



STATE of GEORGIA

2022 TECHNICAL AND PERFORMANCE

SPECIFICATIONS

DODGE RAM PROMASTER MOBILITY VAN

FOR FRONT RAMP

FULL-SIZE CONVERSION, MOBILITY VAN

NOTICE: This specification is NOT intended to restrict competition. Manufacturers/Dealer may bid their bus(es) in accordance with their standard manufacturing process. In the case where that process varies for this specification, deviations must be submitted on the provided Request for Specification Deviation Document Form and Specification Deviation Certification and Compliance Form. Any deviation documented shall be “brand name, equivalent, or equal in performance” and must meet or exceed all FTA requirements (for FTA-compliant vehicles), and all Federal, State, and Local requirements. The state may, at any time during the evaluation and/or contract period, require the bidders to provide proof that the deviation meets the “brand name, equivalent or equal” in performance.

BID SPECIFICATIONS

1.0 GENERAL REQUIREMENTS

- 1.1 The purpose of this specification is to provide a transit quality paratransit vehicle manufactured with a gasoline engine and a raised roof and low floor with provision for stand-up entry, seating for (8) adult ambulatory passengers, and (2) wheelchair position along with the wheelchair ramp and tie downs. All body, floor, and roof joints must be tightly sealed to eliminate drafts and water leaks. The vehicle shall be aesthetically pleasing in design with attention to workmanship and detail. Vehicles furnished to these specifications must meet or exceed all requirements herein. School buses or modified school buses are not acceptable.

ALL VEHICLES DELIVERED IN ACCORDANCE WITH THIS SPECIFICATION MUST MEET THE NECESSARY REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT HEREIN REFERRED TO AS ADA.

- 1.2 All Standard and Common Features Shall be Furnished: Standard and common features, some related to safety and others to driver and passenger convenience, which are generally provided in a transit vehicle without customer stipulation shall be provided. Those features include but are not limited to: adjustable instrument lights, interior sun visors, exterior backup lamps, two-speed windshield wipers, windshield washers, a windshield defroster, a coolant recovery system, etc. Standard and other common features if not specifically stated shall not be interpreted as items that can be omitted to reduce the price or to provide any other bidding advantage. The vehicles and all related equipment shall be designed to permit ready accessibility for maintenance purposes with minimal disturbances of other components and assemblies. All vehicles supplied under these specifications shall be in full compliance with Federal Motor Vehicle Safety Standards as established by the Department of Transportation and FTA guidelines.
- 1.3 Certification of ISO 9001:2000 Compliance
The manufacturer of the buses shall have a proven, third-party certified quality control system in place and shall be ISO 9001:2000 certified. Written certification of ISO 9001:2000 compliance shall be included with the bid submission documents. A copy of the bus manufacturer's ISO-approved Quality Assurance Manual shall also be submitted with the proposers' bid package.
- 1.4 The BIDDER has sole responsibility for and shall provide the vehicle as specified with all certifications, warranties, and special equipment to The Agency as a completed vehicle

NOTE: Any Brand names and specifications mentioned within this document are for reference only. Bids will only be considered when brochures/specifications are included for each component provided with bid for evaluation.

2.0 Catalytic Convertor Theft Protection System will be provided

3.0 NO PROTOTYPES:

The vehicle must be a current production Model type van.

4.0 BODY STRUCTURE:

The standard van body shall meet all stated specifications. The vehicle shall be reinforced such that the structure of the basic van is not degraded. Any deviations shall be documented.

4.1 The vehicle shall be reinforced such that the structural strength of the basic van is not degraded. The lowered subfloor structure shall consist of 2" x 2" tubular steel with 1/8" plate steel subfloor. The floor covering shall be affixed to marine grade plywood and secured to the 1/4" plate steel subfloor with screws.

4.2 Vehicles shall meet all applicable requirements of the Americans with Disabilities Act (ADA As set forth in CFR 37 and 38, issued September 6, 1991, with respect to the body.

5.0 OEM CHASSIS FRAME AND BODY:

Dodge Ram Pro Master 3500 Window Van extended body with H2 roof VF3L27, 159" wheelbase wagon with single rear wheels. The vehicle must have deluxe interior and exterior trim.

6.0 DOORS:

Vehicle must have a Bus Style Entry Doorway with Dark Deep tinted privacy glass on Bus Doorway.

- 6.1 A bus-style entry doorway shall be included rear of the curbside B pillar.
- 6.2 The bus-style entry doorway shall be A & M Brand or Approved Equal.
- 6.3 The minimum clear entry width shall be 32"
- 6.4 There shall be no steps to enter the vehicle and the floor shall be a maximum of 12.5" from the ground.
- 6.5 The left and right vertical sides of the doorway shall be cut and fit to match the contour of the chassis body.
- 6.6 No metal edge should extend outward from the contour of the chassis body more than 2".
- 6.7 An L.E.D. The light that automatically illuminates when the Doorway is opened shall be Included.

7.0 WHEELCHAIR LIFT DOORS:

A manually operated wheelchair ramp shall be mounted in the passenger entrance door opening and shall swing away and stow to allow ambulatory passenger ingress and egress.

- 7.1 Ramp shall have a minimum clear opening of 32" and have a rated capacity of at least 800 lbs.

8.0 DOOR LOCKS:

- 8.1 All doors shall be equipped with a lock.

9.0 DRIVER'S DOOR AND CO-PILOT'S DOOR:

- 9.1 Must have Power windows and Power door locks

10.0 RUNNING BOARDS:

Vehicle must have Extra Heavy-duty Running Boards for Driver door and Co-Pilot's door.

- 10.1 The steps shall be constructed of galvanized one inch square 11 gauge steel tubing or angle iron and have cross center braces and be tested at 800 lbs.
- 10.2 The steps surface shall be made of expanded galvanized steel to allow debris and water run-off.
 - 10.2.1 The steps shall be properly braced and secured to the van and be capable of supporting a Minimum of 800 lbs.

11.0 HANDRAIL:

Handrails must be steel that will not rattle or Flex and mounting bolts shall be body structure.

- 11.1 A left-side handrail at the front passenger door shall be provided. The cross-sectional diameter of the handrail shall be between 1 ¼" and 1½".
- 11.2 Entrance handrails shall not be padded.
- 11.3 Must have at minimum a wall thickness of 18 gauge steel.

11.4 Wood mounting **is not allowed.**

12.0 INTERIOR:

All interior panels, materials, and treatments shall meet all FMVSS 302 requirements.

12.1 Interior wall and ceiling paneling in the passenger compartment shall be molded ABS plastic.

12.2 driver'svers Side Ejection Mitigation Air Bag shall be retained.

13.0 FLOOR ASSEMBLY:

The lowered subfloor structure shall consist of 2" x 2" tubular steel with a 1/8" plate steel subfloor.

13.1 The floor covering shall be wall-to-wall hard fire-resistant slip-resistant, transit-quality flooring securely bonded to the plate floor with waterproof adhesive.

13.2 Acceptable Flooring Brands are Altro or other Equal.

14.0 SLIP-RESISTANT FLOOR COVERING:

Floor covering shall be slip-resistant vinyl flooring, constructed with aluminum oxide, silicon carbide and optional PVC chip blended throughout a high-quality vinyl wear surface.

14.1 Top coating is not acceptable.

14.2 Backing to be polyester/cellulose material with fiberglass fiber reinforced center scrim for additional durability.

14.3 Bacteriostats will be incorporated providing all exposed surfaces with excellent anti-bacterial properties.

14.4 A minimum thickness of 2.2 millimeters or equivalent floor. Color to be gray.

14.5 A plywood sub-floor affixed to the steel floor skin will be provided for the flooring to be glued to.

14.6 The whole floor will be a uniform thickness throughout the vehicle, eliminating the need for ribbed surfaces, while exceeding the ADA minimum slip resistance standard rating of .06 static coefficient of friction under dry or wet conditions.

14.7 Seams must be heat welded to provide a permanent waterproof seal against water penetration leading to premature sub-floor failure or curling leading to possible tripping hazards.

14.8 The floor must be installed according to the manufacturer's directions using proper tools, accessories and adhesives.

NOTE:

If the flooring is not installed according to the flooring manufacture's (heat welded and adhesives) specifications the vehicle will not be accepted.

15.0 DRIVER CONTROLS:

The instrument panel, dash controls and features to be included;

15.1 Dash shall be color coordinated with interior trim color.

15.2 Glove box

15.3 All controls and switches shall be within easy reach of the driver.

- 15.4 Overhead switches or controls must be in easy reach of driver.
- 15.5 Lights in lieu of gauges are not acceptable except where noted.
- 15.6 Power door locks with remote entry and Two Keys and Two Fobs are required
- 15.7 Power windows are required
- 15.8 Power / Heated mirrors with turn signal flashers are required
- 15.9 A tilting telescopic steering wheel shall be included
- 15.10 Chassis OEM Cruise Control is required
- 15.11 AM/FM stereo system shall be provided. This system must have an incorporated backup camera monitor and blue tooth connectivity.
- 15.12 Instrument panel and dash shall be equipped with the following OEM instruments, gauges, and controls:
 - 15.12.1 Tachometer, Speedometer with odometer and trip odometer
 - 15.12.2 Oil pressure light
 - 15.12.3 Engine coolant temperature
 - 15.12.4 Fuel gauge
 - 15.12.5 Upper beam headlamp indicator (light)
 - 15.12.6 Dual-note horn
 - 15.12.7 Directional signals (light)
 - 15.12.8 Parking brake on (light)
 - 15.12.9 Headlight switch
 - 15.12.10 Inside hood release
 - 15.12.11 Controls for heater, defroster, and air conditioner
 - 15.12.12 12 Volt Power outlet
 - 15.12.13 OEM chassis manufacturer's radio (see above for spec)
 - 15.12.14 Digital clock
 - 15.12.15 Windshield wiper w/two speed, intermittent, and washer
 - 15.12.16 Emergency flashers

16.0 BUMPERS:

A Bumper Front and rear must be OEM Manufacture's standard.

17.0 AIR CONDITIONING AND HEATING:

The vehicle shall have the following;

- 17.1 OEM chassis front and rear heating and A/C system required.
- 17.2 Passenger rear air conditioning will be a low-profile ceiling-mounted tie-in system with a total of 47,500 BTU's. The heater will be in the overhead mount.
- 17.3 Dash unit shall be separately controlled from auxiliary system.

18.0 SAFETY EQUIPMENT:

- 18.1 A standard sixteen (16) unit First Aid Kit shall be provided. It shall include a one-way airway apparatus and one pair of disposable gloves. The kit shall be securely mounted near the driver's seat.
- 18.2 A ten (10) pound rechargeable - type 210 ABC fire extinguisher with a metal head shall be provided. It shall be easily accessible in a bracket mounted and near the driver's seat.
- 18.3 Web Cutters shall be provided.
- 18.4 Body Fluid Clean-up kit shall be provided.
- 18.5 three (3) triangular reflectors with a storage container shall be provided, securely mounted
- 18.5 A Backup alarm that is electrically operated and produces an intermittent sound when the vehicle is shifted into reverse shall be furnished to warn others during vehicle movement. The alarm shall be in compliance with SAE J994B with respect to acoustical performance for Type B device (IE107db) (A) and plus or minus 4db with a supply voltage of fourteen (14) volts.

19.0 MIRRORS:

Vehicle exterior mirrors;

- 19.1 OEM chassis power /heated dual exterior rearview mirrors shall be included
 - 19.1.1 Black matt or stainless finish
 - 19.1.2 For Safety an Integrated Turn signal is required
 - 19.1.3 A Convex Lower Mirror shall be Included.

Vehicle interior mirrors;

- 19.1.4 Vehicle must have OEM windshield-mounted mirror
- 19.1.5 OEM chassis driver's and Co-pilot sun visor, rearview mirror, and airbag required.

20.0 SEATS:

Driver's Seat

- 20.1 Driver's seat shall be deluxe high back, fully padded, Cloth or Vinyl contoured bucket types of heavy-duty construction with an armrest.
- 20.2 The driver's seat shall be easily adjusted forward and backward without the use of tools.
- 20.3 OEM three-point restraint system is required. Upholstery shall be color- keyed to the passenger seats.
- 20.4 Co-Pilot seat will be removed for the installation of camera equipment and farebox.

NOTE:

The bidder should supply a seating diagram reflecting all listed dimensions

21.0 PASSENGER SEATS:

Seating shall be provided for ambulatory passengers and a wheelchair securement station. (See options for additional wheelchair securement station and fold-down seats and floor plans).

- 21.1 All seats shall be vinyl.
- 21.2 Fixed may be Chassis OEM, Freedman, or equivalent and shall be a minimum of 17.5" wide and 16" deep.
- 21.3 The seat back cushion shall measure a minimum of 17", shall provide lumbar support and utilize channeling to aid lateral stability.
- 21.4 When any aftermarket seat is used. Seating shall be Freedman series GO-ES or approved equal, and be compliant with FMVSS 208.
- 21.5 Bolting seats to plywood floor without bolting into structural steel under floor is NOT ALLOWED.

22.0 PASSENGER RESTRAINT SYSTEM:

All restraints and retractors must meet all FMVSS 208 regulations.

- 22.1 Wheelchair occupant restraint systems shall be compliant with FMVSS 49.38.
- 22.2 Successful Pull Test results from an A2LA Accredited Laboratory.

23.0 COLOR OF SEATS:

Bid must include all colors available

- 23.1 Successful vendor shall coordinate with the agency issuing this purchase order in the selection of material and color of the seats.

24.0 PRIORITY SEATING SIGNS:

Each vehicle shall contain a sign which indicates that the seats in the front of the vehicle are priority seats for people with disabilities.

- 24.1 Each wheelchair station location shall be designated as such.
- 24.2 The signs shall be in compliance with CFR 38, subpart 38.27 and the appendix to it.

25.0 LIGHTING:

Vehicle interior Lightings;

- 25.1 The interior of the vehicle shall be illuminated by OEM LED interior lighting.
- 25.2 The OEM lighting fixtures shall be controlled by the chassis OEM lighting switch.
- 25.3 The instrument panel must be illuminated to allow the driver to see all the controls at night.
- 25.4 Chassis OEM instrument panel switch shall control the intensity of the lights.
- 25.5 All door lights and the side passenger door shall illuminate automatically when doors are opened.
- 25.6 L.E.D. interior strip lighting shall be provided on each side of the ceiling.

Vehicle exterior Lighting;

25.7 Exterior lighting shall meet all State and Federal Regulations.

25.8 A Third High Mounted Center Brake Lamp shall be Included.

26.0 ELECTRICAL WIRING:

Vehicle wiring shall run inside the body and be located in a protected area.

26.1 Any wiring that is exposed to the elements shall be non-metallic loomed and securely clipped every 18" for maximum protection.

26.2 Clips shall be rubber or plastic coated to prevent their cutting thru the wiring insulation.

26.3 Protective grommets shall be installed at all points where wiring penetrates the metal and other materials.

26.4 Circuit breakers and electrical panels shall be in an easily accessible location.

26.5 Heat shrink-style butt connectors provided.

26.6 Grounding off components shall be thru polarized shielded terminals wired to main structural ground points.

26.7 All accessories and electrical equipment except head and parking lights, emergency flashers, dome light(s), and wheelchair lifts shall be wired through the vehicle ignition switch so as to be operative only with the switch in "on" or accessory" position.

27.0 WINDOWS:

Windshield and front most doors: Chassis OEM standard with standard tint and remainder of windows must have;

27.1 Dark OEM deep privacy tint.

27.2 An Electric Defogger shall be included on the rear windows

27.3 OEM van to have power front windows and fixed rear windows with deep tint, driver and pass. 1-touch down, fixed rearmost windows.

27.4 FMVSS: All windows (including windshield) and tinting shall meet all applicable FMVSS requirements.

NOTE:

All windows and emergency exits must meet the performance and operational requirements as outlined in the Federal Motor Vehicle Safety Standards and Procedures.

28.0 SAFETY BACK-UP EQUIPMENT:

An Audible Back-up Warning Device shall be included. The following shall be equipped If Chassis OEM, is available;

28.1 A Rear-View Camera with a Dashboard Monitor that activates when the Transmission is placed in Reverse.

29.0 WHEELCHAIR SECUREMENT:

Wheelchair parking space shall have min. the clear floor area of 30" wide by 48" long and be equipped with a four-point wheelchair securement tie-down.

- 29.1 Occupant restraint system must be Q'Straint Q-8306-SC or equivalent. Shall have a Retractable lap/shoulder belt combo with a Retractable height adjuster that are anchored to floor and wall that meet SAE J2249 and ADA requirements.
- 29.2 Slide N Click anchors must be bolted to structural steel.
- 29.3 Bolting to plywood floor without bolting into structural steel under floor IS NOT ALLOWED.
- 29.4 Wheelchair Securement system must be Q'Straint QRT MAX Automatic Retractor System Q-8306-SC with Slide N Click anchorage system and J-Hooks or equivalent.
- 29.5 There must be 48" at a minimum and 54" maximum measured from center to center between front and rear Slide N Click anchor points. And be fully assembled and ready to use.
- 29.6 A Storage rack shall be provided to store belts when not in use
- 29.7 Must include eight (8) Q'Straint Q5-7580 Webbing Loops or equivalent for Securing Scooters.

30.0 WHEELCHAIR STATIONS:

At a minimum, one wheelchair station shall be provided in each vehicle. (See options for additional wheelchair securement station and fold down seats and floor plans)

- 30.1 Wheelchair stations are the spaces inside the vehicle for transporting people in wheelchairs and are to be provided on all vehicles.
- 30.2 Each wheelchair station shall consist of a usable floor area in which a passenger in a wheelchair may be positioned and where the wheelchair occupant restraint systems and wheelchair securement devices are located.
- 30.3 Wheelchair stations will secure wheelchairs in a forward-facing position only.

NOTE:

Each wheelchair securement location shall have a sign designating it as such. Lettering size and type on these signs shall comply with the Americans with Disabilities Act Regulations.

31.0 WHEELCHAIR ACCESSIBILITY SYMBOL:

The vehicle will display the international wheelchair accessibility symbol of a person in a wheelchair that is outlined in white on blue background.

- 31.1 This symbol will be placed on all four sides of the bus.

32.0 VEHICLE COLORS:

Vehicle is to be bright white.

- 32.1 Purchasing agency has the option to add a paint scheme / graphics

33.0 VEHICLE FLOOR PLAN:

A proposed floor plan including all pertinent interior dimensions such as overall length, width, distance between seats, etc.

- 33.1 Shall be submitted with the bid proposal.

34.0 CHASSIS SPECIFICATIONS:

Bidder must provide the vehicle specs below:

- Overall vehicle length:
- Width: Exterior
- Height: Exterior

Interior
Wheelbase:
GVWR, axle, spring and tire:
9,250 lb. GVWR minimum

NOTE:

It is the bidder's responsibility to calculate the actual loaded weight, and spring and axle ratings so that the vehicle is engineered for safety.

35.0 WHEELS AND TIRES:

Wheel rim shall be mfr's standard for GVWR.

35.1 Tires –steel belted, all season radial, to meet GVWR.

35.2 All tires shall be the same make or brand, shall be mounted on rims, and shall be balanced.

35.3 Aluminum wheels to be provided.

36.0 ENGINE: GASOLINE:

The engine shall be an electronically fuel-injected six-cylinder gasoline-powered engine with a minimum displacement of 3.6 liters.

36.1 The engine shall be designed to have a useful life of at least 100,000 miles.

36.2 The engine shall be equipped with the largest external oil cooler available from the OEM MFR of the base van.

37.0 RADIATOR:

Heavy-duty radiator with the capacity to prevent engine overheating while operating in stop-and-go transit operation in ambient temperatures as high as 110 degrees F and provide protection to -30 degrees F.

38.0 TRANSMISSION:

Vehicle transmission shall be the heaviest-duty transmission available from OEM.

38.1 OEM auxiliary transmission oil-to-air cooling.

38.2 Automatic 9-speed transmission.

40.0 BRAKES:

Two (2) braking systems are required for the vehicle. Service brakes shall be dual hydraulic, disc front and disc rear.

40.1 The parking brake system shall be operated by an electronic park brake.

40.2 The braking system shall be adequate for the GVWR of the vehicle.

41.0 GEAR RATIO:

OEM Standard gear ratio

42.0 FUEL CAPACITY:

Fuel capacity must be the largest available from chassis manufacture.

43.0 SUSPENSION SYSTEM:

The suspension system shall be heavy-duty and load-rated for the GVWR of the vehicle.

43.1 Shock absorbers shall be extra heavy-duty gas and load rated, capable of controlling the ride when empty, as well as when loaded to maximum GVWR.

- 43.2 Independent MacPherson-strut
- 43.3 Leaf with Rear stabilizer bar required if available from OEM
- 43.4 A Chassis OEM Electronic Anti-Rollover System shall be included.

44.0 STEERING:

Must have power-assisted steering

45.0 AIR CLEANER:

Must have a heavy-duty, dry-type air cleaner

46.0 OIL FILTER:

Must have a heavy-duty, throw-away type oil filter.

47.0 ALTERNATOR:

The vehicle shall have OEM 220-amp Alternator.

48.0 BATTERIES:

One (1) heavy-duty, maintenance free, OEM Batteries

49.0 STABILIZER BAR:

Heavy Duty Front and rear

50.0 HORN:

Must have a dual, electric horn.

51.0 SIGNAL:

Directional and self-canceling with hazard warning flashers.

52.0 WINDSHIELD WIPERS:

Minimum two speeds with intermittent feature and washer.

53.0 KEYS:

The vehicle must include two (2) sets of keys and fobs.

54.0 RADIO:

Must have an AM & FM radio

- 54.1 Radio must be of the same manufacture as chassis. The radio must be mounted in the Chassis OEM Location in the dash.

55.0 GENERAL:

All equipment cataloged as standard for the basic vehicle must be furnished and included in the purchase price of each vehicle. Complete printed specifications, published literature, photos, or illustrations of the basic units that the bidder proposes to furnish to the purchaser upon purchase.

56.0 QUALITY OF MATERIALS:

All materials and equipment used shall be built and/or attached in accordance with all applicable safety codes and design standards including but not limited to;

- 56.1 Society of Automotive Engineers (Electrical components and wiring, hydraulic components, fasteners)

- 56.2 American National Standards Institute (Chain drive and wire rope components)

- 56.3 American Welding Society (Welding code and recommended practices)
- 56.4 FMVSS
- 56.5 All parts shall be new.
- 56.6 All necessary servicing and adjustments shall be made on the equipment prior to delivery of the vehicle.
- 56.7 All exposed metal surfaces shall be painted or shall be corrosion-resistant.

57.0 PUBLICATIONS AND PRINTED MATERIALS:

Each vehicle shall have a complete set of operation, quality assurance, and warranty publications.

- 57.1 Operator's manual: A complete operations manual and troubleshooting guide with a detailed manufacturer's parts list that covers the conversion features on the vehicle as listed in this specification. The manual will provide complete, comprehensive instructions for the wheelchair accessories, wheelchair list deployment, air conditioning system, tie downs, heater, deployment of seats, wiring diagram, and related equipment.
- 57.2 Warranty papers for chassis, body, and additional equipment.
- 57.3 Warranty Information: Each vehicle must have a published listing of contractor warranty repair locations, including address, telephone number, and contact names.

58.0 PRE-AWARD AUDIT:

The vehicles are not considered delivered to the purchasing agency until the required FTA documents are completed by a DOT staff member. A Pre-Award Audit shall be conducted to determine if the bid proposal specifications. The bidder shall submit documents, which include certification of the manufacturer's compliance with the Federal Transit Administration (FTA) Pre-Award Buy America Audit Requirements. The document submitted shall include the following information for each major component used on the vehicle bid:

- 58.1 Name and address of each supplier.
- 58.2 Cost of each major component and subcomponent. In order to protect proprietary information, the document may reflect the percentage of the total cost each item represents instead of the actual cost.
- 58.3 Country of origin of each major component and subcomponent.
- 58.4 Name and address of the company where final assembly occurs.
- 58.5 Cost of final assembly
- 58.6 Signature of an authorized representative of the vehicle manufacturer.

59.0 Deleted Section

60.0 ACCESSIBILITY REQUIREMENTS:

When submitting a bid for an accessible vehicle for the disabled, the vendor shall provide a list of the vehicle-related equipment illustrating the component cost and related installation charges. The purpose of this list is to reflect an accurate cost for those vehicle-related items, which are required to make the vehicle accessible to the disabled.

61.0 ACCEPTANCE OF VEHICLES:

Upon delivery at the designed location specified within this document, the final acceptance will occur after the vehicles have been inspected, road tested and all FTA-required post-audit delivery requirements have been met.

61.1 All vehicles shall be insured by the bidder until the post-audit delivery has been conducted at a minimum.

62.0 PAINTING AND DECALS

62.1 The base vehicle shall be Bright White in color or the purchaser's option and shall include an option for wrapping or striping.

62.2 Decals shall be furnished by Bidder as follows:

62.1.1 "NO FOOD, DRINK, OR TOBACCO USE ALLOWED" at the centerline or right of center on the front header.

62.1.2 "WATCH YOUR STEP"

62.1.3 "WELCOME ABOARD"

62.1.4 "VEHICLE HEIGHT DECAL" to be posted over the windshield within easy view of the driver.

62.3 In addition to the decals described above, safety decal(s) shall be furnished and shall be affixed at any applicable area; emergency exit, steps, wheelchair lift, etc. The decals shall include necessary warnings and precautions. Permanent decals are required.

63.0 Section Deleted

64.0 REGISTRATION

The successful bidder shall provide the necessary documents to enable the purchaser to register the vehicle. Necessary fees and state taxes will be paid by the purchaser; do not include such fees and taxes in the bid price.

65.0 MANUALS

A line setting sheet and manual(s) containing operating and servicing instructions for the vehicle and lift shall be provided with each vehicle. The manual(s) shall be as detailed as possible outlining all necessary operating and servicing instructions for each vehicle and lift including the vehicle's driveline components. Necessary warnings and safety precautions shall be included. In addition, manual(s) containing illustrated parts lists, operating and servicing instructions for related and special equipment supplied with the vehicle and lift shall be provided with the vehicle.

66.0 WARRANTY

The vehicle shall be warranted against defects in material and workmanship for a period of not less than twelve (12) months or twelve thousand (12,000) miles, whichever occurs first, and shall cover one hundred percent (100%) parts and labor for the vehicle. If the manufacturer's standard warranty exceeds twelve (12) months, then the standard warranty period shall be in effect. Bidder shall furnish manufacturer's warranty to The Agency at time of delivery.

67.0 OPTIONS

Please ensure you have included the options below in your Additional Options for each bus bid. Provide the following Options:

67.1 CAMERA SYSTEM-OPTION 1

6 cameras with DVR- Recording while vehicle is in service to include the panic button and specific SD card

Camera locations-
Front – rear
Rear-front
Viewing the driver
Viewing the interior of the wheelchair lift
Viewing out the windshield
Exterior Curbside viewing down the bus towards the wheelchair lift

67.1.1 CAMERA SYSTEM OPTION 2

OPTION 1 and **add the WIFI antenna for live camera views while bus is in service**

67.1.2. CAMERA SYSTEM OPTION 3

OPTION 1 & 2 and **add Automatic Vehicle Locator system with specific needs of Live Tracking in Real Time**

67.1.3.4 CAMERA SYSTEM OPTION 4

OPTION 1, 2 & 3 and **add Passenger WIFI**

NOTE: If there are any charges from cellular companies the subrecipients will be responsible for setting up their accounts.

*******END OF CAMERA SYSTEMS OPTIONS**

67.2 MOBILE DVR SYSTEM OPTION

- 8 Channel HD/IP Mobile DVR Specifications for Mass Transit Applications
- The eight (8) channel mass transit surveillance system requested must meet the following minimum requirements:
- The vendor is permitted to propose multiple systems within their response.
- The vendor is to include pricing for the AngelTrax Vulcan Series eight (8) channel HD/IP mobile digital video recording system.

67.2.1 GENERAL REQUIREMENTS

The MDVR must be constructed in a modular configuration with the modules for the hard drive and main control board which are fully removable on slide rails such that repair and replacement may be completed without removing the MDVR from the vehicle. Onboard system components shall be modular, and entire MDVR replacement shall not be required.

67.2.2 SYSTEM REQUIREMENTS

- The system must be capable of recording eight (8) channels of audio and video in 1080P simultaneously, at up to 20FPS, including up to six (6) HD cameras capable of 1080P video and audio and up to two (2) IP cameras capable of up to 1080P.

- The MDVR must be capable of the following recording resolutions:
 - DIGITAL: 1080P (1920x1080), 720P (1280x720)
 - NTSC: 1080P, 720P, WD1 (928x480), WHD1 (928x240), WCIF (464x240), D1 (704x480), HD1 (704x240), CIF (352x240)
- The system must be capable of optimizing high quality video and recording time by selecting frame rates, recording quality and resolution for each camera independently.
- The system must have a 4 to 7 second brownout protection during a loss of power to protect media. Duration will be determined by power consumption at time of power loss.
- The front of the MDVR must have status indicator lights to include PWR, USB, ALM, REC, ERR, and NET. An optional light indicator box must be available for easy viewing by the driver.
- The system must also continue to record while being viewed remotely or wirelessly downloading video by multiple users.
- The MDVR system must operate utilizing an embedded Linux platform for stability and reliability.

67.2.3 MDVR FEATURES

- The MDVR must have a mounted extension cable for connection to an optional touchscreen monitor used for setup and troubleshooting without removing the front door panel.
- The MDVR must have a “plug and play” connection on the rear panel for an onboard live monitor.
- The MDVR “panic button” located near the driver’s seat must have hard drive location “marking” capabilities and serve as a live recording indicator.
- The MDVR must have one alarm input, one output and eight (8) sensor inputs for marking events defined by the customer.
- The 3.5-inch SATA hard drive shall have a minimum storage capacity of 1TB of high quality video.
- The MDVR must have the capability of storing data on one M.2 SATA SSD, as an alternative to the 3.5-inch SATA hard drive.
- Once the hard drive is full, the system will overwrite the oldest data first.
- The hard drive must be easily accessible from the front panel.
- The hard drive housing must include a heater.
- The MDVR must have one (1) microSD card slot for redundant recording, as desired by the user. The microSD recorder must have separate settings to allow for increased recording time when in redundant mode.
- The MDVR must have a slot to accept one (1) SIM card for dual cellular network capabilities. This feature must be included within the MDVR housing.
- The MDVR must have a USB port on the front of the unit for removable storage to allow for downloading video or images directly from the MDVR or upgrading the

firmware of the device, the CP4 monitor, IPC or GPS. The USB port must also accommodate a mouse or the Vulcan™ Series Easy Check device management software and Wi-Fi module.

- All recording on the MDVR must utilize H.264/H.265 compression.
- The MDVR must have the capability to connect to an Ethernet port at 10/100M/1000M, for connecting the MDVR to a wired Ethernet connection. This unit has 2 RJ45 connections for IP cameras.
- The MDVR must power up based on a 9-36V ignition trigger under continuous record, alarm record, motion record and schedule recording options. In addition, the MDVR must be able to be programmed to stay powered on and recording for up to 24 hours after the vehicle is off.
- The MDVR must be capable of onboard viewing, downloading video and setting up the MDVR via a laptop or touchscreen monitor directly connected to the MDVR.
- The HD cameras must connect directly to the rear of the MDVR with 4 pin aviation grade connectors.
- The MDVR must have the ability to adjust the brightness, contrast, color and saturation individually on each camera and must also be able to electronically mirror or flip the camera displays.
- The MDVR must have the ability to store alarm events without the events being overwritten.
- The MDVR must have an integrated 3-axis accelerometer and must be capable of tagging the video and/or sending alerts if the vehicle exceeds a pre-determined G-Force threshold. An additional connection must be available for an external accelerometer for use in driver behavior reporting.
- The MDVR must have the ability to provide the following, available for immediate download:
 - A programmed channel snapshot, taken when the panic button is pressed or when an alarm or event is triggered, and
 - Video clips, recorded in pre-defined lengths, of the camera view before and after the snapshot is taken.
- The MDVR must have the ability to detect video loss, motion or a camera being covered and be able to trigger an alarm or event independently.
- The MDVR must have the ability to upgrade the device firmware, CP4, IPC or GPS, either directly from a USB drive plugged into the MDVR or remotely using an active Internet connection.
- The MDVR will be capable of recording optional Virtual Synchronized Mapping™ as a permanently embedded video record simultaneously recorded with the video, providing a court-ready GPS map for evidence without the use of an Internet connection or the Google Maps™ mapping service.

67.2.4 MDVR WIRELESS CONNECTIVITY

- The MDVR must have two GPS connections on the rear panel: one for an optional active GPS antenna and one for an optional passive GPS antenna.
- The MDVR must include a port for an optional Wi-Fi or cellular antenna on the rear panel.
- The MDVR must have the ability to connect to one (1) internal cellular modem without requiring any external hardware other than antennas. The cellular connection must be able to be set to 3G/4G or a mix of the networks; must have a place to enter an APN number, user name and password; and must work with both CHAP and PAP certifications.
- The MDVR must be able to connect to a Pro 8™ Central Management System (CMS) server for live tracking, remote view, MDVR health, remote playback and remote video download.
- The MDVR must be able to switch from cellular download to Wi-Fi download when in range of the Wi-Fi network or be able to be programmed for video download using Wi-Fi only.

67.2.5 MECHANICAL REQUIREMENTS

- The MDVR casing must be of extruded aluminum and built for MIL-STD-810F shock resistance and must operate between -40 degrees and 158 degrees Fahrenheit without additional enclosures.
- The MDVR must have user-selectable settings to shut down operations autonomously when temperature or voltage limits are exceeded. Temperature and voltage limits may be set by user, within the MDVR's recommended operating limits.
- The MDVR must be of the following dimensions: 13.7"L x 7.4"W x 3.9"H.

67.2.6. MDVR ELECTRICAL REQUIREMENTS

- The MDVR must operate within a power input range of 9-36V DC and must be connected with a wire that is a minimum of 16-gauge, with inline fuses, and be internally and continually protected from power surges, voltage spikes and reverse polarity.
- A separate, external UPS must be available to regulate fluctuations in vehicle voltage and to provide for operation of all functions at full capacity in the event of an interruption in power to the MDVR.

ENVIRONMENTAL REQUIREMENTS

- The MDVR unit must have high and low temperature protection including a heater. An optional fan kit is required for use with HDD of 4TB+.
- The MDVR must have startup protection to prevent damage from voltage fluctuations.

67.2.7. PLAYBACK SOFTWARE

- Playback software must be provided without charge, including upgrades, for the life of the

system.

- The playback software must be simple to use and, from one window, allow the user to access live or recorded video from multiple sources.
- The playback sources must include but not be limited to the following:
 - An MDVR hard drive connected to a PC.
 - An MDVR connected to the Pro 8 CMS server via an active Internet connection aboard the vehicle.
 - A PC connected directly to the MDVR via the LAN aboard the vehicle or a server and a live stream from selected vehicles.
- The playback software must be capable of displaying video utilizing zoom, blur, selected camera views and selected microphone audio from all playback sources stated above. Organizing the display to pertinent and specific channel display must be done with a mouse click.
- The playback software must be capable of requesting wireless downloads, when equipped with an active Internet connection.
- The playback software must be capable of easy download for viewing by legal authorities and authorized parties.
- The video must be equipped with a watermark feature to alert the viewer to video alteration or manipulation.
- The playback software must utilize proprietary encryption to limit access to authorized parties.
- The playback software must be capable of converting video to AVI formats for common display.
- The playback software must be able to create “clips” of pertinent event time duration for storage and transmission on multiple media such as thumb drives, DVDs, etc.
- The playback software must display Google Maps™ mapping service and the vehicle’s GPS location, if the MDVR is equipped with optional GPS antenna, when the playback PC is connected to the Internet.
- The playback software must be capable of displaying Virtual Synchronized Mapping™, a GPS map of the vehicle location permanently embedded in the video recording, without Internet access, as court-ready evidence.

67.2.8. 7 WARRANTY, SERVICE AND SUPPORT

- All hardware shall include a warranty of five (5) years parts and labor.
- Unlimited telephone and email technical support shall be provided at no additional charge for the life of the system.
- Additional extended warranty and service contracts will be available.

*******END OF MOBILE DVR SYSTEM OPTION**

67.3 CENTRAL MANAGEMENT SYSTEM OPTION

- Central Management System (CMS) is an optional upgrade to the software and includes

additional features to enhance the functionality of the software. The following specifications are divided into Playback Software Requirements and Central Management System Requirements for your reference and should remain separate from each other in all requests and proposals.

67.3.1. PLAYBACK SOFTWARE REQUIREMENTS

- License-free playback software that is capable of video playback, calendar and event searches shall be provided to administration at no extra cost, and shall be compatible with Windows® 7, Windows® 8 and Windows® 10.
- The software shall include the following playback controls: pause/play, stop, rewind and fast forward up to x32 speed, slow motion playback, frame-by-frame playback, audio volume, snapshot, video export.
- The software shall allow users to select specific cameras to be displayed during playback.
- The software shall be capable of allowing camera channels to be rearranged within the playback screen.
- The software shall display the resolution and frame rate at the top of each camera channel.
- The software shall provide multiple layout options and window configurations of camera channels with the playback screen.
- The software shall allow users to double-click a camera channel to maximize its display in the playback screen for full-screen mode. While in full-screen mode, users shall be able to cycle through all camera channels.
- The software shall allow users to select date, time range and condition of the video when searching for available videos.
- The software shall include a slider bar that can be dragged directly to a particular point of the video. The timeframe represented by the slider bar shall be capable of being increased or decreased using magnifying lens icons located at the top of the slider bar.
- The software shall provide a calendar display for each month and adjacent month's video with available clips highlighted by video type (normal or alarm).
- The software must provide a security watermark indicator during playback.
- The software must be capable of timeline zoom to (five) 5 seconds.
- The software shall allow for the following selectable metadata to overlay on recorded video: date/time, speed, vehicle number and GPS coordinates.
- When the system is equipped with GPS, the software shall include a GPS map to display vehicle location, route, breadcrumb trail, and vehicle's sensor inputs synchronous to the video being played. Users shall be able to click on any point on the vehicle's breadcrumb trail on the map to jump directly to that time in the video.
- When equipped with GPS, the system shall provide historical software mapping display

routes of the vehicle location and speed charts.

- When the system is equipped with GPS, the software shall be capable of connecting to prerecorded video by selecting a point on the map or selecting a point on the speed chart to view from that speed or location.
- Vehicle sensor inputs displayed below the map shall correlate with their corresponding location on the map such that when a sensor becomes active, it is highlighted at that point in the recording's timeline.
- The software shall include tabs in the playback screen to allow users to view map only, video only or both.
- To retrieve recorded video, the software shall provide searches by the following: event, time lapse, time and date and vehicle location.
- The software shall include an "Event" tab which displays all events and alarms that occurred during the open video segment. Users shall be able to double-click on an event to jump directly to that time in the video.
- The software shall include a "zoom in" button at the top of each camera channel to allow users to zoom in on any selected areas.
- The software shall include a "Blur" button at the top of each camera channel to allow users to select the areas of the camera's image to blur out. Blurring shall be capable of being used in one or all camera channels simultaneously. Blurring shall be capable of being exported with video.
- The software shall be capable of saving a video clip as a Windows Media Player (.avi) file or saving a video as a self-executable format (.exe). However, our preferred method of saving is in proprietary codec format.
- Video clips saved using the self-executable format (.exe) shall be encrypted and should be viewed without the embedded software, providing the ability to easily transfer secure video evidence.
- The video clip function shall provide the option of saving a portion of the video clip (shorter in length and/or reducing the number of cameras) in order to make a smaller video clip from the original.
- The software shall feature the option to archive video clips requiring a username and password for reviewing.
- The software shall include a "Snapshot" button to save a single-frame still image in .bmp format from any user-selected camera.
- With optional PRO8CMS, the playback software must automatically connect to the backend Central Management System (CMS) for video and audio review and investigation.

67.3.2 CENTRAL MANAGEMENT SYSTEM REQUIREMENTS

- The CMS shall provide various levels of user access rights that allow and restrict

access to various functions.

- The system shall feature software for large-scale remote viewing and administrator functions for unlimited simultaneous users and for viewing up to hundreds of camera views at one time. The software shall allow for automated software upgrades and simultaneous updates to multiple sites.
- The CMS shall clearly display all connected assets (vehicles) for live viewing.
- The CMS shall be capable of live viewing any or multiple connected assets simultaneously.
- The CMS shall be capable of displaying 12 different screen formats for live view.
- The CMS shall be capable of arranging users into hierarchical groups that mirror an agency's organization.
- The CMS shall be capable of arranging vehicles into multiple groups.
- The CMS shall include a "Frame Information" tab which displays detailed metadata: firmware, agency name and vehicle number, specific accelerometer reading and GPS coordinates, vehicle speed, and device voltage and temperature.
- The CMS shall allow the system (when networked via cellular or Wi-Fi or both) to automatically send email or text notifications for any system event including the following: video loss, camera obstruction, hard drive "full status," etc.
- The CMS shall supply health information of the video system with error logs, reports and automatic notifications for the following: video blind events, video loss events, disk errors, disk temperature events, fan errors, recorder errors, disk almost full, and hard disk monitoring events.
- The CMS shall allow the system to send notifications to the vehicle driver or external systems for any system event including video loss, camera obstruction, hard drive "full status," etc.
- The CMS shall be capable of automatically sending notifications to a central location and shall support automatic fleet-wide email notification of system events as well as a fleet-wide health summary featuring camera and system health reports.
- With the CMS, the playback software will have the ability to playback video from the remote server, the asset (vehicle), the local hard drive, the directory or local storage.
- The CMS shall allow for easy fleet-wide searches and wireless download of video-based solely upon the date and a general map location.
- The CMS shall include an "Evidence" folder which allows users to label, categorize, organize and generate incident reports after reviewing critical video clips.
- The CMS shall display the current time and date on live video.
- When events are detected, the CMS shall display the event information and allow users to access the remote server directly to search the image associated with the event, when equipped with Wi-Fi or cellular equipment.
- The CMS shall allow the user to connect to multiple units simultaneously and allow for

viewing 64 camera views at one time, based on the number of cameras in the fleet.

- The CMS shall be capable of two-way audio with optional speaker and microphone and cellular connection.
- The CMS shall be capable of remote configuration of recorder settings while the vehicle and MDVR are running.
- The CMS shall be capable of remotely setting the streaming quality while the vehicle and MDVR are running.
- The CMS shall be capable of remotely setting the GPS post frequency while the vehicle and MDVR are running.
- The CMS shall be capable of sending SMS messages to the driver while the vehicle and MDVR are running.
- The CMS shall be capable of remotely restarting the recorder while the vehicle and MDVR are running.
- The CMS shall be capable of remotely formatting the hard drive while the vehicle and MDVR are running.
- The CMS shall be capable of taking remote snapshots of individual or all views and storing them locally for review.
- Image adjustments and alarm out controls shall be adjustable utilizing the CMS.
- The CMS shall be capable of archiving video as an evidence package to the server, allowing the user to name the event, record vehicle name, input key words for searching, driver name, overall description and screen snapshots.
- The CMS shall be capable of displaying and reporting the following: GPS, alarm, user log, device online/offline, offline user, mileage, continuous driver, online rate, video data traffic, panic button, motion alarm, last vehicle position, fence, I/O, vehicle patrol, RFID, recording unit temperature, and cellular data reporting capabilities.
- The CMS shall be capable of automated event video upload to a remote server.
- The CMS shall be capable of advanced backend capabilities for automatic download of video clips and the ability to classify event video data with wireless connections.
- The CMS shall be capable of searching saved, HDD or live video based on geo-fence setting, by vehicle speed range and by event or alarm.
- The CMS shall also be available as a downloadable app that can be installed onto any mobile device or tablet to stream live video and fleet tracking...

*******END OF CENTRAL MANAGEMENT SYSTEM OPTION**

