CONTRACT DOCUMENTS
AND
TECHNICAL SPECIFICATIONS

ACQUIRE SNOW REMOVAL EQUIPMENT

NORFOLK INTERNATIONAL AIRPORT
NORFOLK, VIRGINIA

PREPARED FOR:
NORFOLK AIRPORT AUTHORITY

As-Bid
May 2016

DELTA AIRPORT CONSULTANTS, INC.
9711 Farrar Ct., Suite 100
Midlothian, VA 23236
CONTRACT SPECIFICATIONS FOR
SNOW REMOVAL EQUIPMENT

AT

NORFOLK INTERNATIONAL AIRPORT
NORFOLK, VIRGINIA

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INVITATION FOR BIDDERS
SNOW REMOVAL EQUIPMENT

I. PURPOSE OF REQUEST FOR BIDS

The Norfolk Airport Authority (the “Authority”) invites bids from interested manufacturers specializing in the fabrication of high quality, snow removal equipment. The intent and purpose of this Request for Bids (hereafter “Request”) is to establish a single agreement with a qualified manufacturer to custom-build five (5) each 4x4 Carrier Vehicles with 22 Foot Power Broom and one (1) each 4x4 carrier vehicles with a dedicated rotatory blower (hereafter “Snow Removal Equipment”) for the Norfolk International Airport (hereafter “Airport”).

The deadline for submission of bids is May 26, 2016 at 11:00 AM local time in Conference Room D at the Norfolk International Airport at which time the bids will be publicly opened and read aloud. A non-mandatory Pre-Bid Meeting will be held May 11, 2016 at 2:00 PM local time in Conference Room D at the Norfolk International Airport.

It shall be understood that Documents referred to in this Request shall be carefully examined and read and are all hereby made a part of this Request.

II. SCOPE OF WORK

The specifications provided clearly describe the design requirements, features, and delivery of Snow Removal Equipment to the Airport. The primary objective of these specifications is to obtain new snow removal equipment meeting or exceeding all specifications to include, but not be limited to performance, safety and service. These specifications cover specific requirements as to the type of construction and tests the apparatus must conform, together with certain details as to finish, material preferences, equipment and appliances with which the successful Offeror must conform.

The design of the snow removal equipment must embody the latest approved automotive design practices. The workmanship must be of the highest quality in its respective field. Special consideration shall be given to the service access to areas needing periodic maintenance, ease of operation, and symmetrical proportions. Construction must be heavy duty and ample safety factors must be provided to carry loads as specified. The construction method employed will be in such a manner as to allow ready removal of any component for service or repair.

The Snow Removal Equipment shall conform to the FAA Advisory Circular 150/5220-20A, dated 9/24/2014, unless otherwise specified in this document. Only the specified snow removal equipment listed in these specifications shall be provided.

The equipment shall further conform to all Federal Motor Vehicle Safety Standards with no exception.
III. CHANGE IN CONTRACT

The authority reserves the right to add or delete options from this contract, as required. The parties may agree in writing to modify the scope of the contract. An increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as part of their written agreement to modify the scope of the contract.

The Offeror shall comply with the notice upon receipt. The Offeror shall be compensated for any additional costs incurred as a result of such order and likewise, shall give the Authority a credit for any savings.

IV. BID SUBMISSION REQUIREMENTS

A. Deadline for Bid Submission – The deadline for submission of bids is May 26, 2016 at 11:00 AM local time at which the bids will be publicly opened and read aloud. Any bid received by the Authority after the designated deadline for submission will be returned to sender unopened.

B. Bid Form - The Bid Form shall be signed with the legal signature of the Offeror’s representative and enclosed in an opaque, sealed envelope and clearly marked on the outside of the envelope with the following information:

   Offeror’s company name and address
   The designated bid opening date and time
   Bid Request 2016: Snow Removal Equipment

Failure to follow marking requirements may result in the bid being deemed unresponsive. Any additional information the Offeror wishes to include must be submitted in the opaque envelope with the bid.

Send Bid Submissions to the respective address via Professional Courier (i.e. FedEx, UPS, etc.), U.S. Mail or Hand Delivery to:

Norfolk Airport Authority
Attn: Mr. Anthony Rondeau
Director of Facilities
2200 Norview Ave.
Norfolk, Virginia 23518

Bids will be logged in with the Authority’s receptionist to reflect the date and time of receipt. Bids will not be accepted by facsimile, email or other electronic means.
C. Questions Regarding Request – Any questions about the scope of work or specifications contained in this Request for Bids, must be submitted in writing no later than 5:00 pm, May 17, 2016 to Mr. John Longnaker, Project Manager for Delta Airport Consultants email: jlongnaker@deltaairport.com or via Fax (804) 275-8371. Any revision made to this Request for Bids shall be in the form of an addendum and will be forwarded to all known recipients of this Invitation to Bid.

D. All Offeror Specifications, which are exceptions to the Authority Specifications, must be noted and attached to the Bid Form. Exceptions to the specifications may be accepted or rejected by the Authority in its sole discretion as to what is in the Authority’s best interest. This information may be presented on a separate sheet; however, it must be presented in the same format as this Request for Bids.

E. All numerical information submitted on the Bid Form must be typed or printed in ink. Erasures or other changes shall be explained or noted over the initials of the Offeror. Award shall be made to the lowest responsive and responsible Offeror. Offeror shall not be considered responsible if they have defaulted under the terms of any contract with the Authority in the past five (5) years, or if based upon review of completed projects, it is determined that the Offeror is not responsible as that term is used in the Virginia Public Procurement Act Section 11-37. If the apparent low Bidder is determined to be non-responsible or non-responsive, the Bidder shall be notified in writing as provided in the Virginia Public Procurement Act Section 11-65.

F. Bid Bond – Each bid must be accompanied by cashier’s check, certified check, or a bid bond in the amount of five percent of the bid, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent of the bid. Such checks or bid bonds will be returned to all except the two lowest bidders within ten (10) business days after the opening of the bids, and the remaining checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contract, or if no award has been made within 45 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid.

G. Performance and Payment Bond, Execution of Contract – Having satisfied all conditions of award as set forth elsewhere in these documents, the successful bidder shall, with the period specified above, furnish separate 100% performance and payment bonds conditioned that such person shall faithfully perform all the provisions of the contract and pay all the laborers, mechanics, and subcontractors and material vendors and all persons who shall supply such person or persons or subcontractors with supplies for the carrying on of such work. Such bonds shall bear the same date as or a date subsequent to, the date of the Contract.
H. **Certification** – Vendor shall submit in writing to the Authority, a signed certification that the components constituting the whole of the equipment being supplied comply with the applicable, performance, design or construction requirements of this specification.
REQUIRED FEDERAL CONTRACT PROVISIONS

ACCESS TO RECORDS AND REPORTS

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the sponsor, the Federal Aviation Administration, and the Comptroller General of the United States or any of their duly authorized representatives, access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION to ENSURE EQUAL EMPLOYMENT OPPORTUNITY

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables

- Goals for minority participation for each trade: 26.6%
- Goals for female participation in each trade: 6.9%

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP) within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated
starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is Economic Area 5720, Norfolk, Virginia.

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner’s notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by deadline indicated in the Owner’s notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

BUY AMERICAN PREFERENCE

The contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or offeror must complete and submit the Buy America certification included herein with their bid or offer. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.
Certificate of Buy American Compliance for Manufactured Products  
(Non-building construction projects, equipment acquisition projects)

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✔) or the letter “X”.

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:
   a) Only installing steel and manufactured products produced in the United States, or;
   b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
   c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:
1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic product
3. To furnish US domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:
1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the “item”. The required documentation for a type 3 waiver is:

   a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.

c) Percentage of non-domestic component and subcomponent cost as compared to total “item” component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

**Type 4 Waiver** – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

a) Detailed cost information for total project using US domestic product

b) Detailed cost information for total project using non-domestic product

**False Statements:** Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

________________________________________
Date

________________________________________
Signature

________________________________________
Company Name

________________________________________
Title
GENERAL CIVIL RIGHTS PROVISIONS

The contractor 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 contractor and sub-tier contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

Title VI Solicitation Notice:

The Norfolk Airport Authority in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

Compliance with Nondiscrimination Requirements

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

1. Compliance with Regulations: The contractor (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. Non-discrimination: The contractor, 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 contractor 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 contractor 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 contractor of the contractor’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 contractor 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 contractor 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 contractor’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 contractor under the contract until the contractor complies;
   and/or

   b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions**: The contractor will include the provisions of paragraphs one
through six in every subcontract, including procurements of materials and leases of equipment,
unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor
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 contractor becomes involved in, or is threatened with
litigation by a subcontractor, or supplier because of such direction, the contractor may request the
sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the
contractor 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 contractor, for itself, its assignees, and successors in
interest (hereinafter referred to as the “contractor”) 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 U.S.C. § 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
U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been
acquired because of Federal or Federal-aid programs and projects);
discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 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 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
• The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 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 non-discrimination 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);
• Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

CLEAN AIR AND WATER POLLUTION CONTROL

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. § 740-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.
CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a “covered transaction”, must verify each lower tier participant of a “covered transaction” under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

DISADVANTAGED BUSINESS ENTERPRISES

Contract Assurance (§ 26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than seven (7) days from the receipt of each payment the prime contractor receives from Norfolk Airport Authority. The prime contractor agrees further to return retainage payments to each subcontractor within seven (7) days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Norfolk Airport Authority. This clause applies to both DBE and non-DBE subcontractors.

Race/Gender Neutral: The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Norfolk Airport Authority to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

The Owner’s award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR §26.53.

As a condition of bid responsiveness, the Bidder or Offeror must submit the following information with their proposal on the forms provided herein:

1. The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
2. A description of the work that each DBE firm will perform;
3. The dollar amount of the participation of each DBE firm listed under (1)
4. Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner’s project goal;
(5) If Bidder or Offeror cannot meet the advertised project DBE goal; evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR Part 26.

The successful Bidder or Offeror must provide written confirmation of participation from each of the DBE firms the Bidder or Offeror lists in their commitment. This Bidder or Offeror must submit the DBE’s written confirmation of participation with the proposal documents as a condition of bid responsiveness.

**TEXTING WHEN DRIVING**

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving" (10/1/2009) and DOT Order 3902.10 “Text Messaging While Driving” (12/30/2009), the FAA encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or sub-grant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 and involve driving a motor vehicle in performance of work activities associated with the project.

**ENERGY CONSERVATION REQUIREMENTS**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq).

**EQUAL OPPORTUNITY CLAUSE**

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identify or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places,
available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

FEDERAL FAIR LABOR STANDARDS ACT

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part time workers.
The contractor has full responsibility to monitor compliance to the referenced statute or regulation. The contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division

CERTIFICATION REGARDING LOBBYING

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. Contractor must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The Contractor retains full responsibility to monitor its compliance and their subcontractor’s compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). Contractor must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.
PROCUREMENT OF RECOVERED MATERIALS

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use of products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

a) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or,

b) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/epawaste/conserve/tools/cpg/products/.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;

b) Fails to meet reasonable contract performance requirements; or

c) Is only available at an unreasonable price.

TERMINATION FOR DEFAULT (EQUIPMENT)

The Owner may, by written notice of default to the Contractor, terminate all or part of this Contract if the Contractor:

1. Fails to commence the Work under the Contract within the time specified in the Notice-to-Proceed;

2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;

3. Fails to make delivery of the equipment within the time specified in the Contract, including any Owner approved extensions;

4. Fails to comply with material provisions of the Contract;

5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements;

6. Becomes insolvent or declares bankruptcy;

If one or more of the stated events occur, the Owner will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the Owner’s discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default. If within [10] days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the Owner, the Owner has authority to acquire equipment by other procurement
action. The Contractor will be liable to the Owner for any excess costs the Owner incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the Owner shall be at the Contract price. The Owner may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the Owner determines to be necessary to protect the Owner against loss because of Contractor default.

Owner will not terminate the Contractor's right to proceed with the Work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the Owner determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the Owner issued the termination for the convenience of the Owner.

The rights and remedies of the Owner in this clause are in addition to any other rights and remedies.

TERMINATION FOR CONVENIENCE (CONSTRUCTION & EQUIPMENT CONTRACTS)

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.
4. Deliver to the owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

a) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
b) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
c) reasonable and substantiated claims, costs and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
d) reasonable and substantiated expenses to the contractor directly attributable to Owner’s termination action

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner’s termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror -

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R.; and

c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or

(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or

(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in in all lower tier subcontracts. The contractor may rely...
on the certification of a prospective subcontractor that it is not a firm from a foreign country included on
the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has
knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an
award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous
certification, the Federal Aviation Administration may direct through the Owner cancellation of the
contract or subcontract for default at no cost to the Owner or the FAA.

VETERAN’S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the
contractor and all sub-tier contractors must give preference to covered veterans as defined within Title
49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf
veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by
15 U.S.C. 632) owned and controlled by disabled veterans. This preference only applies when there are
covered veterans readily available and qualified to perform the work to which the employment relates.
In compliance with our Request for Bids, the undersigned hereby propose to furnish the materials and labor and to perform the work for the completion of items listed in the Schedule below in strict accordance with the Request for Bids, Federal Aviation Administration Contract Clauses, and Specifications and all other contract documents for the consideration of the prices quoted in the following schedule of bid items, and agrees, upon receipt of written notice of award, that it will execute a contract in accordance with the bid as accepted and give the required contract bonds with good and sufficient surety, within fifteen (15) calendar days after receipt of notice of formal award of contract and presentation of the prescribed forms.

It is agreed that the undersigned has informed itself fully in regard to all conditions pertaining the work is to be done; that it has examined the specifications for the work and contractual documents thereto, and has read all the special provisions furnished prior to the opening of bids, and that it has satisfied itself relative to the work to be performed.

It is agreed that the description under each item, being stated, implies although it does not mention, all incidentals and that the prices stated are intended to cover all such work, materials, and incidentals as constitute bidders obligations as described in the specifications, and any details not specifically mentioned, but evidently included in the contract shall be compensated for in the item which most logically includes it.

It is understood that this proposal is submitted for the purpose of obtaining snow removal equipment at the Norfolk International Airport. Said work includes the following general items:

1. 4x4 Carrier Vehicle with integrated 22 foot power broom
2. 4x4 Carrier Vehicle with integrated 52 inch rotary plow
3. Removal (at Authority Option) for up to five (5) rotary brooms and carrier vehicles (1999 and 2001).

Said work is described in the project contract documents which also include the place, date, and time of opening proposals.

It is understood that separate contracts on individual schedules of work may be awarded, when included in the bid documents and bidders can bid on one or all schedules.
It is understood that wages not less than the minimum rates or wages, as predetermined for this project by the Secretary of Labor, were used in the preparation of this proposal.

It is understood that all workmanship and materials under all items of work are guaranteed for one year from the date of final acceptance.

It is understood that the Owner reserves the right to accept or reject any or all bids and waive informalities.

The undersigned agrees, that if awarded the contract, it will commence the work not later than ten (10) days from receipt of the Notice to Proceed and that it will complete the work within the time stipulated in this proposal.

It is understood that for each calendar day that any work remains incomplete after the contract time, including all extensions and adjustments as provided, the sum of two hundred dollars ($200) as liquidated damages will be deducted from any money due or to become due to the Contractor or its Surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the Owner should the Contractor fail to deliver, have operational and complete training of airport staff in the time provided in its contract.

Enclosed is security as required, consisting of (cash, certified check, or bid bond) ______________ payable to the ____________________, in the amount of $__________.

This amount equals 5 percent of the total amount bid submitted.

It is understood that this project is funded by federal, state, and local monies and the Supplier shall be subject to all laws and regulations applicable to recipients of such funds.
PROPOSAL FORM

Date: ____________

BASE BID

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>APPROX. QUANTITY</th>
<th>ITEM WITH UNIT PRICE WRITTEN IN WORDS</th>
<th>UNIT PRICES IN FIGURES</th>
<th>EXTENDED TOTAL</th>
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<tbody>
<tr>
<td>1</td>
<td>5 LS</td>
<td>4x4 CARRIER VEHICLE WITH 22 FOOT POWER BROOM</td>
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<td>2</td>
<td>1 LS</td>
<td>4x4 CARRIER VEHICLE WITH 52 INCH INTEGRATED (SELF CONTAINED) BLOWER UNIT</td>
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TOTAL BASE BID AMOUNT $______________

SURPLUS EQUIPMENT CREDIT

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<tr>
<th>ITEM NO.</th>
<th>APPROX. QUANTITY</th>
<th>ITEM WITH UNIT PRICE WRITTEN IN WORDS</th>
<th>UNIT PRICES IN FIGURES</th>
<th>EXTENDED TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5 EA</td>
<td>SURPLUS EQUIPMENT CREDIT (4 X 4 CARRIER VEHICLE WITH 20 FOOT POWER BROOM - OSHIKOSH MANUFACTURED)</td>
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TOTAL BASE BID + SURPLUS EQUIPMENT CREDIT AMOUNT $______________

CONTRACT TIME: 240 CALENDAR DAYS
LIQUIDATED DAMAGES: $200/CALENDAR DAY
FEDERAL CONTRACT LANGUAGE CERTIFICATION

By signing this bid form, the bidder is affirming that it has read and understands and will follow all applicable Federal Contract Language requirements including adding these provisions to all lower tier agreements. The Federal Contract Language included but is not limited to:

- Access to Record in accordance with 2 CFR § 200.33; 2 CFR § 200.336; and FAA Order 5100.38
- Breach of Contract Terms in accordance with 2 CFR § 200 Appendix II(A)
- Buy American Preference in accordance with 49 USC § 50101 (see separate bid document requiring review and signature)
- Civil Rights in accordance with 49 USC § 47123
- Civil Rights – Title VI assurances in accordance with 49 USC § 47123 and FAA Order 1400.11
- Clean Air and Water Pollution Control in accordance with 2 CFR § 200, Appendix II(G)
- Certification of Offeror/Bidder Regarding Debarment in accordance with 2 CFR part 180 (Subpart C), 2 CFR part 1200 and DOT Order 4200.5
- Disadvantaged Business Enterprise in accordance with 49 CFR part 26
- Distracted Driver (Texting While Driving) in accordance with Executive Order 13513 and DOT Order 3902.10
- Energy Conservation Requirements in accordance with 2 CFR § 200, Appendix II(H)
- Certification Regarding Lobbying in accordance with 31 U.S.C. § 1352 – Byrd Anti-Lobbying Amendment, 2 CFR part 200, Appendix II(J), and 49 CFR part 20, Appendix A (see separate form included in bid proposal)
- Procurement of Recovered Materials in accordance with 2 CFR § 200.322 and 40 CFR part 247
- Occupational Safety and Health Act of 1970 in accordance with 20 CFR part 1910
- Procurement of Recovered Materials in accordance with 2 CFR § 200.322 and 40 CFR part 247
- Termination of Contract in accordance with 2 CFR § 200 Appendix II(B)
- Trade Restrictions Certification in accordance with 49 USC § 50104 and 49 CFR part 30
- Veterans’ Preference in accordance with 49 USC § 47112(c)

______________________________  _______________________________
Date                                             Signature

______________________________  _______________________________
Company Name                                  Title
CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR MANUFACTURED PRODUCTS

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter “X”.

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:
   a) Only installing steel and manufactured products produced in the United States, or;
   b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
   c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:
1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic product
3. To furnish US domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:
1. To submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the “item”. The required documentation for a type 3 waiver is:

   a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation...
Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety).

b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.

c) Percentage of non-domestic component and subcomponent cost as compared to total “item” component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

a) Detailed cost information for total project using US domestic product

b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date

Signature

Company Name

Title
CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a “covered transaction”, must verify each lower tier participant of a “covered transaction” under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

______________________________  ________________________________
Date                             Signature

______________________________  ________________________________
Company Name                    Title
CERTIFICATION REGARDING LOBBYING

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

________________________________________  ______________________________________
Date                                           Signature

________________________________________  ______________________________________
Company Name                                   Title
TRADE RESTRICTION CERTIFICATION

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror -

a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (U.S.T.R.);

b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R.; and

c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

(1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or

(2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or

(3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

Date

Signature

Company Name

Title
By signing the attached, the bidder certifies that a copy of the Contract Documents are in the Bidder’s possession, and that all work called for in the Contract Documents will be done in accordance with these Contract Documents. The Bidder also certifies that they will perform at least 51% of the work by value, and must submit, as part of the bid, a list of any sub-contractor doing work, the extent of work that will be performed and the dollar value of the work.

NOTE: If Bidder is a corporation, write state of incorporation under signature.

The undersigned hereby initialing and dating acknowledges the receipt of the following Addenda to the Contract Documents.

Addendum No. 1: _______________ __________ (initial and date)
Addendum No. 2: _______________ __________ (initial and date)

**BIDDER’S REGISTRATION AND SIGNATURE**

Contractor: __________________________________________________________

Address: _________________________________________________________________

____________________________________________________________

Telephone____________________________

Name of Officer____________________________

Signature of Officer _______________________

NOTE: If Bidder is a corporation, write state of incorporation under signature.

**END OF BID FORM**
BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT WE ____________________
_____________________________________________ as Principal, hereinafter called the Principal, and _______________________________ a corporation duly organized under the laws of the Commonwealth of Virginia as Surety, hereinafter called the Surety, are held and firmly bound unto the Norfolk Airport Authority as Obligee, hereinafter called the Obligee, in the sum of _________________________________ Dollars ($_______), for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for Snow Removal Equipment.
BID BOND

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the principal to enter such Contract and give such bond or bonds, if the principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of __________2016

(Principal)             (Seal)

(Title)

(Witness)

(Surety)                (Seal)

(Title)

(Witness)
THIS AGREEMENT made and entered into this _____ day of __________, 2016, by and between
Norfolk Airport Authority (Party of the First Part, hereinafter called the Owner) and
___________________ (Party of the Second Part, hereinafter called the Contractor).

WITNESSETH: That the said Contractor has agreed and by these presents does agree with the
said Owner, for the consideration herein mentioned in his/her proposal and under the penalty
expressed in Bonds, hereto attached, to furnish all equipment, tools, material, skill and labor of
every description necessary to carry out and complete in good, firm, substantial, and
workmanlike manner, and delivered to Norfolk International Airport the work specified in strict
conformity with the Specifications hereinafter set forth. The work covered by this Agreement
includes all work shown on the plans and specifications and listed in the attached Bid Form, for
the Snow Removal Equipment.

The Contractor shall commence the work with adequate force and equipment on a date to be
specified in a written order of the Owner and shall complete the work within two hundred forty
(240) calendar days from and including said date. The Contractor shall fully guarantee his/her
workmanship and materials furnished for a period of one year following the date of final
acceptance of the work. The performance and payment bonds shall remain in full force for this
one year period. As a condition of final acceptance, the Contractor shall have executed, and
submit to the Owner, the “Warranty of Construction” form that has been attached to this contract
document.

If said work is not completed within the time stated above, the Contractor shall be liable and
hereby agrees to pay to the Owner as liquidated damages and not as a penalty, the amount of two
hundred dollars ($200) per calendar day for each and every part of a day thereafter that said work
remains substantially incomplete.

The Owner shall pay and the Contractor shall receive the unit prices stipulated in the Contractor's
Bid Form hereto attached as full compensation for everything furnished and done by the Contractor
(Total______________________ $______________________), based on the quantities completed in an acceptable
manner, which sum shall be paid in the manner and terms specified in the Contract Documents,
but, before issuance of certificates of payments if the Contractor shall not have submitted
evidence satisfactory to the Owner that all payrolls, materials, bills, and other indebtedness
connected with the work have been paid, the Owner may withhold, in addition to the retained
percentages such amount or amounts as may be necessary to pay just claims for labor and
services rendered and materials in and about the work, and such amount or amounts withheld or
retained may be applied by the Owner to the payment of such just claim. Items of work called out in specifications that are not specifically listed in the bid form shall be considered as incidental to a listed bid item(s), or to the project as a whole.

It is further mutually agreed between the parties hereto that if, at any time after the execution of this agreement and the surety bond hereto attached for its faithful performance, the first party shall deem the surety or sureties upon such bonds to be unsatisfactory, or if, for any reason, such bonds cease to be adequate to cover the performance of the work, the second party shall at its expense, within five days after the receipt of notice from the first party so to furnish an additional bond or bonds in such form and amount, and with surety or sureties as shall be satisfactory to the first party. In such event, no further payment to the second party shall be deemed to be due under this agreement until such new or additional security for the faithful performance of the work shall be furnished in a manner and form satisfactory to the first party.

In the event that it should become necessary, any question or controversy regarding formation, construction, interpretation, validity, and enforcement of this Agreement, and the rights or obligations of the signatory parties hereto, shall be resolved only by lawfully instituted proceedings in the Circuit Court of the City of Norfolk, Virginia, and the substantive law of the Virginia or federal law, where applicable, shall govern resolution of any such question or controversy. In the event any provisions of this Agreement shall be held to be invalid or unenforceable, the remaining provisions shall be valid and binding upon the parties.
IN WITNESS WHEREOF, the parties hereto have executed this Agreement in quadruplicate, the day of ________ 2016.

OWNER: Norfolk Airport Authority

2200 Norview Ave.

Norfolk, VA  23518

ATTEST: Robert Bowen, AAE

Executive Director

CONTRACTOR: Contractor

Address

ATTEST: Signature

Name

Title
PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that _________________________ as Principal, hereinafter called Contractor, and _________________________ a corporation duly organized under the laws of the Commonwealth of Virginia, as Surety, hereinafter called Surety, are held and firmly bound unto the Norfolk Airport Authority, as Obligee, hereinafter called Owner, in the amount of ___________________________________________________________________________ Dollars ($_________), for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Contractor has by written agreement dated ___________________ 2016, entered into a contract with Owner for manufacture, assembly, delivery and personnel training of snow removal equipment and other associated items at the Norfolk International Airport in accordance with Specifications which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then his/her obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever the Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

(1) Complete the Contract in accordance with its terms and conditions, or

(2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and made available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by Owner to Supplier under the Contract and any amendments thereto, less the amount properly paid by Owner to Supplier.
PERFORMANCE BOND

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and sealed this ____ day of ________, 2016.

__________________________________________________________________________
Principal                                                               Surety

__________________________________________________________________________
Signature                                                               Signature

__________________________________________________________________________
Name                                                                   Name

__________________________________________________________________________
Title                                                                  Title

__________________________________________________________________________
Seal By:                                                               Seal By:

__________________________________________________________________________
Title                                                                  Title

(SEAL)                                                                  (SEAL)
WARRANTY

SNOW REMOVAL EQUIPMENT

AT

NORFOLK INTERNATIONAL AIRPORT
NORFOLK, VIRGINIA

DATE OF FINAL ACCEPTANCE: ____________________________

(Contractor, Address) hereby guarantees that all equipment manufacture and assembled and delivered under the above Contract are in accordance with the contract specifications and authorized alterations and additions thereto, and that all of the work under the Contract is free from faulty materials and improper workmanship, and guaranteed against injury from proper and usual wear, and agreeing (and we do hereby so agree) that should any defect develop during the contract guarantee period, as hereinafter defined, due to improper materials, workmanship or arrangement, we will, upon written notice, replace or re-execute such defective work, together with any other work affected in making good such defects, at the convenience of, and without expense to the Owner.

The Contractor further warrants that all manufacturers or other warranties on all materials and equipment furnished by Contractor shall run directly to or be specifically assigned to Owner. The Contractor warrants that the installation of any and all materials and equipment shall be in strict accordance with manufacturer’s requirements. In the event Owner seeks to enforce a claim based upon a manufacturer’s warranty and should such manufacturer then fail to honor its warranty based, in whole or in part, on a claim of defective installation, Owner shall be entitled to enforce said warranty against Contractor in accordance with the terms of said warranty, except that a claim of defective installation shall not be a defense to any such warranty claim by Owner against Contractor.
WARRANTY

The contract guarantee period shall be a period of one (1) year from final acceptance, as noted above, except in the cases of manufacturer’s or other required extended warranties that extend for periods greater than one year from final acceptance, whereby the contract guarantee period shall extend to match for the items that are so warranted.

The warranty for any work repaired or replaced during the guarantee period shall run for a period of one (1) year from the date of repair or replacement.

______________________________
Contractor

Subscribed and sworn before me in the Commonwealth of Virginia, this _____ day of ________, 2016.

________________________________________
Notary Public

My Commission Expires
CERTIFICATE OF FINAL ACCEPTANCE

SNOW REMOVAL EQUIPMENT

AT

NORFOLK INTERNATIONAL AIRPORT
NORFOLK, VIRGINIA

Contract Date: ________________ Contract Amount: $_____________________

Final Cost: $_____________________

This Certificate of Final Acceptance applies to all Work under the Contract Documents and approved Change Orders for the Snow Removal Equipment project completed by ____________________________________________(Contractor) for Norfolk Airport Authority.

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER and CONTRACTOR, and that Work is hereby accepted as complete on ________________ (Date).

The following documents and information are attached to and made a part of this Certificate:

1. Warranty of Construction

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR’s obligation to complete the Work in accordance with the Contract Documents.

Accepted by CONTRACTOR ____________________________________________

By: ___________________________ Date: ____________________________

Accepted by OWNER ________________________________________________

By: ___________________________ Date: ____________________________
SPECIFICATIONS FOR SNOW REMOVAL EQUIPMENT

PART 1 – 4 X 4 CARRIER VEHICLE

1. GENERAL
This carrier vehicle shall comply with all applicable quality and safety standards, and requirements of the FAA Advisory Circular 150/5220-20A. The manufacturer shall also comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

This Vehicle shall be all wheel drive and must be designed and manufactured for the specific purpose of snow removal. Wheelbase shall be no less than 158". Vehicle shall be designed and line built by the original manufacturer as a 4 X 4. Aftermarket conversions of 4 X 2's are not acceptable. Minimum Total Vehicle Rating of 50,000 lbs. at axle hubs.

The airport sponsor requires this specified piece of equipment in order to maintain the airfield during large and small snow events. It will be a central and critical element in the fleet and in the effort to accomplish the airport’s published snow plan. Experience building runway snow sweepers of this nature is mandatory as is a track record of recent manufacture and in-service record for machines comparable and similar to that specified. A listing of airport purchasers and contact information is required in the bid package to enable the sponsor to contact at least three (3) airports that have taken delivery of the carrier vehicle equipment from the bidder within the last three (3) years. **No prototypes shall be permitted.**

2. ENGINE
The engine shall be a current model EPA On-Highway compliant four stroke diesel, six (6) cylinder, developing a minimum of 425 HP at 2100 rpm, 1550 lb.ft torque @ 1200 rpm and shall be equipped with the latest diesel electronic control and management system. The engine shall have an automatic power de-rate system to protect against low oil pressure and high engine temperature.

3. TRANSMISSION AND TRANSFER CASE
The transmission shall be five-speed electronic control automatic. Transfer case shall be a two speed type with an automatic locking / unlocking differential to control the torque between front and rear axles. The Hi-Lo range selection shall be accomplished through air shift linkage to assure positive engagement with operational speed lock out (smart-shift). The transfer case shall have a torque transmission capacity exceeding the maximum torque developed by the engine and transmission, and shall be approved for the application and be manufactured by the chassis builder.
4. **AXLES**  
The rear driving axle shall provide a minimum 10" ground clearance. A controlled traction differential is required. The front axle shall be drive/steer type and shall provide a minimum 11" ground clearance.

5. **SUSPENSION**  
Suspension shall include alloy steel springs of the semi-elliptical type. The spring hangers, pins, and supports shall be heavy duty to insure long life. The pins shall be of the grease type with substantial bronze bushings.

6. **BRAKES**  
The service brakes shall electronic antilock, fully air actuated, drum and shoe type with a minimum 15.7 CFM air compressor. The parking brakes shall be spring actuated, air released at the rear service brake chambers, with the air switch mounted in easy reach of the operator. Both front and rear brakes shall be s-cam type. The air system shall be equipped with a heated air drier system.

7. **WHEELS AND TIRES**  
Single Michelin XZL 395/85R20-20 ply or approved equal tires are required on all axles. The wheels shall be of the steel disc type with an 11.25" bolt circle. Each vehicle shall be delivered with two spare tires and rim assemblies.

8. **STEERING SYSTEM**  
Front axle steering shall be integral hydraulic assist gear type. The steering gear shall be rated for heavy duty service, and a separate hydraulic steering pump shall be provided, with a reservoir independent of the auxiliary hydraulic system. For safety, a mechanical linkage shall be maintained between the operator’s steering wheel and front axle, allowing manual steering in the event of a hydraulic or electrical system failure.

9. **CAB**  
The cab shall be a HEAVY DUTY two man type, all steel, fully insulated. Floor mat, rubber or vinyl covering complete cab floor, fastened for easy removal, but securely held to floor. Tilt/Telescoping steering wheel. Left and right outside grab handles. For operator comfort, the engine shall not intrude into the cab envelope.

10. **CHASSIS**  
The chassis shall be designed to permit easy and safe mounting and dismounting of the unit for the operators and service personnel. All sheet metal, cowling, steps and fenders shall be free of sharp edges and protrusions. All steps or walkways shall be raised lug or expanded metal type construction. Grab bars shall be installed as required for safe mounting and dismounting by personnel. All sheet metal for cowling, shrouds and fenders shall include ample supports and bracing to prevent distortion and cracking. The engine shall be enclosed in a housing of
weatherproof design, full butterfly or full side opening for access to each side of engine. Front tires shall be equipped with fenders. Rear tires shall have mud flaps.

11. COOLING SYSTEM
The cooling system shall consist of a vertical flow radiator. The engine cooling system shall be filled with permanent type antifreeze protecting the system to -40 degrees F. The system shall be sized to allow full operation of the vehicle without overheating.

12. FUEL SYSTEM
Fuel tank(s) shall have a minimum capacity of 200 gallons. The tank shall be constructed of heavy gauge steel and be properly fastened to the frame. A four inch diameter filler neck shall be provided.

13. ELECTRICAL SYSTEM
System shall be 12-volt. Automatic reset circuit breakers on all major circuits are required (fuses are not acceptable).

14. HYDRAULIC SYSTEM
A central hydraulic system shall be provided, adequate to operate all equipment specified within. Lines shall be quick disconnect type.

15. BACK UP ALARM/HORN
The vehicle shall be equipped with a backup alarm installed at the rear. The backup alarm shall be activated whenever the transmission is placed in reverse. The backup alarm shall be a SAE J994, Type B vehicle backup alarm. The vehicle shall be equipped with an electric to allow the operator to provide and audible warning in an emergency.

16. LIGHTING SYSTEMS
The lighting system, including reflectors, markers identification and clearance lights, shall conform to FMVSS 108 as though the vehicle were an on-highway vehicle. Task-oriented lights shall be furnished to help to operator identify the overall width and to project a light pattern on the ground in front of the blower to assist the operator in determining those areas to be cleared and to provide adequate illumination for the operator and service personnel when the unit is on darkened aeronautical areas.

The carrier vehicle shall be equipped with two or more sealed-beam quartz-halogen OR LED headlights with upper and lower driving beams and switch for beam selection.

Three (3) sets (6 total units) of LED auxiliary lights shall be provided to overcome the proposed attachments (boom, rotary plow). Two (2) sets shall be manual adjustable from outside the cab and mounted on the mirror supports. One (1) set shall be mounted on the side of the cab with an interior handle to allow for adjustment while inside the cab. Care shall be taken to ensure that all beams have a clear path. Final locations shall be coordinated with the Airport staff prior to installation. A control to select each set if secondary lights shall be provided in the operator cab.
Backup Lights: There shall be at least two LED backup lights installed at the rear of and at either side of the vehicle that will automatically be activated when the vehicle is shifted into reverse gear.

17. WINDOWS, WINDSHIELDS, MIRRORS
Windshields shall be electrically heated. The vehicle cab shall maximize the use of glass, including the placement of panels if possible in the lower sections of door panels, to increase the operator’s view of operational areas and ground surfaces. All installed glass shall be laminated and safety rated and shall conform to all FMVSS requirements. The location and size of the windshield shall minimize visual obstructions to the operator. The windshield shall be reverse slope design to avoid snow build up and be equipped with four variable speed intermittent operating wipers, wet arm type. The windshield wiper system shall be capable of sweeping a clear view for all occupants. The windshield washer reservoir shall have a capacity of at least 10 gallons. Fluid applicators shall be located to provide at least 75% coverage of the windshield. The cab shall be equipped with sun visors inside the vehicle cab used in the operation of the cab’s heating system. The standard circulating air type defroster shall be complimented by two electrical auxiliary fans.

Two electrically heated exterior rear view mirrors of the extension arm type shall be mounted one on each side of the vehicle cab. Rear view mirrors are to be powered and remotely controlled. Each mirror shall have an area of not less than 100 square inches.

18. INSTRUMENTATION
The instrument panel shall be equipped with rocker switches and controls and instruments that are friendly to operators wearing bulky winter clothing. Frequently used instruments shall be located in direct line-of-sight and within forearm reach of a medium sized person sitting in the operator’s position. All instruments shall be clearly identified with labels that indicate their function. Instruments should display urgency-of-action lights, i.e. green for normal operation, amber for warning, and red for emergency. Instruments shall be illuminated by background lighting regulated by dimmer switches capable of providing infinitely variable lighting intensities. Circuit breakers shall be grouped for easy access and convenience. Typical instruments that report and track major functions of a carrier vehicle and mounted equipment are as follows:

- Air pressure gauge (dual system, physical/mechanical gauge required)
- Clock, (may be incorporated into the AM/FM radio)
- Fuel level with low level indicated by color and flashing visual alarm
- Engine(s) oil pressure
- Engine(s) coolant temperature
- Diesel Exhaust Fluid (DEF) level if applicable
- Diesel Particulate Filter (DPF) service/regen indicator, if applicable
- Transmission temperature
- Hydraulic oil temperature or warning light
• Rear wheel position indicator, if applicable
• Traction Drive modes, for transfer case and/or axle interlock

Warning Icons required for:
• Low Air Pressure
• ABS Fail (when applicable)
• ABS Communication Lost (when applicable)
• Engine Stop
• Engine fault warning
• Low voltage
• Engine overheat
• Engine low oil pressure
• Engine air intake restriction
• Transmission overheat
• Transmission fault
• Engine communication lost
• Control system node communication lost
• Transmission Communication lost
• Parking brake applied
• Windshield washer/deluge system fluid low level indicator
• Message center for fault messages affecting operation
• Warning device to indicate, door open, transmission in gear

Electrical accessory controls for items such as lights, signals, HVAC, Ignition, etc., switches for such items should be located in areas directly related to their frequency of use. As an example, High frequency use items such as AWS control, transmission control, wiper/washer, horn, signal indicator controls should be located in traditional locations within less than arms reach for the average operator. Low frequency use items such as head lights, auxiliary lights, ignition/starter, would be best located on a remote panel off to the side or overhead so as not to cause distraction to the operator. Control switches shall be identified/labeled and lighted preferably in a bold font for easy identification. For safety purposes, snow removal attachment and transmission controls should located to the right hand side of the operator.

Instrumentation shall be centered in front of the primary operator, and positioned to minimize interruption of operator visibility. In general and to provide clear information, chassis engine and system information shall be grouped together with broom and air blast engine information noticeably and meaningfully grouped and displayed to the front of the operator.

19. OPERATOR’S CAB
The unit shall have a fully enclosed two person cab thermally and acoustically insulated (less than 85 dB as measured 6 inches from the driver’s ear at full engine load). Cabs shall be attached to the chassis with vibration isolating mounts. Other cab items include:
• Heat, Defrost and Conditioned Air - fitted with an integral high-output, fresh air type heater/defroster/air conditioner with multi-speed fan motors. A refrigerant charged air
conditioner system shall be incorporated as a device to cool the cab for warm weather pavement maintenance and to control in-cab humidity and to control misting of the interior glass. Side glass defrosters ducts shall be required. Cab heater with defroster shall be capable of maintaining a 65 °F inside temperature at sea level when the ambient temperature is -20 °F. Under all conditions of heating and ventilation, the temperatures measured in the operator's immediate environment should be uniform within 9 °F (5 °C) (see SAE J1503). Warm weather air conditioning performance shall be capable of maintaining 68 °F at sea level with an ambient temperature of 100 °F. A screened, louvered vent with replaceable filter element is required for fresh air intake into the required heating and air conditioning unit. After-market/non- integrated roof-mounted air conditioning units are unacceptable. Vent controls or auxiliary fans shall be furnished as needed to provide maximum defrosting effect.

- Doors and Hardware doors and hinges shall be bolted or welded to the door(s) and cab frame and provided with proper restraints against high winds. Doors and door locks shall comply with FMVSS 206 Door Locks & Door Retention Components. Door handle shall be positioned for use without bending or stooping.
- Rear View Mirrors shall be fitted with dual, heated, motorized (remote controlled) mounted to the exterior of the cab using a pillar with a stabilizer bar connecting the mirror frame to the outer door frame. Mirror controls shall be operated from the operator position in the cab. Each primary mirror head shall have a surface area of not less than 100 square inches (650 cm²).
- Multiple interior sun visors, opaque and/or tinted sun-visors for the front and side windows shall be provided at the airport operators request.
- Two coat hooks, one for each seat
- One 2A-10BC interior mounted fire extinguisher that is readily accessible to both seats, and two if space requires that extinguishers be mounted away from middle console area.
- One 20 B: C: Purple K type fire extinguisher installed at a location readily accessible from the ground.
- Seating shall be premium quality 6-way adjustable air ride, fully adjustable in the horizontal (fore and aft) and vertical positions with high or medium rise back, foldable arm rests, adjustable lumbar support, cloth covered, and load adjustable. All vehicle seats shall be furnished with three-point safety belts, certified by the vehicle manufacturer to have been tested and in conformance with FMVSS requirements. Adjustments shall provide for ease of operation for individuals between the 5th and 95th percentile individuals.
- All interior controls and displays shall incorporate variable intensity lighting control.
- Two auxiliary 12 V power outlets.
- Minimum of two cup holders, one each within easy reach of the operator and passenger seats.
PART 2 – 22-FOOT POWER BROOM WITH AIR BLOWER

1. GENERAL

This power broom shall comply with all applicable quality and safety standards and requirements of the FAA Advisory Circular 150/5220-20A. The manufacturer shall also comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Exempted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

The airport sponsor requires this specified piece of equipment in order to maintain the airfield during large and small snow events. It will be a central and critical element in the fleet and in the effort to accomplish the airport’s published snow plan. Experience building runway snow sweepers of this nature is mandatory as is a track record of recent manufacture and in-service record for machines comparable and similar to that specified. A listing of airport purchasers and contact information is required in the bid package to enable the sponsor to contact at three (3) airports that have taken delivery of runway snow sweeper equipment from the bidder within the last three (3) years. No prototypes shall be permitted.

2. POWER SYSTEMS

Engineering hydraulic power calculations confirming the broom speed and available torque values must be supplied with the bid. This includes sizes and specifications of all components from the engine to the broom shaft including specification sheets for the broom and air blower hydrostatic pumps and motors showing type, size, and manufacture. Efficiency losses must also be accounted for. The calculations must be understandable, complete, logical, and in a mathematical order per the Society of Automotive Engineers (SAE) and the Fluid Power Society standard formulas and practices. The burdened of proof is the responsibility of the bidder.

3. BROOM HITCH

The broom hitch shall be a dedicated front mount hitch manufactured to be directly mounted to the carrier chassis. The broom hitch shall provide low friction, free flotation, and shock absorbing for the broom head that it is independent of broom chassis. Any pin, shall have greaseable low friction bushings, DX pre-lubricated type (no metal on metal). All cylinders used for control shall be hydraulic.

4. BROOM ANGLE

The broom head shall be capable of swinging a minimum of 35 to a maximum of 45 degrees left or right, selectable from an operator’s joystick. Using a longer broom than specified to accommodate swept path for larger swing angles is unacceptable due to storage and
maneuverability reasons. The broom pattern shall not vary more than 0.5 inches end to end for the whole width of the broom whether swung left or right.

5. BROOM OSCILLATION

The broom oscillation shall provide true flotation left to right for the broom head so that it is independent of broom chassis to accommodate surface irregularities and thus minimize brush pattern variation during operation.

6. BROOM ELEVATION AND BRUSH PATTERN ADJUSTMENT

The broom head lift shall be controlled by the operator’s joystick. The lift cylinders shall be equipped with a counterbalance valve, which prevents the broom head from creeping down. The pivoting action shall have adequate stroke to achieve ground clearance during transport when not in use.

A linkage attached to the broom lift cylinders shall also provide the brush pattern adjustment mechanism. The adjustment mechanism shall be the manufacturer’s standard component to limit the down travel of the brush head. A rubber latched, weatherproof control box housing the linkage shall be located behind the broom head allowing easy, repeatable pattern adjustment from a standing position. Returning to operator’s cab to confirm pattern adjustment is unacceptable. For safety reasons the operator cannot be positioned under or near the broom head to make the pattern adjustment. The brush pattern adjustment process shall be accomplished without the use of tools.

7. BROOM HEAD

The broom head shall provide a minimum swept path of 16 feet. It shall be 46 inches in diameter and be capable of producing a minimum of 4800 Ft-Lbs. of torque and a minimum of 500 RPM, with an air blower system capable of producing 14,000 CFM at 350 MPH. The broom head and air blower shall be hydrostatic drive with infinitely variable speed hydraulic pumps and fixed displacement motors. The broom shall have the ability to remove snow, ice, slush, sand and other debris at rated speeds depending on conditions. To confirm this, the following must be supplied with the bid.

The brush itself shall be 46 inches in diameter and 22 feet long comprised of two 11 foot sections. The broom head frame must sustain the loads imposed by the snow removal capacity of the unit. The hydrostatic broom drive shall be dual end drive. Power shall be supplied from two variable displacement hydrostatic pumps mounted on the engine’s gearbox. The gearbox shall be a parallel shaft pump drive with precision gears, AGMA 10 rating and a dipstick for oil level measurement. Two high-speed hydrostatic motors, each connected to a planetary reduction gearbox shall be mounted within the inner diameter of the broom cores outer ends to minimize overall width. The motor gearbox connections shall utilize a static O-ring seal, wet spline type. No dynamic seal shall be used for reliability purposes. The motors shall not support the broom core loads and the planetary gear box shall be hydraulic oil bath lubricated (case flushing type). The broom cores
shall be balanced independently to eliminate vibration. Certification to demonstrate the balance procedure shall be included with the unit upon delivery. Speed of broom shall be infinitely variable from 0 to a minimum of 500 RPM. Available torque at the broom shaft shall be a minimum of 4800 ft-lbs at maximum hydraulic pressure of 5100 psi for maximum snow moving capabilities. Engineering hydraulic power calculations confirming these values must be provided with the bid.

A maximum 2 inch gap between broom core sections shall be obtained by using a center bearing assembly utilizing the same components as the drive ends. The center bearings shall be encased in a sealed housing and be provided with oil bath lubrication; manually greased bearings is also acceptable. The left and right side core sections shall be connected to each other by a center shaft so the two sections rotate at the same speed, and that the power produced by each of the end drive assemblies is transmitted across the full length of the core assembly.

8. BROOM CORES

The two core sections must be split core design for easy handling and efficient (tight) wafer stacking and sustain the loads imposed by the snow removal capacity of the unit. The drive sprockets shall be replaceable hardened steel. Each core shall be individually dynamically balanced to acceptable values at rated RPM.

The brush on the cores shall be full width and designed for runway operation and shall be field replaceable with maximum ease without the use of special tools. The wafers shall be a 50/50 combination of polypropylene and wire. The bristles shall be fastened in a radial wafer fashion to a steel ring. Polypropylene bristles shall be fastened to the steel ring by fusing their base to form a solid loop about the circumference of the ring, then mechanically holding them in place by wrapping the top of the ring over the fused bristle ends to form a dovetail. Wire bristles shall be fastened to the steel ring with wire. The polypropylene bristles shall be oval shaped with an 8 pounds total wafer weight minimum. The wire bristles shall be 13 pounds total wafer weight minimum. All wafers shall be a within 50 oz-in static balance and marked at the heavy location.

9. BROOM CASTERS

There shall be four single tire caster assemblies. Each caster assembly shall be free to rotate 360 degrees. The radial pneumatic tires shall be required. Spring-loaded adjustable automotive type disk brake shall be supplied per caster to prevent caster shimmy at all sweeping speeds. The caster assembly shall be non-suspension type allowing the brush to follow the ground contours as close as possible. The broom head caster support shall be mounted to the main broom frame by means of welded brackets. The steel caster assembly shall be attached to the broom head caster support by means of a minimum of four bolts for serviceability. The caster axle shall be supported by the caster mounting body.

10. BROOM HOOD

The broom hood shall shield the top half of the brush completely and fabricated from heavy-duty 10-gage or heavier sheet steel securely bolted to the broom frame. It shall be non-clog design to
prevent ice buildup during freezing slush removal operations at rated speeds. It shall provide the necessary quick access to the brush for replacement of bristles and for inspection. There shall be an adjustable and replaceable stripper bar across the front of the broom to prevent snow carryover. The stripper bar shall be near tangential to the broom outside diameter.

A smooth curved scoop hood shall be incorporated across the full length of the broom. The stripper bar shall be attached to this scoop hood. It shall be connected to but move independent of the stationary hood. A snow deflector shall be mounted on the front of the scoop or an equivalent hood deflector/stripper system is also acceptable. Two hydraulic cylinders spaced appropriately along the length of the deflector shall adjust the angle of the deflector with respect to the scoop. The deflector angle shall be controlled and adjusted from the operator's cab. The result is a smooth, efficient, and controlled flow of the snow leaving the bristle. The stripper bar, the scoop hood, and the deflector structure shall have no abruption to a smooth flow at any broom / bristle diameter or at any deflector angle.

The adjustment to the bristle diameter wear shall be performed using two hydraulic cylinders or mechanical acme thread jacks, one each end of the scoop and broom frame. The adjustment shall position the stripper bar to the bristle diameter.

This scoop design is required for efficient stripping of the snow off the bristles to prevent carryover, especially with the high performance snow moving capacity specifications of the bid. No substitutes are allowed.

11. FORCED AIR BLOWER

The forced air blower shall be dual centrifugal impeller type with dual inlets and dual outlets. It shall be mounted between the chassis engine and the broom engine. It shall produce at least 14,000 CFM total at 350-mph velocity air out both sides at the same time. Both nozzles shall blow in same direction at any given time. Deflectors at the nozzle ends shall direct the flow to one side or the other. The nozzle deflector’s control shall be hydraulic and interlocked with the broom head angle to blow in the direction of broom casting thus controlled by the operator’s joystick. The nozzle deflectors change direction as the broom swings. A separate control shall allow the nozzle deflector’s direction opposite of the broom angle by choice. An additional control shall permit blowing without broom operation. The velocity and CFM at each nozzle shall be certified by an independent test facility and included with the delivered unit.

The air ducts shall rise within the width of the tires of the chassis for transport and storage. There shall be a minimum 12 inches of ground clearance when raised.

The centrifugal impellers shall be independently driven via hydrostatic motors. The two motors, one for each impeller, shall be mounted directly to the impeller shaft. Power to the motors shall be supplied from a variable displacement hydrostatic pump mounted on the engine’s gearbox allowing incremental control of blower speed from 0 to 100%.
Both impeller / shaft assemblies shall be dynamically balanced at the rated RPM. All controls for the air blower shall be remotely operated from within the cab.

12. HYDRAULIC SYSTEM

All hoses for all systems shall be properly sized and strength to work with the pressure and volume of oil required. All hydraulic positioning functions (broom head lift, broom head swing, deflector, and air nozzle lift) shall be equipped with a hydraulic position locking system. A counterbalance valve shall be used for the broom lift and a pilot operated check valve for the other functions. All hydraulic functions of the broom shall be electric over hydraulic valving. Connectors to the solenoids shall be interlocking type to provide a secure connection, which can withstand normal pressure washing procedures. Piloted operated check valves shall be installed for the broom swing left and right, deflector up and down, air ducts up and down, and air nozzles left and right. Fluid and components shall be design for temperature to –20 degrees F ambient cold start. The hydraulic fluid reservoir shall be 50-gallon minimum. Shut off valves for all filters below tank fluid level shall be installed to allow filter changes without loss of oil.

Proper filtering shall be done on both the high pressure and low pressure circuits and shall conform to SAE J931. There shall be a 5-micron absolute rating on the hydrostatic pumps’ filters and placed in the charge pressure lines. There shall be a clogged filter indicator light on the cab control panel indicating filter replacement.

A hydraulic oil cooler shall be provided to maintain maximum efficiency. The dedicated fan for the hydraulic oil cooler shall be hydraulically driven with automatic thermostat (high/low) control for correct temperature under all conditions, winter and summer. It shall be controlled by a thermostatic switch to avoid excessively cold oil operation and designed such that thermostatic failure results in the cooling fan being engaged. A pressure relief shall allow cold hydraulic oil to bypass the cooler for shorter warm up times. A hydrostatic oil temp gauge and warning light for low hydrostatic oil level shall also be supplied.

13. CONTROLS AND INSTRUMENTATION

All controls shall be electric over hydraulic type. All instruments and controls shall be labeled in a manner to remain legible for the life of the unit and shall be illuminated. All wiring shall be either harness, cable, split loomed, or shrink-wrapped. All wiring shall be color-coded, wire numbered matching drawing schematics and terminal strip, and labeled every 3 inches as to what it is used for. The gauge wire and processes shall be in accordance with common wiring practices.

The operator’s control in the chassis cab shall have a Monitor, Diagnostic and Control (MDC) station for the broom. As stated the MDC station must incorporate diagnostics which displays what is wrong with a particular system. All systems for the broom and broom engine must be part of the diagnostics. All functions and displays must be in easy reach of the operator and integrated into the chassis instrumentation.
The control in the chassis cab shall have all the necessary functions to operate the broom and air blower and shall have the following:

1) System on / off: 1.5 inch diameter e-stop type push button (twist for on, push for off)

2) Multifunction controlled joystick for broom head lift/lower and left/ right swing. It shall also incorporate the snow shed hood lift/stow, deflector angle and the joystick control; and, incorporate any functions that are hydraulically operated such as broom, air blower duct or both.

The broom swing, lift and blower nozzle shall be microprocessor controlled (no relays) and have automatic one touch for cycle complete control. This allows the operator to have hands free operation during cycle movement. Moving the joystick in the opposite direction can reverse the cycle. A switch shall allow the operator to use the automatic control or disengage the system.

3) Monitor display:

- Broom engine main operating screen
  - Engine, broom and air blower speed control and display
  - Oil pressure with visual and audible warning alarms
  - Coolant temperature with visual and audible warning alarms
  - Hydraulic oil temperature with visual and audible warning alarms
  - Engine tachometer
  - Voltmeter and warning indicators
  - Air filter restriction warning and alarm
  - Alarms for engine diagnostics and visual warning indicators and displayed faults
  - Mode selector: auto / manual
  - Status display for:
    - Broom / air duct coordination
    - Weight transfer system
- Engine diagnostics screen
  - Display active faults
  - Active fault codes
  - Output diagnostics: this screen is for display only and shows the controller output diagnostics.
    - Individual system output test function
    - Output diagnostics last 100 fault history
- Setup screen: this screen allows authorized personnel to change the vital settings without the use of a notebook computer and is password protected.

Controls located in the broom engine enclosure shall be the following:

- Single circuit breaker with Master Battery disconnect.
 настоящее время

Snow Shed Hood. Hydraulic pivot tilt to remove snow that has deposited on top during sweeping operations. Snow shed hood is in addition to the standard hood. Skeletal steel framework construction with a black polyethylene cover bolted in place. Positive prevention of any operator error damage to bristles or other components. Tilt operational while the broom is rotating...no stopping. Tilt rotate forward in excess of 100 degrees. Positive stowed position against poly supports. The snowshed hood shall cover the entire length of the broom hood without interruptions for the most efficient snow removing capabilities. When in the automatic control mode, the hood shall lift and lower with one touch of the control switch.

Broom head vibrator: Attached to the broom head shall be a dump truck body vibrator to shake snow and ice accumulation off the broom head, 12 volt “Cougar” type or equivalent. 3000 pounds thrust impact force minimum. The vibrator shall be cab controlled with on / off rocker style switch.

LED marker lights at ends of broom head

Central remote drain lines with valves for the broom portion

Broom speed tachometer with broom hydrostatic pressure gage, both in cab.

One replacement caster wheel, tire, bearings and axle assembly

PART 3 – HIGH SPEED ROTARY PLOW/BLOWER

1. GENERAL

The rotary plow shall comply with all applicable quality and safety standards and requirements of the FAA Advisory Circular 150/5220-20A. The manufacturer shall also comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

These specifications describe a commercial self-contained rotary plow capable of removing 5,000 tons of snow per hour, casting snow at least 100 feet, and manufactured expressly for airport snow removal. This rotary plow shall be rigidly built of new material suited for continuous work under extreme conditions of snow removal, at a speed of up to 45 mph.

The airport sponsor requires this specified piece of equipment in order to maintain the airfield during large and small snow events. It will be a central and critical element in the fleet and in the effort to accomplish the airport’s published snow plan. Experience building airfield rotary plows of this nature is mandatory as is a track record of recent manufacture and in-service record for machines comparable and similar to that specified. A listing of airport purchasers and contact information is required in the bid package to enable the sponsor to contact at three (3) airports.
that have taken delivery of airfield rotary plows from the bidder within the last three (3) years. **No prototypes shall be permitted.**

### 2. POWER SYSTEMS

Engineering hydraulic power calculations confirming the plow speed and rating must be supplied with the bid. This includes sizes and specifications of all components from the engine to the rotary plow including specification sheets for the plow, clutch, auger, impeller, head and cooling system.

### 3. MOUNTING BRACKET

The rotary plow mounting bracket hall be manufactured to be directly mounted to the carrier chassis. The bracket shall provide low friction, free flotation, and shock absorbing for the rotary plow so that it is independent of chassis. Any pins, shall have greaseable low friction bushings, DX pre-lubricated type (no metal on metal).

### 4. HEAD BOX

The rotary plow head shall include a cutting edge, minimum 30 inch discharge chute, skid shoes and rubber tire casters with weight transfer system. The loading shoot shall be capable of spot casting snow.

### 5. AUGER

The auger shall be “ribbon” style auger approximately 55 inches in diameter with a hydraulic override. The drive must be reversible.

### 6. IMPELLER

The impeller shall be high strength steel, include a liner and be specifically designed to work with the auger, and plow head box.

### 7. HYDRAULIC SYSTEM

All hoses for all systems shall be properly sized and strength to work with the pressure and volume of oil required. All hydraulic positioning functions shall be equipped with a hydraulic position locking system. Connectors to the solenoids shall be interlocking type to provide a secure connection, which can withstand normal pressure washing procedures.

Proper filtering shall be done on both the high pressure and low pressure circuits and shall conform to SAE J931. There shall be a 5-micron absolute rating on the hydrostatic pumps’ filters and placed in the charge pressure lines. There shall be a clogged filter indicator light on the cab control panel indicating filter replacement.
8. CONTROLS AND INSTRUMENTATION

All instruments and controls shall be labeled in a manner to remain legible for the life of the unit and shall be illuminated. All wiring shall be either harness, cable, split loomed, or shrink-wrapped. All wiring shall be color-coded, wire numbered matching drawing schematics and terminal strip, and labeled every 3 inches as to what it is used for. The gauge wire and processes shall be in accordance with common wiring practices.

Monitor display:
- Blower engine operating screen
  - Auger operating condition display
  - Oil pressure with visual and audible warning alarms
  - Coolant temperature with visual and audible warning alarms
  - Hydraulic oil temperature with visual and audible warning alarms
  - Engine tachometer
  - Voltmeter and warning indicators
  - Air filter restriction warning and alarm
  - Alarms for engine diagnostics and visual warning indicators and displayed faults
- Mode selector: auto / manual
- Engine diagnostics screen
  - Display active faults
  - Active fault codes
- Setup screen: this screen allows authorized personnel to change the vital settings without the use of a notebook computer and is password protected.

PART 4 - GENERAL TECHNICAL SPECIFICATIONS SECTION

1. PAINT AND LETTERING

The complete vehicle shall be painted with one (1) coat of metal primer and two (2) coats of FAA approved CHROME YELLOW acrylic urethane. The Authority will install any logos, numbers, etc. once on site.

2. RUSTPROOFING AND CORROSION PROTECTION

Rust proofing of commercial vehicles shall be accomplished in compliance with Federal Specification 297E.

The complete vehicle (moldings, fenders, doors, panel wells, underside of cab floor, interior cab floor, et. al.) shall be treated with Ziebart rustproofing protection or an approved equal.
3. COMMUNICATION EQUIPMENT

Two transceiver mobile radios furnished and installed in each vehicle.

a. One Icom or equivalent VHF-AM transceiver with frequencies 120.8, 121.9, 123.95.

b. One Motorola or equivalent UHF Mobile digital radio with frequencies: Receive Channel 1, 453.475; Channel 2, 458.475; Channel 4, 453.675; Channel 5, 458.675. To include one Motorola Spectra Headset or equal with dual radio interconnect box with dash mounted toggle switch for frequency switching.

c. All transceivers shall be installed complete with microphones, antennas, mounting brackets, etc. and ready for use.

d. Radios shall be mounted in a manner that makes them easily accessible to the driver and 1 crew position. Manufacturer shall contact Field Maintenance Department Head for mounting locations prior to mounting.

e. The vehicle shall be adequately radio interference suppressed to permit positive understandable voice radio communications under all operating conditions.

f. Radios shall be connected to interior speaker system (2 speakers), exterior speaker system (3 speakers, two forward, one at rear of chassis) and also be wired through one plug for the drive and one plug for the passenger to allow for use of David Clark aviation headsets (1/4 inch jacks). A separate control shall be installed to allow of speakers to work independently or together.

4. SET-UP AND TRAINING

Within fourteen (14) work days after the equipment is delivered to Purchaser, Bidder shall send a COMPANY EMPLOYED technician to Norfolk International Airport to setup and complete the testing of the operation and performance of the equipment; said set up and tests shall to be conducted in the presence of Owner’s representative. Successful bidder shall then provide eight (8) hours of operators training. Local contract employees and those not properly trained and experienced with at least 4 delivery events are not acceptable.

5. ELECTRONICS MAINTENANCE TRAINING

Maintenance training shall be provided at Norfolk International Airport for a minimum of four (4) days training to address and enable service personnel to troubleshoot, diagnose, and repair vehicle electronic systems. This course will enable the student to understand the theory of operation of the vehicle engine, transmission, braking, all-wheel steering, ABS, and electronic system as they relate to maintenance of the chassis electronic system. In addition, the students will learn to properly diagnose and repair the above systems to include brakes, transmission, and electronic systems. This course shall offer extensive schematic use and troubleshooting exercises. Training shall take place within fourteen (14) days after the equipment is delivered.
7. FINAL INSPECTION
A factory inspection of the completed vehicle shall be provided at no cost to the Norfolk Airport Authority. Bid price shall include airfare, transportation, meals and lodging for one (1) Airport representative.

8. MANUALS AND ELECTRONIC SCHEMATICS
In addition to the Manufacturer’s Certifications required by these provision, the successful bidder shall provide the following product documentation and support information upon delivery of the equipment:

- Two (2) Mechanic’s Service Manuals (Service manual should also include complete electrical, hydraulic and compressed air schematics)
- Two (2) Operators Manuals
- Two (2) Parts Book
- Internet access to parts books
- Cable kits and discs for Diagnostics must be provided with the equipment

9. WARRANTY
The bidder shall guarantee his equipment as to the specified capacities and performance, and to be free from all defects in design, material and workmanship. All labor, transportation cost and defective parts shall be replaced free of cost. THIS GUARANTEE SHALL CONTINUE FOR A PERIOD OF ONE (1) YEAR on ALL EQUIPMENT, MATERIALS and WORKMANSHIP AFTER COMMENCEMENT OF ACTUAL OPERATION OF THE EQUIPMENT. No exceptions to the guarantee requirement will be accepted.

10. CONTRACTOR RESPONSIBILITY
The contractor must assume complete responsibility for all component parts of each entire vehicle, even though portions may be subcontracted. This responsibility shall include design, construction, inspection, performance testing and servicing. It must be the contractor's policy to remain capable of furnishing parts and technical assistance to the purchaser for the normal life of each vehicle (10 years).

11. PREPARATION FOR DELIVERY
   a. Pre-Inspection. Inspection of each vehicle shall be made by a Factory Representative at the manufacturer's factory or at sub-contractor's shop upon completion of the complete unit, prior to delivery to Norfolk International Airport. The cost of inspection is part of these specifications. This inspection shall not be construed as a final inspection or acceptance of the vehicle. All costs for inspection shall be paid by the manufacturer.

   b. Shipment. Each vehicle and its accessories, spare parts, and tools shall be packed in such a manner as to prevent pilferage and insure safe delivery to Norfolk International Airport, Norfolk, Virginia 23518.
c. Delivery. Each vehicle shall be delivered to Norfolk International Airport, Norfolk, Virginia. A qualified delivery engineer in the employ of the manufacturer shall deliver the vehicle and instruct personnel in the operation, care and maintenance of the vehicle. Such delivery shall be done at no additional cost or expense to the airport. The vehicles must not be driven from the factory but conveyed by other means to the Norfolk International Airport.

d. Insurance. Contractor shall carry all necessary insurance, including collision, property damage and liability, until final acceptance by the Authority.

PART 5 – SURPLUS EQUIPMENT CREDIT

1. Norfolk Airport Authority currently owns five 20-foot wide power brooms with dedicated carrier vehicles. These vehicles are surplus when the new vehicles are accepted by the owner.

2. The bidder must provide a credit price for removal of the existing vehicles from the airport with the intent that the equipment has a salvage value to the bidder.

3. Removal of the equipment has been included as a bid alternative to the project. The Authority will determine after bids are received, as to if they desire to exercise the option of performing on the bid alternative or not and two the number of vehicles. The Authority is considering maintaining ownership of one sweeper.