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**CHARLOTTESVILLE- ALBEMARLE AIRPORT**

**CHARLOTTESVILLE, VIRGINIA**

**One (1) Aircraft Rescue and Fire Fighting Vehicle, Class 4**

**Bid #2021-08**

**SPECIFICATIONS**

**April 21, 2021**

**CHARLOTTESVILLE-ALBEMARLE AIRPORT AUTHORITY**

**INVITATION TO BID (ITB)**

**Bid #2021-08**

**One (1) Aircraft Rescue and Fire Fighting Vehicle, Class 4**

The Charlottesville-Albemarle Airport Authority, acting by and through the Executive Director, invites bids for the purchase of **one (1) Aircraft Rescue and Fire Fighting Vehicle, Class 4**. The specifications for the vehicle generally conform to FAA Advisory Circular 150/5220-10E unless otherwise specifically described in the detailed technical specifications.

Copies of the Bid Documents and Specifications are available upon request to Jonathan Shenk, Chief of Public Safety, Charlottesville-Albemarle Airport Authority, 100 Bowen Loop, Suite 200, Charlottesville, Virginia, 22911, (434) 973-8342.

Bids will be received until 2:00pm, local prevailing time, April 30, 2021, by the Chief of Public Safety, Charlottesville-Albemarle Airport Authority, 100 Bowen loop, Suite 200, Charlottesville, Virginia, 22911. Each bid must be contained in an envelope which shall be sealed, conspicuously endorsed with the bidder’s name, date, and time Bid is to be received and may be either mailed or hand delivered. Bids will be opened and read aloud in the Authority offices at 2:00 pm, local prevailing time, April 30, 2021. Bids received after 2:00 pm local prevailing time will be returned unopened.

The Bid must be submitted on the blank form furnished by the Authority and must give all information required. This is Attachment A included in the ITB.

The Authority reserves the right to accept or reject any or all bids and to waive any informalities in Bids received, if it is in the best interest of the Authority to do so.

Jonathan Shenk

Chief of Public Safety

Charlottesville-Albemarle Airport Authority

**CHARLOTTESVILLE-ALBEMARLE AIRPORT**

**AUTHORITY INVITATION TO BID**

**ITB SCHEDULE OF EVENTS**

Bid posting date: April 21, 2021

Deadline for submission of bid questions: April 28, 2021

Bids Open: April 30, 2021

**GENERAL CONDITIONS**

1. Bids must be submitted in a sealed envelope with the outside of the envelope marked in the

lower left hand corner as follows:

**Aircraft Rescue and Fire Fighting Vehicle, Class 4**

**April 30, 2021**

**2:00 PM**

1. Bids will be time stamped upon receipt and retained unopened in a secure location until bid opening. FACSIMILE AND TELEGRAPHIC BIDS SHALL NOT BE ACCEPTED AS RESPONSES FOR COMPETITIVE SEALED BIDDING.
2. No consideration will be given to date of postmark.
3. The Airport Authority reserves the right to accept or reject any or all bids in whole or in part and to waive any informality in the bid. Informality shall be defined as a minor defect or variation from the exact requirements which does not affect the price, quality, quantity or delivery schedule. The Authority reserves the right to terminate the procurement process at any time if the Authority deems it is in its best interest to do so.
4. The specification herein is intended to indicate the character, quality and/or performance of the goods or services desired. Unless qualified by the provision "No Substitute" the name of a brand, manufacturer or catalog designation does not restrict the bidder to that brand or manufacturer. Alternates to the specified goods or service will be considered to the extent that such action is deemed in the best interest of the Airport Authority.
5. The Airport Authority will assume no responsibility for oral instruction, suggestion or interpretation. . Any question regarding the bid documents and/or specifications should be directed to Jonathan Shenk, Chief of Public Safety, and any material change will be submitted to all bidders through issuance of an addendum.
6. Modification of or corrections to bids are not acceptable after bids have been opened.

Erroneous bids may be reclaimed or superseded any time prior to bid opening time. Any new

bid must be marked with the additional notation "Supersedes all previous submissions" .

1. Identity of bidders, except in the case of construction contracts, will not be disclosed prior to bid opening.
2. As part of this bid a notarized Certificate of No Collusion must be submitted with the bid.

Certificate is attached.

10. Unless otherwise noted below no bid may be withdrawn from consideration for 120 days from the bid opening.

A bidder may withdraw a bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. The bidder shall submit the original work papers, documents and materials used in the preparation of the bid at or prior to the time fixed for the opening of bids. Thereafter, the bidder shall have two days after the opening of bids within which to claim in writing any mistake as defined herein and withdraw his bid. Such mistake shall be proved only from the original work papers, documents and materials delivered as required herein. The work papers, documents and materials may be considered as trade secrets or proprietary information. No bid may be withdrawn when the result would be the awarding of the contract on another bid of the same bidder or of another bidder in which the ownership of the withdrawing bidder is more than five percent. No bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted. If a bid is withdrawn under the authority of this section, the lowest remaining bid shall be deemed to be the low bid.

1. Do not include taxes, including excise taxes in your quotation. A tax- exempt certificate will be provided upon request.
2. Tabulations of bids are a matter of public record and are available upon request.
3. Awards shall be based on determination of the lowest responsive and responsible bidder.
4. All prices submitted must be FOB Destination-Freight Prepaid and Allowed, unless otherwise specified.
5. In the case of error in the extension of prices the unit price shall govern.
6. Unless otherwise noted any equipment shall be new, unused, of current production and standard to the manufacturer. Where any part or nominal appurtenances of equipment are not described it shall be understood that all equipment and appurtenances standard to or recommended by the manufacturer for complete and safe use shall be included as part of this bid.
7. A Material Safety Data Sheet is required for all chemicals proposed to be furnished as a result of this bid. The MSDS must list all ingredients which constitute more than 1% of the product (.1% for known or suspected carcinogens); identify the product by common and chemical name; provide physical and chemical characteristics of any hazardous components; list any known acute or chronic health effects; specify exposure limits, precautionary measures, and emergency and first aid procedures.

 18. The undersigned hereby certifies that the provisions of the federal Buy American provisions shall be met.

 19. A requirement in the invitation to bid that fixes the time within which bids must be received is

 not a minor defect or an informality that may be waived but, rather, a material and formal

 requirement that, under the circumstances present in the instant case , must be fulfilled to the letter of the law.

20. Bids shall be valid and binding for a period not less than 120 days from the date set for receipt of bids

Conditions herein have been carefully read and this bid is submitted subject to all requirements stated herein. The undersigned hereby acknowledges and agrees if this bid is accepted to furnish all goods and/or services for which prices are quoted in strict accordance with the specifications.

SPECIAL CONTRACT TERMS AND CONDITIONS

1. The General Terms and Conditions applicable to the Authority’s procurement transactions (Attachment B) and FAA provisions for Airport Improvement Program (Attachments C and D) of this ITB, and are incorporated by reference as if set forth herein verbatim. The provisions of Attachments B, C and D should be construed together with the provisions of this ITB, so as to give effect to the terms and conditions set forth within each whenever possible. However, in the event of any conflict between the provisions of Attachment B, C and D and those set forth within this ITB, the provisions of this ITB shall govern as the requirement applicable to the contractor.

**PROCUREMENT SPECIFICATIONS**

**AIRCRAFT RESCUE AND FIRE FIGHTING TRUCK
CHARLOTTESVILLE – ALBEMARLE AIRPORT AUTHORITY**

**CLASS 4 AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) VEHICLE**

1. SCOPE. This Procurement Specification (PS) covers a commercially produced diesel engine driven ARFF vehicle for the Charlottesville – Albemarle Airport Authority (CHO), an Index B airport. It includes a 1500-gallon water/Aqueous Film Forming Foam (AFFF) fire suppression system with 450 lb. potassium-based dry chemical only complementary system.

The ARFF vehicle is intended to carry rescue and firefighting equipment for the purpose of rescuing AIRCRAFT passengers, preventing AIRCRAFT fire loss, and combating fires in AIRCRAFT.

1. CLASSIFICATION. The ARFF vehicle covered by this PS are classified in accordance with Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers, Section 315, AIRCRAFT Rescue and Firefighting: Index Determination; Section 317, AIRCRAFT Rescue and Firefighting: Equipment and Agents; and Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5220-10, Guide Specification for AIRCRAFT Rescue and Fire Fighting (ARFF) Vehicles, Index B, Vehicle Class 4 with a minimum rated capacity of 1500 gallon (5678 liter) water/AFFF solution.
2. VEHICLE CONFORMANCE/PERFORMANCE CHARACTERISTICS. The ARFF vehicle will be in accordance with the applicable requirements of National Fire Protection Association (NFPA) 414, Standard for AIRCRAFT Rescue and Fire Fighting Vehicles (2007 Edition), and AC 150/5220-10, Guide Specification for AIRCRAFT Rescue and Fire Fighting (ARFF) Vehicles.

3.1 **General Administration Requirements.**

3.1.1 Manuals. Technical manuals will consist of operator, service, and parts manuals. All manuals are required to be provided in hardcopy and in digital format. on CDs when requested.

3.1.1.1 Technical manuals. The overall format for the manuals will be commercial. Each technical manual will have a title page. Line art will be used to the maximum extent possible for illustrations and parts lists. One complete set of engine and transmission parts, service and operator’s manuals will be packed with each vehicle.

1. The contractor will provide digitized manuals in CD format when requested in addition to or in place of printed paper copies.
2. The contractor will provide two complete sets of hardcopy manuals and/or CDs when requested.

3.1.1.1.1 Operator's manual. The operator's manual will include all information required for the safe and efficient operation of the vehicle, including fire extinguishing systems, equipment, and any special attachments or auxiliary support equipment.

As a minimum, the operator's manual will include the following:

1. The location and function of all controls and instruments will be illustrated and functionally described.
2. Safety information that is consistent with the safety standards established by the occupational Safety and Health Administration (OSHA) and NFPA.
3. All operational and inspection checks and adjustments in preparation for placing the vehicle into service upon receipt from the manufacturer.
4. Tie down procedures for transport on a low-boy trailer.
5. Warranty information and the period of the warranty coverage for the complete vehicle and for any component warranty that exceeds the warranty of the complete vehicle. Addresses and telephone numbers will be provided for all warranty providers.
6. General description and necessary step-by-step instructions for the operation of the vehicle and its fire extinguishing system(s) and auxiliary equipment.
7. A description of the post-operational procedures (draining, flushing, re-servicing, et cetera).
8. Daily maintenance inspection checklists that the operator is expected to perform including basic troubleshooting procedures.
9. Disabled vehicle towing procedures.
10. Procedures and equipment required for changing a tire.
11. Schedules (hours, miles, time periods) for required preventative maintenance and required periodic maintenance.
12. Line art drawing of the vehicle, including panoramic views (front, rear, left, and right sides) showing basic dimensions and weights (total vehicle and individual axle weight for the unloaded and fully loaded vehicle). For the purposes of this AC, "unloaded" is defined as a lack of agent, occupants and compartment load, and "loaded" is defined as including agent, occupants and compartment load.

3.1.1.1.2 Service manual. The service manual will identify all special tools and test equipment required to perform servicing, inspection, and testing. The manual will cover troubleshooting and maintenance as well as minor and major repair procedures. The text will contain performance specifications, tolerances, and fluid capacities; current, voltage, and resistance data; test procedures; and illustrations and exploded views as may be required to permit proper maintenance by qualified vehicle mechanics. The manual will contain an alphabetical subject index as well as a table of contents.

The service manual will contain at least the following, where applicable:

1. Firefighting system schematic(s).
2. Hydraulic schematic.
3. Pneumatic schematic.
4. Electrical schematic.
5. Winterization schematic.
6. Fuel schematic.
7. Schedules for required preventative maintenance and required periodic maintenance.
8. Lubrication locations, procedures, and intervals for parts of the vehicle and equipment that require lubrication. A diagram of this information will be located inside of a panel in the engine compartment where Preventative maintenance is performed.

3.1.1.1.3 Parts identification manual. The parts manual will include illustrations or exploded views (as needed) to identify properly all parts, assemblies, subassemblies, and special equipment. All components of assemblies shown in illustrations or exploded views will be identified by reference numbers that correspond to the reference numbers in the parts lists. All purchased parts will be cross-referenced with the original equipment manufacturers (OEM) name and part number. The parts identification manual will provide the description and quantity of each item used for each vehicle. The size, thread dimensions, torque specifications, and special characteristics will be provided for all nonstandard nuts, bolts, screws, washers, grease fittings, and similar items. The manual will contain a numerical index. The parts manual will contain a list of all of the component vendor names, addresses, and telephone numbers referenced in the parts list.

3.1.2 Painting, plating, and corrosion control.

3.1.2.1 Finish. Exterior surfaces will be prepared, primed, and painted in accordance with all of the paint manufacturer's instructions and recommendations. Vehicles will be painted and marked in accordance with AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used at an Airport. The interior finish of all compartments will be based on the manufacturer’s standard production practice. This may include painting, texturing, coating or machine swirling as determined by the manufacturer. All bright metal and anodized parts, such as mirrors, horns, light bezels, tread plates, and roll-up compartment doors, will be painted. All other surfaces capable of being painted must be in the appropriate yellow-green color. Frame rails to be painted black and wheel rims.

3.1.2.2 Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889, Dissimilar Metals, will not be in contact with each other. Metal plating or metal spraying of dissimilar base metals to provide electromotively compatible abutting surfaces is acceptable. The use of dissimilar metals separated by suitable insulating material is permitted, except in systems where bridging of insulation materials by an electrically conductive fluid can occur.

3.1.2.3 Protection against deterioration. Materials that deteriorate when exposed to sunlight, weather, or operational conditions normally encountered during service will not be used or will have a means of protection against such deterioration that does not prevent compliance with performance requirements. Protective coatings that chip, crack, or scale with age or extremes of climatic conditions or when exposed to heat will not be used.

3.1.2.4 Reflective stripes. A minimum ten (8) inch horizontal band of reflective tape. (Retroreflective, ASTM-D 4956-09, *Standard Specification for Retroreflective Sheeting for Traffic Control*, TYPE III & above) must be applied around the vehicle’s surface.

3.1.2.5 Lettering. The manufacturer will apply the airport’s 'Name' (Charlottesville – Albemarle Airport Fire Rescue) and 'Insignia' (to be provided) in a contrasting color or by decal on both sides of the vehicle in long radius elliptical arches above and below the lettering center line. The size of the lettering will be a minimum of 2 1/2” to a maximum of 6”.

Reflective lettering is allowed if the material is the same as that which is used for the reflective stripe (as specified in AC 150/5210-5).

3.1.3 Vehicle identification plate. A permanently marked identification plate will be securely mounted at the driver's compartment. The identification plate will contain the following information:

1. NOMENCLATURE
2. MANUFACTURER'S MAKE AND MODEL
3. MANUFACTURER'S SERIAL NUMBER
4. VEHICLE CURB WEIGHT: kg (pounds)
5. PAYLOAD, MAXIMUM: kg (pounds)
6. GROSS VEHICLE WEIGHT (GVW): kg (pounds)
7. FUEL CAPACITY AND TYPE: gals (gallons)
8. DATE OF DELIVERY (month and year)
9. WARRANTY (months and km (miles))
10. CONTRACT NUMBER
11. PAINT COLOR AND NUMBER

A second permanently marked information data plate will be securely mounted on the interior of the driver's compartment. The plate will contain the information required by NFPA 414, Standard for AIRCRAFT Rescue and Fire Fighting Vehicles (2007 Edition), Section 1.3.5 Vehicle Information Data Plate. A single plate that combines or contains the information required for both plates is acceptable.

3.1.4 Environmental conditions.

3.1.4.1 Vehicle operation and storage temperature conditions will vary with geographical location. Thus, the locality temperature range can go from -40° to 110°F. Refer to NFPA 414 for vehicle winterization criteria.

3.1.4.2 Extreme temperature range. The vehicle will be capable of satisfactory storage and operation in temperatures ranging from -40° to 110°F. The vehicle will be equipped with a cab, chassis, and agent winterization system, permitting operation at -40°F. The winterization system will not detract from the performance of the vehicle or the firefighting system in ambient temperatures up to 110°F.

3.1.5 Reduction of potential foreign object damage. All loose metal parts, such as pins, will be securely attached to the vehicle with wire ropes or chains. Removable exterior access panels, if provided, will be attached with captive fasteners.

3.1.6 Vehicle Mobility.

3.1.6.1 Operating terrain. The vehicle will be capable of operating safely on paved roads, graded gravel roads, cross country terrain, and sandy soil environments. Cross country terrain consists of open fields, broken ground, and uneven terrain. An off-road, high-mobility suspension system resulting in no more than 0.5 Grms acceleration at the driver’s seat of the vehicle when traversing an 8-inch (20 cm) diameter half round at 35 mph (56 kph) must be provided. The suspension design by which the manufacturer meets the suspension performance requirements is at the manufacturer’s discretion.

3.1.6.2 Gradeability. The fully loaded vehicle will be able to ascend any paved slope up to and including 50-percent.

3.1.6.3 Side slope stability. The fully loaded vehicle will be stable on a 30° side slope when tested in accordance with NFPA 414.

3.1.6.4 Cornering stability. The fully loaded vehicle will be stable in accordance with NFPA 414 when tested in accordance with NFPA 414.

3.2 **Weights and dimensions.**

3.2.1 Overall dimensions. The maximum dimensions listed below are desirable to ensure vehicles can be accommodated in existing fire stations. Likewise, the overall dimensions should be held to a minimum that is consistent with the best operational performance of the vehicle and the design concepts needed to achieve this performance and to provide maximum maneuverability in accordance with NFPA 414.

|  |
| --- |
| **Vehicle Capacity/Dimensions 1500 Gallon** |
| Length (inches/cm) | 433/1100 |
| Width (inches/cm, excluding mirrors) | 124/315 |
| Height (inches/cm) | 154/391  |

3.2.2 Angles of approach and departure. The fully loaded vehicle will have angles of approach and departure of not less than 30°.

3.2.3 Field of vision. The vehicle will have a field of vision in accordance with NFPA 414.

3.2.3.1 Mirrors. Combination flat and convex outside rearview mirrors will be installed on each side of the cab. The flat mirrors will be of the motorized remote-control type, providing not less than 60° horizontal rotational viewing range. The flat mirrors will also have electrically heated heads. Mirror remote and heating controls will be located on the instrument panel within reach of the seated driver. To provide the driver a clear view of the area ahead of the vehicle and to eliminate potential blind spots, a rectangular mirror will be installed on the lower corner of each side of the windshield, having a minimum area of 35 square inches. The vehicle will have a back-up (rear-view) camera with a display monitor mounted above the driver in the cab. Cameras and monitors that are designed to replace the function of the side-view mirrors are not an approved option in this specification.

3.3 **Chassis and vehicle components**.

3.3.1 Engine. The vehicle will have a turbocharged diesel engine that is certified to comply with the Environmental Protection Agency (EPA) and state laws for off-highway emission requirements at the time of manufacture. The engine and transmission must operate efficiently and without detrimental effect to any drive train components when lubricated with standard, commercially available lubricants according to the recommendations of the engine and transmission manufacturers.

3.3.1.1 Acceleration. The fully loaded vehicle will accelerate from 0 to 50 miles per hour (mph) on a level paved road within 25 seconds.

3.3.1.2 Maximum speed. The fully loaded vehicle will attain a minimum top speed of 70 mph on a level, paved road.

3.3.1.3 Pump and roll on a 40-percent grade. The fully loaded vehicle will be capable of pump and roll operations on a paved, dry, 40-percent grade in accordance with NFPA 414.

3.3.2 Engine cooling system. The engine cooling system will be in accordance with NFPA 414. A label will be installed near the engine coolant reservoir reading “Engine Coolant Fill.”

3.3.3 Fuel system. The fuel system will be in accordance with NFPA 414.

3.3.3.1 Fuel priming pump. The vehicle will be equipped with an electric fuel pump in addition to the mechanical fuel pump. The electric/pneumatic pump will be used as a priming pump capable of re-priming the engines fuel system.

3.3.3.2 Fuel tank. The vehicle will have one or two fuel tanks with a minimum usable capacity in accordance with NFPA 414, as amended by NFPA 414. Each tank will have a fill opening of 3 inches minimum, readily accessible to personnel standing on the ground and designed to prevent fuel splash while refueling. Each 90-gallon tank will be located and mounted so as to provide maximum protection from damage, exhaust heat, and ground fires. If more than one tank is furnished, means will be provided to assure equalized fuel level in both tanks. An overturn fuel valve will be provided for each tank to prevent spillage in the event of a rollover. Each fuel tank must be prominently labeled “Diesel Fuel Only”.

3.3.4 Exhaust system. The exhaust system will be in accordance with NFPA 414. The exhaust system will be constructed of high-grade rust resistant materials and protected from damage resulting from travel over rough terrain. The muffler(s) will be constructed of aluminized steel or stainless steel. Exhaust system outlet(s) will be directed upward and to the rear, away from personnel accessing equipment compartments and the engine air intake and will not be directed toward the ground.

3.3.5 Transmission. A fully automatic transmission will be provided. The transmission will be in accordance with NFPA 414.

3.3.6 Driveline. The vehicle driveline will be in accordance with NFPA 414. If the driveline is equipped with a differential locking control, a warning/caution label will be placed in view of the driver indicating the proper differential locking/un-locking procedures. The operator’s manual will also include a similar warning/caution. All moving parts requiring routine lubrication must have a means of providing for such lubrication. There must be no pressure lubrication fittings where their normal use would damage grease seals or other parts.

3.3.7 Axle capacity. Each axle will have a rated capacity, as established by the axle manufacturer, in accordance with NFPA 414.

3.3.8 Suspension. The suspension system will be in accordance with NFPA 414 and AC 150/5220-10, Guide Specification for AIRCRAFT Rescue and Fire Fighting (ARFF) Vehicles.

3.3.9 Tires and wheels. Tires and wheels will be in accordance with NFPA 414. The vehicle will be equipped with single tires and wheels at all wheel positions. The vehicle will be equipped with tubeless steel belted radial tires with non-directional on/off-road type tread mounted on disc wheel assemblies. Tire and wheel assemblies will be identical at all positions.

Tires and wheels will be certified by the manufacturer for not less than 25 miles of continuous operation at 60 mph at the normal operational inflation pressure. A spare tire and wheel assembly will be provided; however, the spare tire and wheel assembly are not required to be mounted on the vehicle. Tires will be new. Retreads, recaps, or re-grooved tires will not be permitted.

Tire bead locks, where justified, may be installed on all tires and rims.

3.3.10 Towing connections. The vehicle will be equipped with towing connections in accordance with NFPA 414. The vehicle will be designed for flat towing; the capability to lift and tow the vehicle is not required. The tow connections may intrude into the 30-degree approach angle.

3.3.11 Brake system. The vehicle will be equipped with a multi-channel all-wheel antilock brake system with at least one channel for each axle. The brakes will be automatic, self-adjusting and fully air-actuated. Brakes will be in accordance with CFR 49 CFR 393.40 through 393.42(b)), 393.43, and 393.43 through 393.52. The braking system, complete with all necessary components will include:

1. Air compressor having a capacity of not less than 16 standard cubic feet per minute (SCFM).
2. Air storage reservoir(s), each tank equipped with drain (bleed) valves, and with safety and check valves between the compressor and the reservoir tank.
3. Automatic moisture ejector on each air storage reservoir. Manual air tank drains are acceptable if they are labeled, are centrally located in one compartment and are accessible by an individual standing at the side of the vehicle.
4. Automatic slack adjusters on cam brakes or internal self-adjusting brakes on wedge brakes on all axles.
5. Spring set parking brakes.

All components of the braking system will be installed in such a manner as to provide adequate road clearance when traveling over uneven or rough terrain, including objects liable to strike and cause damage to the brake system components. No part of the braking system will extend below the bottom of wheel rims, to ensure, in case of a flat tire, that the weight of the vehicle will be supported by the rim and the flat tire and not be imposed on any component of the braking system. Slack adjusters and air chambers will be located above the bottom edge of the axle carrier.

3.3.11.1 Air dryer. A replaceable cartridge desiccant air dryer will be installed in the air brake system. The dryer will have the capability of removing not less than 95 percent of the moisture in the air being dried. The dryer will have a filter to screen out oil and solid contaminants. The dryer will have an automatic self-cleaning cycle and a thermostatically controlled heater to prevent icing of the purge valve.

3.3.11.2 Compressed air shoreline or vehicle-mounted auxiliary air compressor. A flush mounted, check valved, auto-eject compressed air shoreline connection will be provided to maintain brake system pressure while the vehicle is not running. The shoreline will be flush mounted (not to extend outside the body line), located on the exterior of the vehicle, either on the left side rear corner of the cab, or at the rear of the vehicle, In lieu of a compressed air shoreline connection, the vehicle will be equipped with a 110-volt shoreline connected vehicle-mounted auxiliary air compressor. In lieu of a compressed air shoreline connection, the vehicle may be equipped with an electrical shoreline connected vehicle mounted auxiliary air compressor.

3.3.12 Steering. The vehicle will be equipped with power steering. Rear-wheel steering technology is not an approved vehicle option.

3.3.12.1 Steering effort. The steering system performance will be in accordance with NFPA 414.

3.3.12.2 Turning diameter. The fully loaded vehicle will have a wall to wall turning diameter of less than three times the overall length of the vehicle in both directions in accordance with NFPA 414.

3.3.13 License plate bracket. A lighted license plate bracket will be provided at the left rear and left front of the vehicle. The location of the left front bracket will be placed so as not to interfere with the operation of firefighting systems.

3.4 Cab. The vehicle will have a fully enclosed two door cab of materials which are corrosion resistant, such as aluminum, stainless steel, or glass reinforced polyester construction. Steps and handrails will be provided for all crew doors, and at least one grab handle will be provided for each crew member, located inside the cab for use while the vehicle is in motion. The lowermost step(s) will be no more than 22 inches above level ground when the vehicle is fully loaded. A tilt and telescoping steering column will be provided.

3.4.1 Windshield and windows. The windshield and windows will be of tinted safety glass. Each door window will be capable of being opened far enough to facilitate emergency occupant escape in the event of a vehicle accident. The vehicle windows will have an electric control system.

3.4.2 Cab interior sound level. The maximum cab interior sound level will be in accordance with NFPA 414.

3.4.3 Instruments and controls. All instruments and controls will be illuminated and designed to prevent or reduce windshield glare. Gauges will be provided for oil pressure, coolant temperature, and automatic transmission temperature. In addition to the instruments and controls required by NFPA 414, the following will be provided within convenient reach of the seated driver:

1. Master warning light control switch,
2. Work light switch(es), and
3. Compartment "Door Open" warning light and intermittent alarm that sounds when a compartment door is open and the parking brakes are released or the transmission is in any position other than neutral.

3.4.4 Windshield deluge system. The vehicle will be equipped with a powered windshield deluge system. The deluge system will be supplied from the agent water tank and will have an independent pumping system. The deluge system activation switch will be located within reach of the seated driver and turret operator.

3.4.5 Forward Looking Infrared (FLIR). A forward looking infrared (FLIR) camera and in-cab monitor, meeting the requirements of NFPA 414, will be provided. In addition, the FLIR monitor described in NFPA 414 will have a minimum dimension of 10 in (25 cm) (measured diagonally) and be located in a position where it is visible to both the seated driver and turret operator.

3.4.6 Climate control system. The offeror/contractor's standard heater/defroster and air conditioning system will be provided. The climate control system will induct at least 60 cubic feet per minute of fresh air into the cab. Cab mounted components will be protected from inadvertent damage by personnel.

3.4.7 Seats. The driver seat will be adjustable forward and back and for height. The turret operator’s seat, located to the right front of the driver’s seat, will be a fixed (non-suspension) type. Each seat will be provided with a Type 3 seat belt assembly (i.e., 3-point retractable restraint) in accordance with CFR 49 CFR 571.209. Seat belts must be of sufficient length to accommodate crew members in full Personal Protective Equipment (PPE).

3.4.7.1. Seat Options. Two types of seat options are allowed in the vehicle. A standard seat contains a hard/fixed back. For these seats, a remote-mounted bracket designed to store a Self–Contained Breathing Apparatus (SCBA) will be provided. The remote-mounted bracket for the driver and turret operator (at a minimum) must be placed inside the cab. An SCBA seat, on the other hand, contains an opening which can accommodate someone wearing an SCBA. SCBA seats and seat brackets will be compatible with *MSA G-1, 4500 psi, 45-minute cylinders*. The chart below represents the user’s stated preference for the vehicle seating configuration.

**AIR BOTTLE HOLDERS**

All SCBA type seats in the cab shall have a SCBA holder mounted in each backrest. A front cushion release shall be provided on each bracket. This bracket shall accommodate all diameter bottles. There shall be a quantity of three (3).

|  |  |  |  |
| --- | --- | --- | --- |
| **Position** | **Standard** | **SCBA-Seat** | **N/A** |
| Driver | X |  |   |
| Turret |  | X |  |
| #3 |  | X |  |
| #4 |  |  | X |

3.4.8 Windshield wipers and washer. The vehicle will be equipped with electrically powered windshield wipers. The wiper arms and blades will be of sufficient length to clear the windshield area described by SAE J198, Windshield Wiper Systems - Trucks. Individual wiper controls will include a minimum of two speed settings and an intermittent setting. The wiper blades will automatically return to a park position, out of the line of vision. The vehicle will be equipped with a powered windshield washer system, including an electric fluid pump, a minimum one-gallon fluid container, washer nozzles mounted to the wiper arms (wet arms), and a momentary switch.

3.4.9 Warning signs. Signs that state "Occupants must be seated and wearing a seat belt when apparatus is in motion" will be provided in locations that are visible from each seated position in accordance with NFPA 414.”

3.4.10 Lateral accelerometer and/or stability control system. The vehicle will be equipped with a lateral accelerometer and/or an electronic stability control system in accordance with NFPA 414.

3.4.11-Monitoring and Data Acquisition System (MADAS). The vehicle will be equipped with a MADAS as prescribed by NFPA 414.

3.5 **Body, compartments, and equipment mounting.**

3.5.1 Body. The vehicle will have a corrosion-resistant body.

3.5.2 Compartments. The vehicle body will have lighted compartments in accordance with

NFPA 414 with a minimum of 10 cubic feet of enclosed storage space.

3.5.2.1 Compartment doors. Storage compartments will have clear anodized aluminum, counter balanced, non-locking, roll-up or single hinged doors as determined by the manufacturer. Door latch handles on roll-up doors will be full-width bar type. Door straps will be provided to assist in closing the compartment doors when the rolled up or hinged door height exceeds six feet above the ground.

3.5.2.2 Scuffplates. Replaceable scuffplates will be provided at each compartment threshold to prevent body damage from sliding equipment in and out of the compartments. The scuffplates will be securely attached to the compartment threshold but will be easily replaceable in the event of damage.

3.5.2.3 Drip rails. Drip rails will be provided over each compartment door.

3.5.2.4 Shelves. An adjustable and removable compartment shelf will be provided for every 18 inches of each vertical storage compartment door opening. Shelving adjustments will require no more than common hand tools and will not require disassembly of fasteners. Shelves will support a minimum of 200 pounds without permanent deformation. Each shelf will be accessible to crew members standing on the ground or using a pull out and tip-down configuration. Each shelf will have drain holes located so as to allow for drainage of any water from the stowed equipment.

3.5.2.5 Drainage mats. Each compartment floor and shelf will be covered with a removable black mat designed to allow for drainage of any water from the stowed equipment.

3.5.3 SCBA storage tubes. A single compartment or tubes for storage of four SCBA bottles will be provided. Two will be installed on each side of the vehicle. The tubes will be of sufficient size to accommodate the procuring agencies SCBA cylinders.

3.5.4 Ladder, handrails, and walkways. Ladder, stepping, standing, and walking surfaces will be in accordance with NFPA 414. Handrails will be provided in accordance with NFPA 414. The lowermost step(s) or ladder rungs will be no more than 22 inches (56 cm) above level ground when the vehicle is fully loaded. The lowermost steps may extend below the angle of approach or departure or ground clearance limits if they are designed to swing clear. The tread of the bottom steps must be at least 8 inches (20 cm) in width and succeeding steps at least 16 inches (40 cm) in width. The full width of all steps must have at least 6 inches (15 cm) of unobstructed toe room or depth when measured from, and perpendicular to, the front edge of the weight-bearing surface of the step. Vehicle must be capable of holding a ladder up to 24 feet in length.

3.5.5 Ancillary equipment. Ancillary equipment listed in NFPA 414 A.4.2.1 (1)-(17) is not covered by this Procurement Specification in accordance with AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles. Ancillary equipment is funded separately by other sources.

**NOTE:** Equipment funding will be obtained as a separate contract under the provisions of AC 150/5210-14, Aircraft Rescue and Fire Fighting Equipment, Tools, and Clothing.

3.6 Agent system.

3.6.1 Agent (fire) pump. The vehicle will be equipped with a centrifugal pump capable of providing the performance specified herein as prescribed by NFPA 414.

3.6.1.1 Agent system piping. All piping, couplings, and valves and associated components that come into contact with the agent will be in accordance with NFPA 414.

3.6.1.2 Tank to pump connection. A check valve and shutoff valve will be provided in each tank to pump line.

3.6.1.3 Piping, couplings, and valves. All agent system piping will conform to NFPA 414 criteria.

3.6.1.4 Overheat protection. The agent system will be equipped with an overheat protection system in accordance with NFPA 414. Overheat protection is not required on vehicles utilizing a pre-mixed pressurized foam system

3.6.1.5 Pressure relief valves. The agent system will be equipped with pressure relief valves in accordance with NFPA 414.

3.6.1.6 Drains. The agent system will be equipped with a drainage system in accordance with NFPA 414.

3.6.2 Water tank. The vehicle will have a water tank with a manufacturer certified minimum capacity of at least 1500 gallons.

3.6.2.1 Water tank construction. The water tank will be constructed of passivated stainless steel, polypropylene, or Glass Reinforced Polyester (GRP) construction. All materials used will be capable of storing water, foam concentrate, and water/AFFF solution.

3.6.2.2 Water tank overhead fill cover and drain. The water tank will be equipped with a 20-inch fill tower. The tower will be designed to allow for video inspection of the water tank interior. The water tank will incorporate a drainage system in accordance with NFPA 414.

3.6.2.3 Water tank overflow system and venting. The water tank will incorporate a venting system to relieve pressure on the tank during fill and discharge operations at maximum flow rates. It will have an overflow system to relieve excess fluid in the event of tank overfill. Drainage from the vent and overflow system will not flow over body panels or other vehicle components and will not be in the track of any of the tires. Tank vent hoses will be of the non-collapsible type.

3.6.2.4 Water tank top fill opening. A top fill opening of not less than 8 inches internal diameter with a readily removable 1/4-inch mesh strainer will be provided. The fill opening may be incorporated as part of the manhole cover and will be sized to accommodate a 2 1/2-inch fill hose.

3.6.2.5 Water tank fill connections. The water tank fills will incorporate 4” storz connections, one on each side of the vehicle, and will be in accordance with NFPA 414. The vehicle will be fitted with the "structural firefighting capability option" and the additional requirements listed in paragraph 3.6.8 must be incorporated.

3.6.3 Foam system. (**NOTE:** *The requirements of section 3.6.3 do not apply to pre-mixed pressurized foam systems.)*

3.6.3.1 Foam concentrate tank. The foam concentrate tank(s) will have a manufacturer certified working capacity sufficient for two tanks of water at the maximum tolerance specified in NFPA 412, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment for 3 to 6 percent foam concentrate (i.e., 7.0-percent).

3.6.3.1.1 Foam tank construction. The foam tank will be constructed of passivated stainless steel, polypropylene, or GRP construction. All materials used will be capable of storing foam concentrate.

3.6.3.1.2 Foam tank drain. The foam tank will incorporate a drain and drain valve. The valve will be on the left side of the vehicle and controlled by a crew member standing on the ground. The drain line will have a minimum 1 1/2-inch I.D. The foam tank drain outlet will be located so that the contents of the tank can be drained into 5-gallon cans and 55-gallon drums.

3.6.3.1.3 Foam tank top fill trough. The foam tank will incorporate a top fill trough mounted in the top of the tank readily accessible to at least two crew members on top of the vehicle. The top fill trough will incorporate a cover, latch, and sealed so as to prevent spillage under any operating condition. The top fill trough will be designed to allow two standard 5-gallon foam concentrate containers to be emptied simultaneously. The top fill trough neck will extend sufficiently close to the bottom of the tank to reduce foaming to a minimum during the fill operation. The top fill trough will incorporate readily removable, rigidly constructed 10 mesh stainless steel, brass or polyethylene strainers. All components in and around the top fill trough will be constructed of materials that resist all forms of deterioration that could be caused by the foam concentrate or water.

3.6.3.2 Foam tank fill connections. The foam tank will incorporate a 1.5-inch National Hose thread female hose connection on both sides of the vehicle to permit filling by an external transfer hose at flow rates up to 25-gpm. The connections will be provided with chained-on long handled plugs or rocker lug plugs. The top of the connections will be no higher than 48 inches above the ground and readily accessible. The fill lines will incorporate check valves and readily removable, rigidly constructed 1/4-inch mesh strainers. All components in the foam tank fill system will be constructed of materials that resist all forms of deterioration that could be caused by the foam concentrate or water.

3.6.3.2.1 Foam tank vent and overflow system. The foam tank will incorporate a vent system to relieve pressure on the tank during fill and discharge operations at maximum flow rates and an overflow system to relieve excess liquid in the event of tank overfill. Drainage from the vent and overflow system will not flow over body panels or other vehicle components and will not be in front of or behind any of the tires. Tank vent hoses will be of the non-collapsible type.

3.6.3.3 Foam transfer pump. A foam transfer pump will be provided and mounted in a compartment on the vehicle. The pump will be capable of transferring and drawing foam liquid concentrate at adjustable flow rates up to 25 gallons per minute (GPM) directly through the pump and loading connection (see 3.6.3.2). All materials and components that come in contact with the foam will be compatible with the foam concentrate. The pump and its plumbing will have provisions for flushing with water from the water tank. A suitable length of hose with appropriate connections will be provided for filling the foam tank from an external foam storage container.

3.6.3.4 Foam flushing system. The foam concentrate system will be designed in accordance with NFPA 414 so that the system can be readily flushed with clear water.

3.6.3.5 Foam concentrate piping. All metallic surfaces of the piping and associated components that come into contact with the foam concentrate will be of brass, bronze, or passivated stainless steel. The foam concentrate piping will be in accordance with NFPA 414.

3.6.4 Foam proportioning system. The vehicle will have a foam proportioning system for Aqueous Film-Forming Foam (AFFF) (whether 3- or 6-percent foam concentrate) in accordance with NFPA 414. If a fixed orifice plate system is used, a plate will be provided for each percentage foam concentrate; the additional plate will be securely mounted in a protected location on the vehicle. A fire vehicle mechanic will be able to interchange the plates using common hand tools. The vehicle will be set to 3 % on delivery.

3.6.4.1 Input-Based Testing The vehicle will have piping, internal modification, cart, trailer, or other equipment needed to support NFPA 412 input-based testing.

3.6.5 Primary vehicle turret. The vehicle will be equipped with a standard roof mounted turret, high reach extendable turret, and/or high flow bumper mounted turret to serve as the primary sources of agent delivery, as specified below:

3.6.5.1 Roof turret. The roof turret will be mounted near the front of the roof of the vehicle. It will have a non-air-aspirating, constant flow, variable stream nozzle with dual flow rates for foam or water rated as specified in NFPA 414. The discharge pattern will be infinitely variable from straight stream to fully dispersed. The roof turret and LED Light will be power operated; power controls will be positioned for use by the driver and the crew member seated to the right of the driver. The type of nozzle or turret drain will be per the manufacturer's recommendation.

3.6.6 Bumper turret. The vehicle will be equipped with a joystick controlled, constant flow, non-air­-aspirating, variable stream type: low angle high volume dual rate (minimum 375/750 GPM) bumper turret. The bumper turret will be capable of discharging at a minimum flow rates of foam or water as specified by the user, with a pattern infinitely variable from straight stream to fully dispersed. The bumper turret and LED light will be capable of automatic oscillation, with the range of oscillation adjustable up to 90° each side of center (left and right) with vertical travel capabilities of +45°/20° meeting section 4.20.2 in NFPA 414.

3.6.7 Pre-connected handline(s). Two 200 foot, 1 3/4-inch pre-connected woven jacket handlines, with a 1 1/2-inch control valve and a pistol grip nozzle, will be accessible from each side of the vehicle. A safety system will be provided to prevent charging of the hose until the hose has been fully deployed. The handline(s) and nozzle(s) will be in accordance with NFPA 414 and will allow for a minimum of 100 gpm at 100 psi nozzle pressure. A control for charging each handline will be provided for operation by both the driver and the turret operator. All handlines to be stored in slide out crosslay trays.

3.6.7.1 In addition, the vehicle will be equipped with the following handlines: 100 feet of twinned 1-inch dry chemical/foam-water hose on a reel.

3.6.8 Structural firefighting capability. The vehicle will be equipped with an agent system structural control panel, on the left side of the vehicle, operable while standing on the ground. Structural panel activation will be interlocked to operate only with the vehicle parking brakes set and the transmission in neutral position. Controls and instruments will be grouped by function. The control panel will be hinged or accessible from the rear for maintenance. Instruments will be lighted for night operation.

3.6.8.1 The structural panel will include, as a minimum, the following:

1. Panel activation switch, including the panel lights.
2. Engine tachometer.
3. Engine oil pressure gauge with low pressure warning light.
4. Engine coolant temperature gauge with high temperature warning light.
5. A liquid filled gauge, or digital indicator for pump suction, -30 inches Hg vacuum to 600 psi.
6. A liquid filled gauge, or digital indicator for pump pressure, 0 to 600 psi.
7. An adjustable pump pressure using either an electronic pressure governor or a manual control with a relief valve will be provided.
8. Foam or water selection.
9. Water and foam tank liquid level indicators, located adjacent to the water and foam tank fills.

3.6.8.2 The structural firefighting capability will also require installation of the following items:

1. A priming pump and control (for drafting using the large intake connection).
2. Water tank isolation valve.
3. Discharge connections. Two 2 1/2-inch discharge connections with male National Hose threads will be provided. One 2 1/2-inch discharge will be provided on each side of the vehicle. Each connection will be equipped with a cap, a quarter-turn control valve, a bleeder valve, and a pressure gauge. Each connection will be rated at 250-gpm minimum.
4. Intake connections. The vehicle will be equipped with one valved 5-inch intake connection on the left side. The vehicle will be equipped with one valved 2 1/2-inch intake connection on the left side adjacent to the 5-inch intake connection with both having either a 30° or 45° turn-down fitting. The 5-inch intake connection will have a male National Hose threads, a quarter-turn control valve, a bleeder valve, a strainer, and a cap. The 2 1/2-inch intake connection will have rocker lug female National Hose threads, a quarter-turn control valve, a bleeder valve, a strainer, and a plug. The vehicle will be capable of filling its water tank by pumping from a draft, a hydrant, or a nurse truck through either of the intake connections without the use of a hose from a discharge connection to a tank fill connection.

3.6.9 Primary turret discharge nozzle. The vehicle will be equipped with a complementary agent discharge mounted parallel to the AFFF solution discharge on the primary turret mounted on the front bumper.

3.7 Dry chemical agent system. The vehicle will be equipped with a 450 lb. minimum capacity potassium based dry chemical agent system. The propellant gas cylinder will be a DOT-3AA2400 cylinder and replaceable within fifteen minutes by two crew members standing on the ground. It will be equipped with a cylinder replacement hoisting system. The propellant gas cylinder will be secured to withstand off-road operations. A pressure indicator will be visible to any person opening the tank fill cap. Blow-down piping will be directed beneath the vehicle. The dry chemical agent tank will include lifting rings and will have a nameplate indicating, as a minimum, the following:

1. Extinguishing agent.
2. Capacity.
3. Weight full.
4. Weight empty.
5. Operating pressure.
6. Hydrostatic test date.
7. Type of agent required for re-servicing.

3.7.1 Dry chemical primary turret discharge nozzle. The vehicle will be equipped with a turret mounted on the cab roof, and the bumper, with a combination dry chemical/AFFF turret of the concentric direct injection type, designed to entrain the dry chemical agent within the AFFF solution discharge. Dry chemical discharge control will be within reach of the driver and the turret operator.

3.7.2 Dry chemical hose reel. A hose reel, equipped with at least 100 feet of dry chemical hose, will be mounted in a compartment. Handline agent and purge controls will be mounted in or adjacent to the compartment. All electrical components will be sealed against entry of water. The hose reel will have both electric and manual rewind provisions. The manual rewind handle will be bracket mounted and stored in the compartment. A quick acting control will be provided to activate the handline from the cab of the vehicle

3.8 Electrical systems and warning devices. The vehicle will have a 12-volt or 24-volt electrical and starting system in accordance with NFPA 414.

3.8.1 Alternator. An appropriate charging system, in accordance with NFPA 414, will be provided. The minimum continuous electrical load will include operation of the air conditioning system.

3.8.2 Batteries. Batteries will be of the maintenance-free type; addition of water will not be required during normal service life. The battery cover and vent system will be designed to prevent electrolyte loss during service and to keep the top of the battery free from electrolyte.

3.8.2.1 Battery compartment. The batteries will be enclosed in a weatherproof enclosure, cover, or compartment and be readily accessible.

3.8.3 Battery charger or conditioner. The vehicle will have a DC taper type battery charger or an automatic battery conditioner, or voltage monitoring system, providing a minimum 12-amp output. The charger/conditioner will be permanently mounted on the vehicle in a properly ventilated, accessible location. The charger/conditioner will be powered from the electrical shoreline receptacle (see 3.10.1). A charging indicator will be installed next to the receptacle. When a battery conditioner is provided, the conditioner will monitor the battery state of charge and, as necessary, automatically charge or maintain the batteries without gassing, depleting fluid level, overheating, or overcharging. A slave receptacle will be provided at the rear or on either side of the vehicle cab. Battery jump studs may be installed on the exterior of the battery box in lieu of a slave receptacle.

3.8.4 Electromagnetic interference. The vehicle electrical system will be in accordance with SAE J551- 2 for electromagnetic interference.

3.8.5 Work lighting.

3.8.5.1 Cab interior lights. Cab interior light levels will be sufficient for reading maps or manuals. At least one red and one white cab interior dome light will be provided.

3.8.5.2 Compartment lights. White lighting sufficient to provide an average minimum illumination of 1.0 foot-candle will be provided in each compartment greater than 4.0 cubic feet and having an opening greater than 144 square inches. Where a shelf is provided, this illumination will be provided both above and below the shelf. All compartments will be provided with weatherproof lights that are switched to automatically illuminate when compartment doors are opened and the vehicle master switch is in the ‘on’ position. Light switches will be of the magnetic (non-mechanical) type.

3.8.5.3 Ladder, step, walkway, and area lights. Non-glare white or amber lighting will be provided at ladders and access steps where personnel work or climb during night operations. In addition, ground lighting will be provided. Ground lights will be activated when the parking brake is set in accordance with AC 150/5220-10, Guide Specification for Aircraft Rescue and Fire Fighting (ARFF) Vehicles. These area lights will be controlled with three-way switches on the cab instrument panel and near the light sources. The switch located in the cab will be a master switch and must be turned on before auxiliary switches near the light sources are operational.

3.8.5.4 Spot/Floodlights. Two spot/floodlights will be attached at the end of the primary turret. The lights will illuminate the area covered by the turret. Both lights will be controlled from switches in the cab. LED lights will be used.

3.8.5.5 Flood Lights. Two telescoping floodlights will be provided. One light will be mounted on the left and right sides of the vehicle. 250W LED lights will be used. Both lights will be mounted on extension tubes and controlled from switches in the cab and manually raised. To prevent these lights from accidental damage, the cab will be equipped with a visual warning signal to alert the driver if the lights are inadvertently left in the “up” position.

3.8.5.6 Scene Lights. A total of six high mounted floodlights will be provided to illuminate the work areas around the vehicle. Two lights will be mounted on the front and two will be mounted on each side of the vehicle. The lights will be powered by the vehicle alternator driven system or auxiliary generator, and the lights in the front will be controlled from switches in the cab. LED lights will be used.

3.8.6 Audible warning devices.

3.8.6.1 Siren. The vehicle will be equipped with an electronic siren system. The amplifier unit will include volume control and selection of "Radio," "PA," "Manual," "Yelp,", "Wail" and “Hi-Lo” (European) modes, and a magnetic noise canceling microphone. The amplifier, microphone, and controls will be within reach of the driver and the turret operator. Siren activating foot switches will be located in front of the driver and the turret operator. The siren speaker will be rated at 100 watts minimum and will be located in a guarded position as low and as far forward on the vehicle as practical.

3.8.6.2 Horn. Dual forward-facing air horns will be installed in protected locations near the front of the vehicle. Air horn activating foot switches will be located in front of the driver and the turret operator.

3.8.7 Emergency warning lights. All emergency warning lights must meet the requirements of AC 150/5210-5. Where applicable, LED lights will be used as the primary light type. Lighting units will

be installed on the top front, sides, and rear of the vehicle to provide 360° visibility. A switch will be provided on the instrument panel to control all of the top, side, front and rear emergency warning lights. A switch will also be provided on the instrument panel to disable all lower emergency warning lights when desired. All lighting systems will meet NFPA 414 emergency lighting criteria.

3.8.7.1 Emergency warning light color. All emergency warning lights will meet the requirements of AC 150/5210-5.

3.8.7.2 Headlight flashing system. A high beam, alternating/flashing, headlight system will be provided. The headlight flasher will be separately switched from the warning light panel. All emergency warning lights will meet the requirements of AC 150/5210-5.

3.8.8 Radio circuit. The vehicle will have three separate 30-amp circuits with breakers and connections provided in a space adjacent to the driver and turret operator for installation of radios and other communications equipment after the vehicle has been delivered. To facilitate the installation of the communications equipment the manufacturer will provide three antennas pre-installed on top of the cab.

Two (2) antennas will be for the following bands (one each): an 800 MHz radio and a 9W, air-band 118-136 MHz VHF radio. One (1) 9W, air band 118-136 MHz VHF radio will be wired, mounted and installed.

The mounting and wiring for the 800 MHz radio should be set up for a Motorola APX6500 model, which Charlottesville – Albemarle Airport Authority will provide to the manufacturer.

3.8.9 Power receptacles.

3.8.9.1 Primary power receptacles. The vehicle will have two duplex 15-amp 110-volt power receptacles, one installed adjacent to the cab door on each side of the vehicle. Each duplex receptacle will include one straight blade and one twist-lock connection. These outlets will be powered by the generator.

3.8.9.2 Auxiliary power receptacles. The vehicle will have 2 12-volt auxiliary power receptacles mounted adjacent to the driver and crew member positions, preferably in the instrument panel.

3.8.9.3 Cable reel. The vehicle will be equipped with an electrical cable reel, located within a compartment. The reel will be equipped with 200 feet of 20-amp, 600 volt, 90°C insulated electrical cable. The electrical cable will be equipped with a rubber ball stop to prevent cable pull through during rewinding operations. A four-way roller guide will be provided on the cable reel to prevent chafing of cable insulation. The cable reel will have an electric rewind motor with provisions for manual rewind in the event of motor failure; the manual rewind handle will be securely stored near the cable reel. A portable weatherproof duplex outlet box, with built-in circuit breakers and straight blade receptacles, will be provided for on the cable end. The cable reel will be powered by the auxiliary generator.

3.8.10 Auxiliary generator. A minimum 10 kilowatt (kW) (continuous rating), 120/240-volt, 60 hertz, diesel, hydraulic, or split shaft Power Takeoff (PTO)-driven generator will be provided.

3.9 Line voltage electrical system.

3.9.1 Electrical shoreline connection. The battery charger/conditioner will be powered from a covered, polarized, insulated, labeled, recessed (flush mounted), male, 110-volt AC auto-eject receptacle. The connection will be located on the exterior of the vehicle on the left side of the cab. A weatherproof charge meter will be installed next to the receptacles. A 15-amp rated, 110-120-volt, AC straight blade (non twist-lock) connector will be provided.

3.10 Air systems.

3.10.1 Air hose reel. An air hose reel will be provided in an enclosed compartment on the vehicle. The hose reel will be equipped with 200 feet of 3/8-inch I.D. hoseline. A 3/8-inch National Pipe Taper (NPT) fitting and female style quick disconnect will be connected to the end of the hoseline. A four-way roller guide will be provided for the hose reel to prevent hose chafing and kinking. The hoseline will be equipped with a rubber ball stop to prevent hose pull through on roller guides during rewinding operations. The hose reel will have an electric rewind motor and provisions for manual rewind in the event of motor failure; the manual rewind handle will be securely stored near the hose reel. A pressure protected air supply from the chassis air system will be connected to the hose reel. The air supply lines will be routed with minimum bends and located or guarded from damage from the carried equipment. Install shutoff valve to the hose real.

3.11 Quality of Workmanship. The vehicle, including all parts and accessories, will be fabricated in a thoroughly workmanlike manner. Particular attention will be given to freedom from blemishes, burrs, defects, and sharp edges; accuracy of dimensions, radii of fillets, and marking of parts and assemblies; thoroughness of welding, brazing, soldering, riveting, and painting; alignment of parts; tightness of fasteners; etc. The vehicle will be thoroughly cleaned of all foreign matter.

4. **REGULATORY REQUIREMENTS.**

4.1 Recoverable Materials. The contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with Title 48: Federal Acquisition Regulations System, Part 2823— Environment, Conservation, Occupational Safety, and Drug-free Workplace, Subpart 2823.4 Use of Recovered Material, 403 Policy and 404 Procedures.

4.2 Green Procurement Program. Green Procurement Program (GPP) is a mandatory federal acquisition program that focuses on the purchase and use of environmentally preferable products and services. GPP requirements apply to all acquisitions using appropriated funds, including services and new requirements. FAR 23.404(b) applies and states the GPP requires 100% of EPA designated product purchase that are included in the Comprehensive Procurement Guidelines list that contains recovered materials, unless the item cannot be acquired:

1. competitively within a reasonable timeframe;
2. meet appropriate performance standards, or
3. at a reasonable price.

The prime contractor is responsible for ensuring that all subcontractors comply with this requirement. Information on the GPP can be found at: <http://www.dot.gov/ost/m60/DOT_policy_letters/apl8_04.pdf> or FAR 23.404(b): <http://www.acquisition.gov/far/current/html/Subpart%2023> 4.html.

5. **PRODUCT CONFORMANCE PROVISIONS.**

5.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

1. Performance inspection (see 5.2).
2. Conformance inspection (see 5.3).

5.2 Performance inspection. The vehicle will be subjected to the examinations and tests described in 5.6.3.1 through 5.6.3.5 (if applicable). The contractor will provide or arrange for all test equipment, personnel, schedule, and facilities.

5.3 Conformance inspection. The vehicle will be subjected to the examinations and tests described in 5.6.3.1 through 5.6.3.5 (if applicable). The contractor will provide or arrange for all test equipment, personnel, and facilities.

5.4 Product conformance. The products provided will meet the performance characteristics of this PS, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial marketplace. The purchaser reserves the right to require proof of such conformance.

5.5 Technical proposal. The offeror/contractor will provide an itemized technical proposal that describes how the proposed model complies with each characteristic of this PS; a paragraph by paragraph response to the characteristics section of this PS will be provided. The offeror/contractor will provide two copies of their commercial descriptive catalogs with their offer as supporting reference to the itemized technical proposal. The offeror/contractor will identify all modifications made to their commercial model in order to comply with the requirements herein. The vehicle furnished will comply with the "commercial item" definition of FAR 2.101 as of the date of award. The purchaser reserves the right to require the offeror/contractor to prove that their product complies with the referenced commerciality requirements and each conformance/performance characteristics of this PS.

5.6 Inspection requirements.

5.6.1 General inspection requirements. Apparatus used in conjunction with the inspections specified herein will be laboratory precision type, calibrated at proper intervals to ensure laboratory accuracy.

5.6.2 Test rejection criteria. Throughout all tests specified herein, the vehicle will be closely observed for the following conditions, which will be cause for rejection:

1. Failure to conform to design or performance requirements specified herein or in the contractor's technical proposal.
2. Any spillage or leakage of any liquid, including fuel, coolant, lubricant, or hydraulic fluid, under any condition, except as allowed herein.
3. Structural failure of any component, including permanent deformation, or evidence of impending failure.
4. Evidence of excessive wear.
5. Interference between the vehicle components or between the vehicle, the ground, and all required obstacles, with the exception of normal contact by the tires.
6. Misalignment of components.
7. Evidence of undesirable road ability characteristics, including instability in handling during cornering, braking, and while traversing all required terrain.
8. Conditions that present a safety hazard to personnel during operation, servicing, or maintenance.
9. Overheating of the engine, transmission, or any other vehicle component.
10. Evidence of corrosion.
11. Failure of the firefighting system and sub-systems.

5.6.3 Detailed inspection requirements.

5.6.3.1 Examination of product. All component manufacturers’ certifications, as well as the prototype and production/operational vehicle testing outlined in Table 1, will be examined to verify compliance with the requirements herein. Attention will be given to materials, workmanship, dimensions, surface finishes, protective coatings and sealants and their application, welding, fastening, and markings. Proper operation of vehicle functions will be verified as defined by NFPA 414, Acceptance Criteria chapter. A copy of the vehicle manufacturer's certifications will be provided with each vehicle in accordance with NFPA 414. The airport may accept a manufacturer or third-party certification for any/all prototype and production/operational vehicle testing performed prior to delivery which proves that the vehicle meets the performance parameters of NFPA 414.

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| **Table 1. Vehicle Test Data *NFPA 414 paragraph*** | ***Test*** |
| **Production Vehicle Operational Tests (NFPA 414 - Section 6.4)** |
| (6.4.1) | Vehicle Testing, Side Slope |
| (6.4.2) | Weight / Weight Distribution |
| (6.4.3) | Acceleration. **NOTE:** *With the modification that the instrumentation must be a GPS-based electronic data collection system.* |
| (6.4.4) | Top Speed |
| (6.4.5) | Brake Operational Test |
| (6.4.6) | Air System / Air Compressor Test |
| (6.4.7) | Agent Discharge Pumping Test |
| (6.4.8) | Dual Pumping System Test (As Applicable) |
| (6.4.9) | Pump and Maneuver Test |
| (6.4.10) | Hydrostatic Pressure Test |
| (6.4.11) | Foam Concentration Test |
| (6.4.12) | Primary Turret Flow Rate Test |
| (6.4.13) | Piercing/Penetration Nozzle Testing (As Applicable) |

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| **Prototype Vehicle Tests (NFPA 414 – Section 6.3)** |
| (6.3.1) | Rated Water and Foam Tank Capacity Test |
| (6.3.2) | Cornering Stability. **NOTE:** *With the modification that the evasive maneuver / double-lane change test must be conducted at 35 mph (56 kph).* |

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| --- | --- |
| ***NFPA 414 paragraph*** | ***Test*** |
| (6.3.3) | Vehicle Dimensions |
| (6.3.4) | Driver Vision Measurement |
| (6.3.5) | Pump and Roll on a 40 Percent Grade |
| (6.3.6) | Electrical Charging System |
| (6.3.7) | Radio Suppression |
| (6.3.8) | Gradeability Test |
| (6.3.9) | Body and Chassis Flexibility Test |
| (6.3.10) | Service/Emergency Brake Test |
| (6.3.11) | Service/Emergency Brake Grade Holding Test |
| (6.3.12) | Steering Control Test |
| (6.3.13) | Vehicle Clearance Circle Test |
| (6.3.14) | Agent Pump(s)/Tank Vent Discharge Test |
| (6.3.15) | Water Tank Fill and Overflow Test |
| (6.3.16) | Flushing System Test |
| (6.3.17) | Primary Turret Flow Rate Test |
| (6.3.18) | Primary Turret Pattern Test |
| (6.3.19) | Primary Turret Control Force Measurement |
| (6.3.20) | Primary Turret Articulation Test |
| (6.3.21) | Handline Nozzle Flow Rate Test |
| (6.3.22) | Handline Nozzle Pattern Test |
| (6.3.23) | Ground Sweep/Bumper Turret Flow Rate Test |
| (6.3.24) | Ground Sweep/Bumper Turret Pattern Control Test |
| (6.3.25) | Undertruck Nozzle Test |
| (6.3.26) | Foam Concentration/Foam Quality Test |
| (6.3.27) | Warning Siren Test |
| (6.3.28) | Propellant Gas |
| (6.3.29) | Pressure Regulation |
| (6.3.30) | AFFF Premix Piping and Valves |
| (6.3.31) | Pressurized Agent Purging and Venting |
| (6.3.32) | Complementary Agent Handline Flow Rate and Range |
| (6.3.33) | Dry Chemical Turret Flow Rate and Range |
| (6.3.34) | Cab Interior Noise Test |

6. **PACKAGING/DELIVERY**.

6.1 Preservation, packing, and marking will be as specified in the Procurement Specification, contract or delivery order.

6.2 The vehicle must be delivered with full operational quantities of lubricants, brake and hydraulic fluids, and cooling system fluid all of which must be suitable for use in the temperature range expected at the airport.

6.3 The vehicle must be delivered with one complete load of firefighting agents and propellants. One complete load is defined as all of the agents and propellants necessary for the vehicle to be fully operational. One load would include, at a minimum: one fill of a foam tank; one fill of a dry chemical tank (if applicable); one fill of a halogenated tank (if applicable); one spare nitrogen cylinder for a dry chemical system (if applicable); and one spare argon system for a halogenated system (if applicable). Agents and propellants for required testing or training are not included. For the initial training period, water should be used in place of other extinguishing agents. The manufacturer may pre-ship agents and propellants to a receiving airport to reduce overall procurement costs.

6.4 The vehicle manufacturer must provide initial adjustments to the vehicle for operational readiness and mount any ancillary appliances purchased through the vehicle manufacturer as part of the vehicle.

**TRAINING.**

7.1 Upon delivery of the vehicle to the airport, the manufacturer must, at no additional cost, provide the services of a qualified technician for five consecutive days (or up to 8 days for an high reach extendable turret) for training. This is considered sufficient time for the purchaser to adjust shift work schedules to get maximum employee attendance to training sessions at some point during the training period. During this time sufficient repetitive learning opportunities must be provided by the manufacturer to allow various shifts to complete the training requirements.

7.2 The technician must provide thorough instruction in the use, operation, maintenance and testing of the vehicle. This setup must include operator training for the primary operators, which will give them sufficient knowledge to train other personnel in the functional use of all firefighting and vehicle operating systems. Prior to leaving the vehicle, the technician should review the maintenance instructions with the purchaser's personnel to acquaint them with maintenance procedures as well as how to obtain support service for the vehicle.

7.3 Training must include written operating instructions, electronic training aids (videos/power point), or other graphics that depict the step-by-step operation of the vehicle. Written instructions must include materials that can be used to train subsequent new operators.

1. **REFERENCED DOCUMENTS**.

8.1 Source of documents.

8.1.1 The CFR may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402.

Title 14, Code of Federal Regulations (CFR), Part 139, Certification of Airports (14 CFR Part 139)

* Section 139.315 Aircraft Rescue and Firefighting: Index Determination.
* Section 139.317 Aircraft Rescue and Firefighting: Equipment and Agents.
* Section 139.319 Aircraft Rescue and Firefighting: Operational Requirements.

Title 49; Code of Federal Regulations (CFR), Part 393:

* Parts and Accessories Necessary for Safe Operation: Subpart C—Brakes.

Title 49; Code of Federal Regulations (CFR), Part 571, Motor Carrier Vehicle Safety Standards, Part 209, Standard No. 209; Seat Belt Assemblies.

8.1.2 SAE documents may be obtained from SAE, Inc., 400 Commonwealth Drive, Warrendale PA 15096.

8.1.3 National Fire Protection Association (NFPA): NFPA documents may be obtained from NFPA, Batterymarch Park, Quincy MA 02269-9101.

NFPA 412, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment (2009 Edition)

NFPA 414, Standard for AIRCRAFT Rescue and Fire Fighting Vehicles (2007 Edition) NFPA 1901, Standard for Automotive Fire Apparatus (2009 Edition)

8.1.4 Federal Aviation Administration (FAA): FAA ACs may be obtained from the FAA website: <http://www.faa.gov/regulations_policies/advisory_circulars/>

AC 150/5220-10, Guide Specification for AIRCRAFT Rescue and Fire Fighting (ARFF) Vehicles AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport

FAA Orders, Specifications, and Drawings may be obtained from: Federal Aviation Administration, ATO-W CM-NAS Documentation, Control Center, 800 Independence Avenue, SW, Washington, DC 20591. Telephone: (202) 548-5256, FAX: (202) 548-5501 and website: <http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/atc_facilitie> s/cm/cm documentation

**ARFF Vehicle Training Equipment:**

A Computer Based Simulation Training System shall be furnished in accordance with Appendix B of FAA AC 150/5220-10E. A computer based simulator training program shall be required to aid in the proficiency in the employment of high reach extendable turrets. The training package must include controls that simulate as closely as possible the actual cab environment (e.g. location of joystick, throttle, and steering wheel). The simulation software program must represent the actual maneuvering operation and controller interface of the actual operation of the elevated and high reach extendable turret of the ARFF vehicle.

 **Insurance**

To protect the purchaser from potential involvement in litigation, the chassis manufacturer for this contract shall be adequately covered with liability insurance. The manufacturer shall carry commercial general liability insurance including coverage for the products-completed operations exposure, with limits of not less than $1,000,000 Each occurrence (Bodily Injury and Property Damage), $1,000,000 Products/Completed Operations Aggregate, $5,000,000 General Aggregate, and $1,000,000 Personal and Advertising Injury. The insurance shall be issued by an insurance company with a current A.M. Best rating of A- or higher. A Certificate of Insurance showing that this minimum amount of coverage is currently in force shall be included in the bid package for the bid to be considered.

**Manufacturer / Supplier Stability:**

In the interest of continued and reliable service, parts, and technical support, equipment suppliers shall have exhibited a consecutive history of financial stability and manufacture of similar equipment over a minimum of the past ten years. Documentation shall be provided in the bid package to verify such continuous business activity, such as location and contact lists (minimum 10 users), financial statements, and annual reports. In the interest of process and quality control, the chassis manufacturer shall be ISO9001 certified. Because of the critical nature of the product and its application, the burden of proof for this requirement lays with the bidder and/or suppliers.

**Chassis Manufacturer Certification**

Chassis manufacturer shall be ISO 9001 certified for the production of heavy trucks. Claims of self-certification programs are self-serving and are not acceptable for this procurement activity. Third party verification is required given the import and scope of the equipment and the purchaser’s equipment procurement program. Certification documentation of chassis manufacturer compliance with 9001 FROM AN ACCREDITED THIRD PARTY is required in the bid package. Bids not including this documentation will be deemed not acceptable.

**Component Sourcing**

Because of the critical nature of this machinery, it is essential that the complete unit and all components be newly manufactured and unused. To this end, the purchaser reserves the right to compare serial numbers of engines, transmissions, transfer cases and axles with the current production records of the component manufacturers. Any component found to be used, or not of current production will be rejected. The contractor (bidder) will replace the component in question with an appropriate and acceptable new replacement component at his own expense.

**Preparation for Shipment:**

a. Shipment. The vehicle and its accessories, spare parts, and tools shall be packed in such a manner as to prevent pilferage and insure safe delivery to the Charlottesville-Albemarle Airport, Charlottesville, Virginia.

b. Delivery. The vehicle shall be delivered F.O.B. to the Charlottesville-Albemarle Airport, Charlottesville, 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 vehicle must not be driven from the factory, but conveyed by other means to the Charlottesville-Albemarle Airport.

**ATTACHMENT A**

**Bid Sheet**

**One (1) Aircraft Rescue and Fire Fighting Vehicle, Class 4**

Company Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Model/Truck \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Total Bid Price $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Delivery Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Not to exceed 365 days from date of award)

Authorized Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ATTACHMENT B**

**GENERAL TERMS AND CONDITIONS**

**APPLICABLE TO CONTRACTS BETWEEN THE CHARLOTTESVILLE ALBEMARLE AIRPORT AUTHORITY AND NON-GOVERNMENTAL PARTIES FOR THE PURCHASE OF GOODS AND SERVICES**

1. **General Application.** These general terms and conditions apply to all Authority purchases of goods and services, including, without limitation, construction, insurance, and other services. They shall be deemed an integrated part of each contract entered into between the Charlottesville-Albemarle Airport Authority (“Authority”) and a non-governmental party. In the event of a conflict between these general terms and conditions and any other provision of a contract between the Authority and a non-governmental party, the provisions of these general terms and conditions shall govern the parties’ agreement.
2. **Modification of contract pricing.** (VA. Code §2.2-4309). No fixed-price contract may be increased by more than twenty-five percent of the amount of the contract or $50,000, whichever is greater, without the advance written approval of Authority’s governing body. In no event may the amount of any contract, without adequate consideration, be increased for any purpose, including, but not limited to, relief of a bidder from the consequences of an error in its bid, proposal or price quote.
3. **Energy Forward Pricing Mechanisms.** (VA. Code §2.2-4329.1). For the purpose of budget risk reduction, Authority may use forward pricing mechanisms, consistent with Authority’s written policies and procedures governing the use of forward pricing mechanisms. Any contract for natural gas, heating oil, propane, diesel fuel, unleaded fuel, and any other energy source, but excluding contracts for the purchase of electricity, may include a forward pricing mechanism which either: (i) Obligates Authority to buy or sell a specified quantity of energy at a future date, at a set price or (ii) Includes an option for the sale or purchase of the contract.

Forward pricing mechanism transactions shall be made only under the following conditions:

(i) Authority’s obligations shall be subject to the availability and annual appropriation of funding;

(ii) The quantity of energy affected by the forward pricing mechanism shall not exceed the estimated energy use for Authority for the same period, which shall not exceed 48 months from the trade date of the transaction; and (ii) a separate account shall be established by the contractor for operational energy for the Authority. Contractor shall be required to cooperate and assist Authority with any and all internal and external audit reviews, and with the preparation and submission of annual reports to Authority’s internal investment committee.

1. **Modification (extension) of Contract Term** (VA. Code §2.2-4309). Authority may extend the term of an existing contract for services, to allow completion of any work undertaken but not completed during the original term of the contract. Any such extension of time shall be in writing and signed by an authorized representative of the Authority.
2. **Annual appropriations condition.** For any contracts that cannot or will not be completed within a single fiscal year: notwithstanding anything in this contract to the contrary, beyond the initial fiscal year in which performance is commenced, Authority’s obligations are and shall be subject to and expressly conditioned upon the availability and appropriation of public funds by Authority to support continued performance in succeeding fiscal years. When funds are not appropriated or otherwise made available to support continuation of performance in a succeeding fiscal year, the order for goods, or contractor’s performance of services, as applicable, shall be canceled and the Contractor shall be reimbursed for the reasonable value of any goods ordered and received, and services completed, prior to the end of the preceding fiscal year.
3. **No Discrimination by Authority** (VA. Code §2.2- 4310). In the solicitation or awarding of contracts, Authority shall not discriminate against a bidder or offeror because of race, religion, color, sex, national origin, age, disability, status as a service disabled veteran, or any other basis prohibited by state law relating to discrimination in employment. **THE AUTHORITY DOES NOT DISCRIMINATE AGAINST FAITH-BASED ORGANIZATIONS**, and shall comply with the requirements of VA Code §2.2-4343.1, as may be applicable.
4. **No Discrimination by Contractor** (Contracts Over $10,000) (VA. Code §2.2-4311). During the performance of a contract where contractor’s compensation is more than $10,000, the contractor agrees as follows:
	1. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
	2. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.
	3. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The contractor will include the provisions of the foregoing paragraphs a, b and c in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

1. **Compliance with Federal Immigration Laws** (VA. Code §2.2-4311.1). The contractor expressly warrants and certifies that it does not, and shall not during the performance of the contract knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986.
2. **Contractor’s Authority to Conduct Business in Virginia** (VA. Code §2.2-4311.2). A contractor organized as a stock or non-stock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 or as otherwise required by law. A contractor that enters into a contract with Authority shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. Authority may void any contract with a business entity for its failure to comply and remain in compliance with the provisions of this paragraph.
3. **Drug-Free Workplace Requirement** (Contracts Over $10,000) (VA. Code §2.2-4312). During the performance of a contract where contractor’s compensation is more than $10,000, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor. For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.
4. **Workers’ Compensation Coverage** (Construction Contracts) (VA. Code §2.2-4332). No contractor shall perform any work on a Authority construction project unless and until he has obtained, and continues to maintain for the duration of the work, workers' compensation coverage required pursuant to the provisions of Chapter 8 (§ 65.2-800 et seq.) of Title 65.2.
5. **Contractor’s License** (Construction Contracts) (VA. Code §54.1-1115). No individual or business entity shall contract for, or bid upon, the construction, removal, repair or improvements to or upon real property owned, controlled or leased by Authority without a state-issued license or certificate, or without the proper class of license as defined in VA. Code § 54.1-1100 for the value of work to be performed.
6. **Purchase of building materials, etc., from architect or engineer prohibited** (VA. Code §2.2-4374). No building materials, supplies or equipment for any building or structure constructed by or for the Authority shall be sold by or purchased from any person employed as an independent contractor by the Authority to furnish architectural or engineering services, but not construction, for such building or structure, or from any partnership, association or corporation in which such architect or engineer has a personal interest. No building materials, supplies or equipment for any building or structure constructed by or for the Authority shall be sold by or purchased from any person who has provided or is currently providing design services specifying a sole source for such materials, supplies or equipment to be used in the building or structure to the independent contractor employed by the Authority to furnish architectural or engineering services in which such person has a personal interest. For purposes of this paragraph, the term “personal interest” shall have the meaning set forth within VA. Code §2.2-3101.
7. **Bonds and alternate forms of security** (VA. Code §§2.2-4337 and -4338). Where any payment or performance bond, with surety, is required, each of the bonds shall be executed by one or more surety companies selected by the contractor that are authorized to do business in Virginia. Each of the bonds shall be filed with Authority.

In lieu of a bid, payment, or performance bond, a bidder may furnish a certified check or cash escrow in the face amount required for the bond. If approved by Authority attorney, a bidder may furnish a personal bond, property bond, or bank or savings institution's letter of credit on certain designated funds in the face amount required for a required bid, payment or performance bond. Approval shall be granted only upon a determination that the alternative form of security proffered affords protection to Authority equivalent to a corporate surety's bond.

1. **Required Insurance.** The specific insurance requirements for this contract, if any, (“Required Insurance”) have been specifically set forth within the Specifications/Special Terms and Conditions of the procurement documents. All policies of Required Insurance shall be issued by a company authorized to do business within the Commonwealth of Virginia. (See VA. Code§38.2-518).

Prior to award, the contractor shall be required to demonstrate that it has obtained the Required Insurance, and that each Required Insurance Policy has been endorsed (i) to name Authority, its officers, employees and agents as additional insured parties, and (ii) to confer rights upon Authority to receive at least 30 days’ advance notice of cancellation or nonrenewal. Proof of insurance and required endorsements shall be demonstrated through production of copies of the Required Insurance policies and endorsements, or other evidence satisfactory to Authority. If a standard form insurance certificate is utilized, the insurance certificate must contain the Policy ID number(s) as well as the specific Endorsement Number(s), along with a description of the purpose(s) of the referenced endorsements.

1. **Prompt Payment by Authority** (VA. Code §§2.2- 4352, 2.2-4353) Authority shall promptly pay for the completed delivered goods or services by the required payment date. The required payment date shall be either: (i) the date on which payment is due under the terms of the contract for the provision of the goods or services; or (ii) if a date is not established by contract, not more than 45 days after goods or services are received or not more than 45 days after the invoice is rendered, whichever is later. Separate payment dates may be specified for contracts under which goods or services are provided in a series of partial executions or deliveries to the extent that the contract provides for separate payment for partial execution or delivery. Unless otherwise provided under the terms of the contract for the provision of goods or services, if Authority fails to pay by the required payment date then Authority shall pay any finance charges assessed by the supplier that shall not exceed one percent per month. In those cases where payment is made by mail, the date of postmark shall be deemed to be the date payment is made.
2. **Contractor’s Tax ID** (VA. Code §2.2-4354(2)). Notwithstanding the foregoing, contractor shall have no right to receive payment from Authority unless and until (i) for an individual contractor, the contractor must provide his social security number to the Authority, and (ii) for proprietorships, partnerships, and corporations, any such entity must provide its federal employer identification number to the Authority.
3. **Notice of defects or impropriety** (VA. Code §2.2-4352). Within 20 days after the receipt of an invoice, or of goods or services, the Authority shall notify the supplier of any defect or impropriety that would prevent payment by the payment date.
4. **Interest.** Unless otherwise provided under the terms of this contract, interest shall accrue at the rate of one percent per month on amounts owed by Authority to contractor which remain unpaid by the required payment date. (See VA Code §2.2-4354)

No interest penalty shall be charged when payment is delayed because of disagreement between Authority and a vendor regarding the quantity, quality or time of delivery of goods or services or the accuracy of any invoice received for the goods or services. The exception from the interest penalty provided by this paragraph shall apply only to that portion of a delayed payment that is actually the subject of the disagreement and shall apply only for the duration of the disagreement.

1. **Retainage (Construction Contracts**) (VA. Code §2.2-4333). In any construction contract that provides for progress payments in installments based upon an estimated percentage of completion, the contractor shall be paid at least 95 percent of the earned sum when payment is due, with no more than 5 percent being retained to ensure faithful performance of the contract. All amounts withheld may be included in the final payment. Any subcontract for a public project that provides for similar progress payments shall be subject to the provisions of this section.
2. **Escrowed Retainage (Construction Contracts)** (VA. Code §2.2-4334). For a construction contract involving $200,000 or more, for construction of highways, roads, streets, bridges, parking lots, demolition, clearing, grading, excavating, paving, pile driving, miscellaneous drainage structures, and the installation of water, gas, sewer lines and pumping stations, where portions of the contract price are to be retained, the contractor is authorized to elect to utilize an escrowed retainage procedure, via notification submitted with its bid submission.

In the event the contractor elects to use the escrow account procedure, the contractor shall execute an escrow form, substantially the same as that used by VDOT, and shall submit the executed escrow form to Authority within 15 calendar days after notification. If the escrow agreement is not submitted within the 15-day period, the contractor shall forfeit his rights to the use of the escrow account procedure. Any designated escrow agent shall be a trust company, bank or savings institution with its principal office located in the Commonwealth. If the construction contract includes payment of interest on retained funds, the contractor shall, exclusive of reasonable circumstances beyond the control of the contractor, be required to pay a penalty specified within the construction contract for each day exceeding the completion date stated in the contract.

1. **Payment of subcontractors required** (VA. Code §2.2-4354) Within seven days after receipt of amounts paid to the contractor by Authority for work performed by the subcontractor under that contract the contractor shall: (a) pay the subcontractor for the proportionate share of the total payment received from the agency attributable to the work performed by the subcontractor under that contract; or (b) notify the agency and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment. Contractor shall pay interest to the subcontractor on all amounts owed by the contractor that remain unpaid after seven days following receipt by the contractor of payment from Authority for work performed by the subcontractor under that contract, except for amounts withheld as allowed in (b), above. Unless otherwise provided under the terms of this contract, interest shall accrue at the rate of one percent per month. Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower-tier subcontractor. A contractor's obligation to pay an interest charge to a subcontractor pursuant to this payment clause shall not be construed to be an obligation of Authority. No contract modification shall be made for the purpose of providing reimbursement for the interest charge, and no cost reimbursement claim shall include any amount for reimbursement for the interest charge.
2. **Contract disputes and claims** (VA. Code §2.2- 4363). Written notice of the contractor's intention to file a claim, whether for money or other relief, shall be given at the time of the occurrence or beginning of the work upon which the claim is based. Nothing herein shall preclude a contract from requiring submission of an invoice for final payment within a certain time after completion and acceptance of the work or acceptance of the goods. Pendency of claims shall not delay payment of amounts agreed due in the final payment. Contract claims, whether for money or other relief, shall be submitted in writing to the Authority no later than 60 days after the contractor’s receipt of final payment; provided, however, that written notice of the contractor’s intention to file a claims shall have been given at the time of the occurrence, or at the beginning of the work, upon which the claim is based. Claims shall be considered by Authority in accordance with VA Code §2.2-4363.

The final decision of Authority shall be final and conclusive unless the contractor appeals within six months of the date of the final decision on the claim by Authority, by instituting legal action as provided in VA Code §2.2-4364.

1. **Trade Secrets; Proprietary Information**. Except as provided in VA Code §2.2-4342, all proceedings, records, contracts and other public records relating to procurement transactions shall be open to the inspection of any citizen, or any interested person, firm or corporation, in accordance with the Virginia Freedom of Information Act (VA Code § 2.2-3700 et seq.). Any inspection of procurement transaction records under this section shall be subject to reasonable restrictions to ensure the security and integrity of the records. Trade secrets or proprietary information submitted by a bidder in connection with a procurement transaction or prequalification application shall not be subject to the Virginia Freedom of Information Act (§ 2.2-3700 et seq.); provided that the bidder must (i) invoke the protections of the referenced VA. Code section prior to or upon submission of the data or other materials, (ii) identify the data or other materials to be protected, and (iii) state the reasons why protection is necessary. Each bidder is solely responsible for protecting its trade secrets or proprietary information in accordance with these instructions.
2. **Applicable Law.** Any contract resulting from a Authority procurement transaction shall be governed in all aspects by the laws of the Commonwealth of Virginia, without regard to conflict of laws’ provisions, and any litigation with respect thereto shall be brought in the Circuit Court for Albemarle County, Virginia, or other court presiding within the territory in which Authority is situated.
3. **No Collusion** (VA. Code §18.2-498.4). Any person offering or agreeing to transact business with Authority may be required to submit a certification that the offer or agreement or any claim resulting therefrom is not the result of, or affected by, any act of collusion with another person engaged in the same line of business or commerce; or any act of fraud punishable under this article.
4. **No Waivers of Sovereign or Governmental Immunity.** No action or omission of Authority, and no terms, conditions or provisions within any contract resulting from this procurement transaction, shall be deemed or construed as a waiver of any sovereign or governmental immunity to which Authority may be entitled under the laws of the Commonwealth of Virginia, or any applicable federal law.

**ATTACHMENT C**

FEDERAL REQUIRED SOLICITATION PROVISIONS FOR AIRPORT IMPROVEMENT PROGRAM (AIP) – **Equipment procurement with NO installation**

**C1 BUY AMERICAN PREFERENCE**

Dollar Threshold: $0

***Solicitation Clause***

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 Federal Aviation Administration 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.

***C1.1 Certification to be executed in proposal:***

**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:
	1. Only installing steel and manufactured products produced in the United States;
	2. Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or
	3. 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 U.S. domestic product.
3. To furnish U.S. 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 percent 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:
5. To submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that supports the type of waiver being requested.
6. 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.
7. To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.
8. 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 percent of the cost of all components and subcomponents of the “item”. The required documentation for a Type 3 waiver is:

1. Listing of all product components and subcomponents that are not comprised of 100 percent U.S. 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).
2. Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
3. 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 U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

1. Detailed cost information for total project using U.S. domestic product
2. 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

**C2 CIVIL RIGHTS – TITLE VI SOLICITATION NOTICE**

Dollar Threshold: $0

***Solicitation Clause***

The Charlottesville-Albemarle Airport Authority, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors 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.

**C3 CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT**

Dollar Threshold: $25,000

***Solicitation Clause***

**Bidder or Offeror Certification**

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.

**Lower Tier Contract Certification**

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.](http://www.sam.gov/)
2. Collecting a certification statement similar to the Certification of Offeror /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration 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.

**C4 DISADVANTAGED BUSINESS ENTERPRISE**

Dollar Threshold: $0

***A12.3.1 Solicitation Clause***

**Solicitation Language (Solicitations that include a Project Goal)**

Information Submitted as a matter of bidder responsiveness:

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 its 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; and
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.

Information submitted as a matter of bidder responsibility:

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

The successful Bidder or Offeror must provide written confirmation of participation from each of the DBE firms the Bidder or Offeror lists in its commitment within five days after bid opening.

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; and
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.

**Solicitation Language (Race/Gender Neutral Means)**

The requirements of 49 CFR part 26 apply to this contract. It is the policy of the Charlottesville- Albemarle 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.

**C5 FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)**

Dollar Threshold: $0

***Solicitation Clause***

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.

**C6 LOBBYING AND INFLUENCING FEDERAL EMPLOYEES**

Dollar Threshold: $100,000

***Solicitation Clause***

**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, subgrants, 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.

**C7 TRADE RESTRICTION CERTIFICATION**

Dollar Threshold: $0

***Solicitation Clause***

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

1. 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 (USTR);
2. 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 USTR; and
3. has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

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 USC 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 USTR or
2. whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or
3. who incorporates in the public works project any product of a foreign country on such USTR 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 USTR, 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 (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

ATTACHMENT D

FEDERAL REQUIRED CONTRACT PROVISIONS FOR AIRPORT IMPROVEMENT PROGRAM (AIP) – **Equipment procurement with NO installation**

**D1 ACCESS TO RECORDS AND REPORTS**

Dollar Threshold: $0

***Contract Clause:***

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, 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.

**D2 BREACH OF CONTRACT TERMS**

Dollar Threshold: $150,000.

***Contract Clause:***

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 the 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.

**D3 CIVIL RIGHTS - GENERAL CIVIL RIGHTS PROVISIONS**

Dollar Threshold: $0

***Contract Clause:***

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

**D4 CIVIL RIGHTS – TITLE VI SOLICITATION NOTICE**

Dollar Threshold: $0

***Contract Clause:***

**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. **Nondiscrimination:** 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.

1. **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:
	1. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
	2. Cancelling, terminating, or suspending a contract, in whole or in part.
2. **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.

***Contract Clause:***

**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 USC § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
* 49 CFR part 21 (Non-discrimination in Federally-assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
* The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC

§ 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);

* Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27;
* The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq*.) (prohibits discrimination on the basis of age);
* Airport and Airway Improvement Act of 1982 (49 USC § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
* The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
* Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 USC §§ 12131 – 12189) as implemented by

U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;

* The Federal Aviation Administration’s Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
* Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
* Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
* Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC 1681 et seq).

**D5 CLEAN AIR AND WATER POLLUTION CONTROL**

Dollar Threshold: $150,000

***Contract Clause:***

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC § 740-7671q) and the Federal Water Pollution Control Act as amended (33 USC

§ 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.

**D6 DISADVANTAGED BUSINESS ENTERPRISE**

Dollar Threshold: $0

***Contract Clause:***

**Prime Contracts (Projects Covered by a DBE Program)**

**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 Department of Transportation-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 Charlottesville Albemarle Airport Authority, deems appropriate, which may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;
3. Liquidated damages; and/or
4. Disqualifying the Contractor from future bidding as non-responsible.

**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 14 days from the receipt of each payment the prime contractor receives from the Charlottesville-Albemarle Airport Authority. The prime contractor agrees further to return retainage payments to each subcontractor within 14 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 Charlottesville- Albemarle Airport Authority. This clause applies to both DBE and non-DBE subcontractors.

**D7 TEXTING WHEN DRIVING**

Dollar Threshold: $3,500

***Contract Clause:***

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 Federal Aviation Administration 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 subgrant.

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 that involve driving a motor vehicle in performance of work activities associated with the project.

**D8 ENERGY CONSERVATION REQUIREMENTS**

Dollar Threshold: $3,500

***Contract Clause:***

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 USC 6201*et seq*).

**D9 OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970**

Dollar Threshold: $0

***Contract Clause:***

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. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer 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). The employer 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.

**D10 PROCUREMENT OF RECOVERED MATERIALS**

Dollar Threshold: $10,000

***Contract Clause:***

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 products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

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

 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/smm/comprehensive-procurement-](http://www.epa.gov/smm/comprehensive-procurement-) guidelines-construction-products.

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

1. Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
2. Fails to meet reasonable contract performance requirements; or
3. Is only available at an unreasonable price.

**D11 TAX DELINQUENCY AND FELONY CONVICTIONS**

***Contract Clause:***

**CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS**

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the

space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

**Certifications**

1. The applicant represents that it is (✓) is not (✓) a corporation that has any unpaid federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
2. The applicant represents that it is (✓ ) is not (✓) a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

**Note**

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government’s interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency’s SDO to facilitate completion of the required considerations before award decisions are made.

**Term Definitions**

**Felony conviction:** Felony conviction means a conviction within the preceding twenty four

(24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

**Tax Delinquency**: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

**D12 TERMINATION OF CONTRACT**

Dollar Threshold: $10,000

***Contract Clause:***

**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:

 completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

 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;

 reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

 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.

**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; or
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 the Owner.

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