.42	.52	.72	.26	.38	.66
Dynatest Consulting, Inc. Runway Friction Tester	.50	.60	.82	.41	.54	.72
Airport Equipment Co. Skiddometer	.50	.60	.82	.34	.47	.74
Airport Surface Friction Tester	.50	.60	.82	.34	.47	.74
Airport Technology USA Safegate Friction Tester	.50	.60	.82	.34	.47	.74
Findlay, Irvine, Ltd. Griptester Friction Meter	.43	.53	.74	.24	.36	.64
Tatra Friction Tester	.48	.57	.76	.42	.52	.67
Norsemeter RUNAR (operated at fixed 16% slip)	.45	.52	.69	.32	.42	.63

3-20. EVALUATION AND MAINTENANCE GUIDELINES. The following evaluation and maintenance guidelines are recommended based on the friction levels classified in Table 3-2. These guidelines take into account that poor friction conditions for short distances on the runway do not pose a safety problem to aircraft, but long stretches of slippery pavement are of serious concern and require prompt remedial action.

a. **Friction Deterioration Below the Maintenance Planning Friction Level (500 ft).** When the average Mu value on the wet runway pavement surface is less than the Maintenance

Planning Friction Level but above the Minimum Friction Level in Table 3-2 for a distance of 500 feet (152 m), and the adjacent 500 foot (152 m) segments are at or above the Maintenance Planning Friction Level, no corrective action is required. These readings indicate that the pavement friction is deteriorating but the situation is still within an acceptable overall condition. The airport operator should monitor the situation closely by conducting periodic friction surveys to establish the rate and extent of the friction deterioration.

APPENDIX 4. FAA-APPROVED CFME

AIRPORT SURFACE FRICTION TESTER INDUSTRIES AB Metallgatan 7 271 39 Ystad, Sweden SWEDEN	AIRPORT SURFACE FRICTION TESTER +46 0 411 651 00 FAX +46 0 411 190 12 sales@asft.se
AIRPORT TECHNOLOGY USA NO LONGER AVAILABLE	SAFEGATE FRICTION TESTER
DYNATEST CONSULTING, INC., (FORMERLY K.J. LAW ENGINEERS, INC.) 13952 US Highway 301 South Starke, FL 32091	RUNWAY FRICTION TESTER (M6800) (904) 964-3777 FAX (904) 964-3749
FINDLAY, IRVINE, LTD. 42-44 Bog Road, Penicuik Midlothian EH 26 9 BU SCOTLAND	GRIPTESTER FRICTION TESTER +44 1968 672111 FAX +44 1968 671237 www.findlayirvine.com
INTERTECH ENGINEERING NO LONGER AVAILABLE	TATRA FRICTION TESTER
NEUBERT AERO CORP. 4105 West DeLeon Street Tampa, FL 33609	MARK 4 MU METER (404) 252-0600 FAX (727) 789-2015 www.airportnac.com
NORSE METER P.O. Box 125 Bogstadvien 0323 0310 NORWAY	RUNAR RUNWAY ANALYSER AND RECORDER +47 23 20 1270 FAX + 47 23 20 1271
PATRIA VAMMAS AEC P.O. Box 18 Vammaksentie FIN-38201 Vammala FINLAND	BV-11 SKIDDOMETER + 358 20 4694041 FAX +358 20 4694250 www.patria.fi



EXHIBIT C: SAMPLE ADDENDUM FORM

To: NAME
TITLE
FROM: Christy Dixon
Purchasing Manager
DATE: TBD
SUBJ: Addendum No. ____
Request for Quotation – One (1) Friction Grip Tester
Savannah/Hilton Head International Airport

Dear Mr./Ms. _____:

Attached please find Addendum No. ____ to the above referenced RFQ. Please acknowledge the receipt of this Addendum in the space provided below and return one company to this office for our records prior to _____.

I hereby acknowledge receipt of Addendum No. _____

(Signature) (Date)

(Name of Company)

ADDENDUM NO. ____
(DATE)

SAVANNAH/HILTON HEAD INTERNATIONAL AIRPORT

REQUEST FOR QUOTATIONS
ONE (1) FRICTION GRIP TESTER

The following amendments, additions, deletions shall be made to the Contract Documents. Insofar as these documents are at variance with this Agreement, Addendum No. _____, dated _____, shall govern:

END ADDENDUM NO. 1