GENERAL INFORMATION

Purpose
This Invitation for Bid (IFB) provides to those interested in submitting bids for the subject procurement (Bidders) sufficient information to enable them to prepare and submit bids for the Pennsylvania Emergency Management Agency for a Mobile Command Vehicle.

Issuing Office
The Pennsylvania Emergency Management Agency (Issuing Office) has issued this IFB for a Mobile Command Vehicle. The sole point of contact in the Commonwealth for this IFB is Stephanie Fisher stefisher@pa.gov, 2605 Interstate Drive, Harrisburg, PA 17110, the Issuing Officer for this IFB. Please refer all inquiries to the Issuing Officer.

Problem Statement
The mobile command unit is to be designed to withstand the intended use and allow for expanding and updating to meet new technologies. We propose the new vehicle to be equipped with four slide out areas which will allow expansion of the communications area from 2 to 4 or more positions. New 9-1-1 telephony equipment will allow us to have actual 9-1-1 telephone answering points in the vehicle when needed as well as to transfer actual in progress calls to either the communication or command section of the proposed vehicle.

Current implementation of a state of the art 700MHz narrow band radio system will increase the capabilities of our interoperations as we include 8CALL and 8TAC channels in our expanded communications area as well as capabilities to add additional direct channels and Digital Vehicle.

Repeaters. By adding options to allow for the vertical separation of antennas will reduce issues reported.

This new vehicle will provide for 2 totally separate and secure areas, Command and Communications with an area in between containing office equipment available for both areas. Increased capabilities for both command and control of the incident as well as expanded communications will greatly increase the capabilities and the use of this vehicle.

Questions and Answers
If a Bidder has any questions regarding this IFB, the Bidder must submit the questions by email (with the subject line “IFB 6100035267 Question”) to the Issuing Officer. If the Bidder has questions, they must be submitted via email no later than Wednesday August 19, 2015 2:00 PM. The Bidder shall not attempt to contact the Issuing Officer by any other means. The Issuing Officer will post the answers to the e-Marketplace website. A Bidder who submits a question after the deadline date for receipt of questions, assumes the risk that its bid will not be responsive or competitive because the Commonwealth is not able to respond before the bid receipt date or in sufficient time for the Bidder to prepare a responsive or competitive bid. When submitted after the deadline date for receipt of questions, the Issuing Officer may respond to questions of an administrative nature by directing the questioning Bidder to specific provisions in the IFB. To the extent that the Issuing Office decides to respond to a non-administrative question after the deadline date for receipt of questions, the answer will be provided to all Bidders through an addendum.

All questions and responses as posted on the e-Marketplace website are considered as an addendum to, and part of, this IFB. Each Bidder shall be responsible to monitor the eMarketplace website for new or revised IFB information. The Issuing Office shall not be bound by any verbal information nor shall it be bound by any written information that is not either contained within the IFB or formally issued as an addendum by the Issuing Office. The Issuing Office does not consider questions to be a protest of the specifications or of the solicitation.
Restriction of Contact
From the issue date of this IFB until the Issuing Office selects a bid for award, the Issuing Officer is the sole point of contact concerning this IFB. Any violation of this condition may be cause for the Issuing Office to reject the offending bidders bid. If the Issuing Office later discovers that the bidder has engaged in any violations of this condition, the Issuing Office may reject the offending bidders bid or rescind its contract award. Bidders must agree not to distribute any part of their bids beyond the Issuing Office. Any bidder who shares information contained in its bid with other Commonwealth personnel and/or competing bidder personnel may be disqualified.

Vendor Requirements and Standards
All equipment shall be new and not used, refurbished, and/or overhauled. The vendor shall ensure that all work, installations, and necessary documentation conform to the requirements of the National Electrical Code, the National Fire Protection Association publication NFPA-110 and the Department of Transportation.

The following specifications outline the minimum requirements for a custom manufactured Mobile Command and Communications. The vehicle will be utilized in the most critically sensitive operations and must be designed and constructed for its intended use and be of heavy duty construction for a life expectancy to exceed 30 years. While all efforts have been made to fully detail the construction materials, methods and equipment required to accomplish this task, it remains the vendor’s responsibility to choose components that will provide maximum performance, service life, and safety and not just meet the minimum requirements. Any item necessary for the normal and intended use of the vehicle will be supplied by the Vendor even if it is not fully detailed by the specifications.

Due to the complexity of the conversion, life expectancy, and the sensitive electronics equipment the vehicle will carry, prospective vendors must provide detailed specifications.

A general statement or letter stating that the vendor meets all specifications will not be acceptable. Additionally, photo copies of this specification will not be an accepted response.

Your proposed detailed specification shall be in the same order as the below bid specifications for ease of review by the end user.

Vendors are required to include a minimum of three (3) references of Mobile Command and Communications Centers of similar design delivered in the last 12 months. An additional three (3) references shall be included of Mobile Command and Communications Centers that have been in service for a minimum of ten years. (Include Department name, contact name and telephone number).

Brand names are used to establish minimum standards. If an alternate brand or model is bid, equivalency must be demonstrated. All exceptions are to be listed on a separate sheet of paper with reasons for exceptions. If item is to be purchased rather than made by bidder, appropriate literature demonstrating equivalency must be provided. Failure to demonstrate equivalency will be cause for rejection.

No drawings are provided with this request for bid. It is up to the individual vendor to supply their own design for submission. The interior layout shall include three separate work areas. Front room: four work stations, large conference table for eight people, printer cabinet, two electronics racks, and upper and lower storage cabinets on both sides of room. Center room: storage cabinet with roll-up lockable door (approx. 4ft wide) and adjustable shelves, two refrigerators, two electronics racks, communications closet with printer on slide-out tray, stand-up work station with upper and lower storage cabinets, plotter, area to charge hand held radios. Rear room: four work stations with upper and lower storage cabinets, and large conference table for six people.
It is understood that each manufacturer has certain features they incorporate into the design of their vehicles. It is in the best interest to evaluate each vendor’s configuration concepts based on the description above and the information included throughout the specifications. The final interior item placement in the design of all areas (interior and exterior) shall be agreed upon during the pre-construction meeting and shall not change the bid price. In order to fairly evaluate each vendor’s technical ability and design capability, electronic blueprints are to be provided with your bid response.

The 2D blueprints are to be scaled for “D” size paper, 24” x 36” in size; all views must be on ½” = 12” scale.

The blueprints are to be provided as follows:
- Interior floor plan (overhead)
- Right hand section view interior
- Left hand section view interior
- Appropriate section views interior
- Driver and passenger view exterior
- Front and rear view exterior
- Roof view exterior

ENGINEERING DOCUMENTS:
As built weight calculations to be supplied with bid showing proposed vehicle, front axle, rear axle, and total weight.

Electrical load calculations showing power draw for all installed 120/240VAC and 12VDC systems to be supplied with bid.

HVAC calculation showing proper heating and cooling based on occupants, equipment, square footage, vehicle construction, windows, doors etc.
SPECIFICATIONS

CHASSIS:

Current model Peterbilt 348 Conventional cab, tandem rear axle truck chassis. 56,000-lb. GVWR with rear air ride suspension and air brakes.

- PACCAR PX-9 350 HP @ 2000 RPM, 2000 GOV, 1000 LB/FT @ 1400 RPM
- 12v 270 AMP alternator
- (3) 12 volt maintenance free 2100 CCA threaded stud batteries (Group 31)
- 18.7 CFM Compressor
- VGT Exhaust brake integral with variable geometry turbo
- RH Standard horizontal tailpipe
- Antifreeze to -30F
- Immersion Type Pre-Heater 110-120V
- Allison 3000 EVS automatic transmission
- Magnetic plugs, engine drain, transmission drain, axle(s) fill and drain
- Transmission oil check and fill with electronic oil level check
- Dash mounted push button shifter
- 20,000# drop single front axle
- Dana Spicer D2000F
- TRW THP60 Dual power steering
- Synthetic 75w-90 front axle lube
- 16,000# Taper leaf front suspension
- Front shock absorbers
- Dana Spicer DPS40 40,000# tandem rear axle
- 5.29 Rear axle ratio
- Synthetic 75w-90 rear axle lube
- Peterbilt Low Air Leaf 40,000# rear suspension
- Manual dump valve for air suspension with indicator light
- Air brake package
- Air disc front brakes
- Air cam rear drum brakes
- 4SM ABS without traction control
- Bendix AD-IS air dryer with heater
- Polish aluminum air tanks (if exposed)
- .375" x 3.874"x11.625" steel frame
- Three piece cross members
- 70 Gallon polished aluminum fuel tank - RH Under cab
- Non-slip fuel tank step
- High temperature reinforced wire braided fuel lines
- DEF tank mounted RH - BOC
- Goodyear 315/80R22.5 G291 18 ply radial front tires (or current model)
- Goodyear 295/75R22.5 GS72A LHD 14 ply radial rear tires (or current model)
- Alcoa 893657 22.5x9 hub pilot mount aluminum front wheels
- Alcoa 883677 22.5x8.25 hub pilot mount aluminum rear wheels
- Polished disc side front wheels with Dura-Bright finish
- Polished outer (dished side) rear wheels with outer only Dura-Bright finish
- Conventional cab with extended rear window
• LH and RH exterior grab handles
• Aluminum battery box, LH under cab
• Stainless Steel Clad Channel Bumper with 2 tow pins
• Cab mounted stainless steel heated/motorized mirrors
• LH and RH 8" stainless steel convex mirrors mounted under primary mirrors
• Stainless steel sun visor
• Hood mounted mud flaps
• Heater, defroster and air conditioner
• Heavy duty air conditioner compressor
• Dome door activated LH and RH, dual reading lights, forward cab roof
• High back air suspension driver seat
• High back air suspension passenger seat
• Dual driver seat armrests
• Adjustable tilt and telescoping steering column
• Backup alarm
• Odometer/trip/hour/diagnostic/voltage display/outside air temp.
• Engine and trip hour meters integral within driver display
• Power package - includes power windows and door locks
• Smart Nav system - includes Garmin GPS navigation, Phone via Bluetooth, Audio AM/FM/Weather band/CD player/USB port/iPod/Bluetooth, and truck monitoring and tools
• Rear underbody skid bar. Protects rear bumper and skirts from possible damage caused by steep grades. Includes:
  • 3 ½" steel tube across the width of the vehicle mounted to the frame with steel channel, supported diagonally from the ends to the frame mounts
  • Steel tube is capped on the ends and mounted just below the skirting
  • Block heater shall be controlled by vehicle automation system.
  • This feature allows block heater to be turned on while chassis is plugged into auto eject or shore power without needing a separate cord and is also able to be turned on when generator is running. Vehicle automation system shall turn off the block heater automatically if the battery chargers require the entire auto eject circuit load. When batteries are charged enough the system will turn the block heater back on.
• DOT triangle reflector kit with three (3) triangles.
• Pair of rubber wheel chocks with rope handle.

**BODY:**

• Overall length of apparatus: 45'
• Overall apparatus width, rub rail to rub rail: 102''
• Interior walkway height raw body: 83''
• Interior walkway height finished: 81.5''
• Interior walkway length: 33.1'
• Interior raw body width: 93.75''
• Interior finished body width: 92''

All aluminum custom body. Include cross section photo of wall construction with bid response (photo must show outer skin, wall beam, insulation, inner sub wall and FRP wall covering - no exceptions.)

• One (1) 32'' wide x 82'' high 0.125” aluminum sedan door with 21.5'' wide x 25.5'' high fixed window. Door shall have continuous stainless steel piano hinge, two (2) nylon door straps and an aluminum drip rail.
• Aluminum extruded one piece heavy duty wall beams 3" x 3", 0.125 wall thickness, installed on 24" centers. Studs feature machined wire pass-throughs, and raised adhesive control features on base.

• Beams shall be chemically bonded to sidewalls eliminating the need for additional rivets. Buck-rivets will be used to fasten the top, bottom and rub rail. Use of two-sided tape is not acceptable.

• Body shall have 0.125” strain-hardened aluminum alloy 5052-H36 side panels. The upper panels shall be free of rivets allowing for smooth graphics application.

• Skirt supports, 1.5 x 1.5 x 0.125 angle to reinforce skirt edge and hold bottom edge in a straight line. 0.188 x 1.00” flat braces placed at 4’ intervals and riveted to lower wall angle and floor to maintain sidewall skirt rigidity.

• Fender flares, 1.38” x 2.25” x 0.090” roll formed and radiused 5052-H32 aluminum sheet, mechanically fastened to wheel opening. Edges sealed against moisture and painted to match the body.

• NFPA 1901 embossed 0.125” aluminum tread plate roof attached to 3” x 3” one piece heavy duty extruded aluminum roof beams on 16” centers. Beams are 2” skip welded every 12” to diamond plate. Tread plate roof seams to be continuous welded. Perimeter of roof shall be chemically sealed. Include photos of roof beams with proposal to verify that vendor has experience building this body, simply stating comply without the photo documentation will not be acceptable.

• Extruded aluminum floor with interlocking planks, 1.88” high x various widths, 0.125” top surface. 6005-T5 alloy and temper. Heavy-duty thick-wall extruded planks fore and aft of all floor cutouts and every 5th plank in all other areas. Planks made of 6005-t5 alloy and temper, 0.250” thick top surface.

• Flat floor risers to eliminate wheel boxes

• Full width rear custom bumper, 12” deep, covered with all aluminum polished NFPA tread plate.

• Full length skirting. Skirt shall extend 32” down from the bottom of floor extrusions.

• All clearance and side marker lights to be LED.

• Standard structural warranty of 5 years or 50,000 miles and standard component warranty of 12 months or 12,000 miles.

• The vehicle shall be fully sanded on all exterior surfaces with no more than 150 grit to assure removal of imperfections in metal surface. All aluminum shall be chemically etched and primed prior to painting. Base body color shall be oven baked and painted to commercial truck standards.

• Heavy-duty fluted aluminum grab handle with rubber inserts and chrome plated stanchions installed at exterior entry door locations.

• Heavy-duty fluted aluminum grab handle with rubber inserts and chrome plated stanchions installed inside entry door locations.

• Whelen par 16 automatic courtesy LED at side entry doors.
• Courtesy light defeat feature controlled by vehicle automation system.

• Lights turn off when red night lighting is activated.

• **Kwikee** Series 32 (or current model) dual 24" wide automatic electric steel entry step with NFPA 1901 approved embossed aluminum tread plate step cover. Product features:
  - 24" wide tread
  - Door switch extends step when door is opened, retracts step when door is closed
  - Power switch locks step in extended position
  - Ignition override retracts step when ignition is turned on
  - "Last out" feature extends step when the door is opened

• **Trimark keyless** entry with remote radio frequency (RF) transmitter fob, externally mounted keypad and lock actuator.

• Three (3) additional key fobs.

• **Whelen** 600 series LED tail light package
  - Two (2) **Whelen** PLAST4V (or current model) polished chrome vertical housings for four 600 series light heads.
  - Two (2) **Whelen** 600 series LED amber turn signal light heads with populated arrow shape and multiple flash patterns, model number 60A00TAR (or current model).
  - Two (2) **Whelen** 600 series LED red brake/tail light heads, model number 60R00BRR (or current model).
  - Two (2) **Whelen** 600 series max intensity LED Back-up light heads, model number 60C00WCR (or current model).

• Entire underside of the apparatus shall be undercoated. Includes chassis, floor extrusions, step wells and aluminum compartments.

• Rear mud flaps with anti-sail brackets.

**SLIDE-OUTS:**

• 2 - Flat floor slide out room extensions in front room, fabricated with a structurally rigid welded aluminum tube design with a fully bonded aluminum shell. During deployment an electronic control system automatically expands the room extension and lowers the floor to flush position. Slide out features:
  - 30” deep
  - Slide-out to be fabricated with a structurally rigid welded aluminum tube design with a fully bonded aluminum shell.
  - 0.125” 5052 aluminum wall skins on slide-out.
  - 1” x 3” x 0.125” 6061 aluminum wall beam channels with 2” x 6” wire chase slot 6” from the top.
  - 2” x 4” x 0.125” 6061 aluminum lower tubular structure with 1” x 2” x 0.125” cross supports.
  - 1” x 4” x 0.125” 6061 aluminum upper tubular structure with 1” x 1” x 0.125” cross supports.
  - All exposed tube ends to be capped before welding assembly together.
• Flexible wire chases to be fully enclosed in aluminum channel with access cover. Fabric covered or exposed cable chase will not be acceptable under any circumstance.
• Awning that automatically extends and retracts over the top of the room to protect from weather and debris.
• Stainless steel trim shall be installed on front edge of slide-out and on floor where the slide-out meets flush with the center isle floor.
• Full perimeter double rubber bulb seal with an additional seal in the fully extended and fully retracted positions.
• Slide out shall be fully automatic and shall not require the operator to manually move the floor panel or any other component of the slide out before or after deployment.
• No track or hardware shall be attached to the ceiling of the body.
• Multiplexed electric over hydraulic control system programmed to lower the slide out to floor height after full extension.
• Vehicle automation system touch screen(s) shall have a slide-out extend/retract icon on the MISC screen for each slide out room.
• There shall be an interlock through the vehicle automation system to prevent moving the vehicle with the slide out extended. Vehicle automation system to give audible and visual alert if the ignition is turned to on position when any slide out is extended. Include photos of vehicles previously built with four (4) flat floor slide out rooms with response. Photos must show slide out construction and fit and finish. Ergonomic safety and efficiency is of utmost importance in the design and functionality of this vehicle, therefore, above floor or straight out slide outs will not be acceptable. There will be no exceptions to any of the slide out requirements.

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• Include photos of vehicles previously built with four (4) flat floor slide out rooms with response. Photos must show slide out construction and fit and finish. Ergonomic safety and efficiency is of utmost importance in the design and functionality of this vehicle, therefore, above floor or straight out slide outs will not be acceptable. There will be no exceptions to any of the slide out requirements.
• Warning light system for slide outs.
• Includes two Truck-Lite model 44356R SUPER 44 LED per slide out.
• Lights will automatically turn on with slide out deployed.

• Lights will be steady burn.

PAINT AND GRAPHICS:

• Cab and body color shall be black.

• 4-inch wide reflective stripe on the exterior back and sides of the vehicle, placed up to 48" above ground level (color ~ to be determined).

• Custom computer-generated non-reflective vinyl graphics per end user's specifications. All lettering shall be shaded or outlined (colors/style ~ to be determined).

• Install shields supplied by end user.

DRIVER/PASSENGER CAB AREA:

• Custom fabricated console in cab to house emergency lighting controls, receptacles, and radios. Console shall be constructed from sheet aluminum and powder coated to match cab interior.
  • Vehicle height sign on dash.
  • Vehicle shall have a Final Stage Vehicle Certification and Altered Vehicle Certification as required by Federal Motor Vehicle Safety Standards (FMVSS) 49 CFR Part 567.5 and 567.7
  • Payload sticker in cab area with vehicle axle load ratings and available axle payload as built.

• Grover 1601 dual trumpet air horns with driver actuated foot switch.

• Door ajar warning message and audio alert through vehicle automation system.

• Light and alert will be activated when vehicle parking brake is not engaged.

• Door ajar contact/magnet for all entry and compartment doors on vehicle.
WALLS, CEILING AND FLOOR:

- Insulate walls with a minimum of 3" of fiberglass insulation. Cover interior body side walls with 1/2" plywood sub wall, structural plywood sub wall, Exposure 1-APA, 5 ply, face veneer plugged and sanded.
- Cover sub wall with Chrome Gray Carpet
- Insulate ceiling with a minimum of 3" of fiberglass insulation. Cover interior ceiling with three (3) piece modular panel ceiling. Panels to be made with 1/2" structural plywood, Exposure 1-APA, 5 ply, face veneer plugged and sanded. Modular ceiling panels to be covered with Silver Haze Fabric.
- Floor underlayment to be 5/8" exterior grade tongue and groove structural plywood, Exposure 1-APA, 6 ply, face veneer plugged and sanded.
- Lonseal Loncoin II Flecks 150 Onyx non-skid commercial grade PVC flooring. The flooring shall be continuous, one piece full length, full width, no seams.
- 2-1/2" vinyl cove molding in all areas where side walls meet floor.
- 30" Dry Erase laminate covered pocket doors installed on heavy-duty aluminum track with two (2) four-wheel roller trucks to create three separate rooms. Pocket doors shall have recessed handles and a key lock.
- Pocket door frames shall be capped with anodized extruded aluminum. All screws shall be stainless steel.
- All bulkheads shall be covered with Chrome carpet. Cap all sides with anodized extruded aluminum. All screws shall be stainless steel.
- Cover load space doors with black powder coated aluminum panel, install 10" high 0.100" bright aluminum tread plate kick plate at bottom of door and heavy-duty rubber grab handle.
- Cover entry door windows with day/night shades.

GALLEY:

(2) Norcold model DE-0041 (or current model) 12Vdc/120Vac refrigerator. Refrigerator has the following features:
- 3.6-cu.ft. Capacity.
- Full width freezer compartment.
- Adjustable door bins for various size containers.
- Integrated door latches.

One for evidence and one for food and beverage.

SEATING:

(12) Space Air Grid office chairs 5560 black (or current model) with armrests, five caster spider base, and adjustable height for conference table and work station seating.
- Each chair shall have a custom length black bungee strap or wall mount bracket to secure chair as required for travel.
• Fabricate and install flip-down bench seating in front room where space allows for overflow seating.

• Minimal of two locations preferred.

• Bench seat cushions shall be covered in heavy-duty vinyl.
  • Bottom seat cushion will be installed on *Zico Quic-Seat®* fold down spring loaded seat brackets.

• Seat belts shall be provided for the flip down seats.

**BENCH SEAT REQUIREMENTS:**

• Foam for seat backs and bottoms shall be firm density

• All bench seating material must meet Federal Motor Vehicle Safety Standards part 571.302 Flammability of Interior Materials.

• Material corners shall be squared or angled to fit precise cut of foam.

• Foam shall be bonded to plywood backer with industrial grade adhesive.

• Stapling of fabric/vinyl to backer with industrial grade upholstery staples.

**CABINETS:**

All proposed cabinets shall be custom fabricated aluminum and built for the exact space it will be installed in. Cabinet specifications:

• Base cabinets constructed of 0.080" powder coated aluminum with anodized aluminum frames.

• Base cabinet doors are double shell, formed from a single sheet of 0.080" aluminum, with a 0.040" aluminum door back attached.

• Overhead cabinets constructed of 0.064" powder coated aluminum with anodized aluminum frames.

• Overhead cabinet doors are double shell, formed from a single sheet of 0.064" aluminum, with a 0.040" aluminum door back attached.

• Overhead cabinet doors swing up on a full-length aluminum hinge.

• Powder coated radius edging on upper and lower cabinets.

• Dry erase writing surface on all overhead cabinet doors.

• Gas shock lift supports on all overhead cabinet doors.

• All under cabinet lights shall be Orion 6" LED, neutral white/red with polished bezel installed with rocker switch for individual control at each location. The day/night mode shall be controlled by the vehicle automation touch screen controls.
MOBILE COMMAND VEHICLE SPECIFICATIONS
IFB 6100035267

- Floor to ceiling height roll-up door cabinet with adjustable shelving to be provided in the galley area.

- *Wilsonart* Gibraltar 1/2" solid surface for all countertops. Solid surface countertop shall have a 1-1/2" front lip with radius edge.

- *Wilsonart* Gibraltar 1/2" solid surface conference table in the front room. Solid surface tabletop shall have a 1-1/2" front lip with radius edge.

- *Wilsonart* Gibraltar 1/2" solid surface conference table with two flip down table leaf’s in the rear room. Solid surface tabletop shall have a 1-1/2" front lip with radius edge.

- Solid Surface communication equipment / radio shelf at work stations in front and rear room.

- Powder coated 0.125” aluminum conference table bases in front and rear room with power, network, and phone jacks.

- Custom fabricated anodized aluminum framed magnetic dry erase marker board with pin strips shall be installed to cover all open wall areas in conference room. Frames shall be hinged and held closed with tension clips. Minimum of six in front room and four in rear room.

- Pull out map clamps for two maps located in front room.

- Slide out docking station drawer under countertop at each workstation.

- Computer cable pass-thru grommet at work stations and conference tables. Qty 13

- Three (3) wall mounted dry erase marker caddy kit QRT558 (or current model). Install Velcro on rear of caddy to allowing attaching to walls.

- A floor to ceiling laminated cabinet with two doors and key locks shall be installed to right of center entry door for mounting all systems associated with multiplexed vehicle automation system and controls.

**HVAC SYSTEM:**

- *Fan-tastic Vent* model 4000 R (or current model) 3-speed reversible 12" power roof ventilator
  
  - A smooth aluminum plate shall be welded to the roof diamond plate to create a smooth seal for the PRV sealant.
  
  - An aluminum support frame shall be welded to wall beams between roof vent and inside shroud.

- Each room shall have a 12,000-16,000 Btu/hr direct discharge, 12Vdc powered, diesel-fired furnace. Exhaust shall be routed to the street side and connect to a stainless steel exhaust plate in body skirting. A "Caution Hot" label shall be placed above each plate. Each heater shall be zoned and temp set from any of the touch screens which shall read current room temp and set temp. Front room, center room, rear room.

- Ducted Coleman Polar Mach 8 series low profile air conditioners. 2-front room, 1-center room, 1-rear room.
• 13,500 nominal BTU air conditioner with condensate pump that routes water under skirting on drivers side.
• Chill Grille Assembly with 5,600 BTU heat strip
• High Capacity Air Duct manufactured from polystyrene foam laminated with 99% pure polished aluminum inside and out, internally mounted in ceiling
• Louvered Ceiling Vents
• A smooth aluminum plate shall be welded to the roof diamond plate to create a smooth seal for the gasket
• An aluminum support frame shall be welded to wall beams between roof air conditioner and inside ceiling pack.
• Each air-conditioner shall be zoned and temp set from any of the touch screens which shall read current room temp and set temp.

120/240VAC ELECTRICAL SYSTEM:

• Power Tech 25-kW 120/240Vac liquid-cooled diesel generator with air bag mounts installed in a custom fabricated compartment. Generator features:
  • USTC Certified Manufacturer
  • 3 year/2000 hour Warranty with nationwide service network
  • Four point air bag mounting system controlled plumbed to chassis air ride system
  • Four-cycle water cooled diesel engine
  • Radiator cooled, direct mounted
  • High-coolant temp and low oil pressure shutdown sensors
  • Spin-on fuel and oil filter
  • Single side service
  • Typical Gallon Per Hour fuel consumption: 25% load = 0.51, 50% load = 1.01, 100% load = 2.03

• Compartment shall be constructed to the following specifications:
  • 0.187” aluminum with all welded seams.
  • 2” deep 0.125” aluminum box pan doors and 0.125” aluminum frames.
  • Door frames riveted to the body and welded to the compartments.
  • Stainless steel door hinges attached with stainless steel machine screws.
  • Flush mounted door handles with slam latches.
  • 0.125” perforated aluminum panels on interior door surfaces.
  • Gas charged lift/support cylinders to hold doors open at 90°.
  • Industrial grade neoprene gasket door seals.
  • Sound barrier lining on interior compartment walls, ceiling and doors. Sound barrier material consists of metalized Mylar facing, 1” sound absorbing foam, 1.0#/sf barrier, 1/4” foam decoupler and a 3 mil. Acrylic pressure sensitive adhesive with a 76# Kraft paper liner.
  • Door activated interior LED light

• Hardwired Transient Voltage Surge Suppressor (TVSS) protection for entire AC power system.
  • Tested to 25,000 Amps Fault Current per NEC Article 285
  • UL US listed: UL1449 2nd Edition
  • NEMA 4 plastic enclosure: 6.28”(H) x 4.18”(W) x 3.33”(D)

• None of the below components and systems may be proprietary. Include photos of touch screen control panels with bid response. No exceptions to any of the Vehicle Automation System requirements.
A Custom Programmed Vehicle Automation System must be incorporated into a common touch screen with the ability to distribute and control strategic on board systems. Each vehicle is custom programmed with features to suit the particular applications, the software can be updated at no cost to the agency, and all touch screen panels and tablet systems require a pin code to operate to ensure only the appropriate personnel can operate the system (after 60 seconds of non-use the system will go back to the lock out screen - this timing can be adjusted by the end user).

This software simultaneously allows distribution of the information to multiple onboard control/monitoring stations. This system is required as it simplifies start up procedures, contains fewer operating components, reduces operational start-up time, reduces the total amount of wiring in the vehicle and has error detection protocols and troubleshooting features.

Vehicle Automation System features include:

- Two (2), 10” LCD touch screens with custom graphics for control and monitoring at separate control stations in the front and rear of the truck
- Touch pads with custom graphics for local control of HVAC and lighting in center rooms and exterior.
- Customer provided mobile device (tablet) integrated to control all systems. The tablet screen display shall match the screen displays on the two interior mounted 10" LCD touch screens.
- AC power distribution control and monitoring for the generator with power management
- DC power distribution control and monitoring with I/O channels and three battery banks
- Manual or automatic generator control
- HVAC temperature control in each section of the truck and on front and rear LCD touch screens
- Lighting control Day/Night mode in each section of truck and on front and rear LCD touch screens. Note: Each zone shall have three 3 modes. 1 - red/night mode, 2 - white, 3 - reduced white.
- Automatic power transfer switches
- Automated startup and shutdown procedures which allow all operators to get all systems operational in the same order every time in less than 5 minutes
- Seamless control of generators, lighting, awnings and additional devices
- Mast control
- Safety interlocks will not allow vehicle to start when exterior equipment is deployed up, out, or down
- System shall identify wrong AC voltage plugged into vehicle and stop power from leaving system and reaching equipment
- The system must be completely upgradeable with power modules located throughout vehicle. Additional components may be added to system with a simple software modification
- System capability is not to be achieved with use of multiple monitoring systems designed for specific use i.e. water monitors, battery monitors etc.

- **Kussmaul** Auto Eject 20, 20A-120Vac shore power inlet with 25-ft. 20A-120Vac shore power cord.

- **Marinco** 100A-125/250Vac waterproof shore power inlet, 25-ft. 100A-125/250Vac shore power cord and 6-ft. 100A-125/250Vac pigtail.

- **Marinco** 100 amp to 50 amp shore inlet adapter.
  - M4100C12R 100 amp female connector
  - 6365CRN 50 amp plug
• 7717N weather proof cover for 50 amp plug

• A minimum of eighteen (18) specification grade 20A-125Vac duplex receptacle with dual USB chargers shall be located throughout vehicle. Final placement to be determined at pre-construction meeting. Receptacles are not dedicated to any installed equipment.

• A minimum of five (5) specification grade 20A-125Vac exterior GFCI duplex receptacle with weatherproof PVC cover. GFCI receptacles will be wired in pairs to 20A circuit.

• Surface mounted wire chase wire management raceway system located in front and rear rooms. Product features:
  • Satin anodized finish. The finish resists rust, corrosion and fading. Material extruded from 6063-T5 aluminum alloy.
  • Removable dual cover. Makes wiring easy and accessible and provides maximum flexibility for adding or relocating outlets and circuits. The cover retention is 45 lbs. straight pull for one minute.
  • UL and cUL Listed component raceways. File E73943 Guide RJBT, Fittings: File E74343 Guide RJPR. Meets Article 386 of NEC and meets Section 12-600 of CEC.
  • UL5 and ADA compliant. Raceway and fittings meet UL5 specifications and can be installed in conformance with ADA requirements

• Will-Burt Night Scan Chief NS1.8-3000M (or current model) 115Vac light tower. Includes:
  • Four (4) 750 watt Magnafire 3000 Halogen light heads.
  • Pistol grip, full-function remote control.
  • Self-contained 12Vdc air system.
  • Additional roof support structure, as required.
  • Ignition Interlock controlled by Vehicle Automation System

  Roof light shall bolt on to a custom support frame that will be welded to the roof of the truck. No bolting through roof will be acceptable.

**120/240VAC WIRING REQUIREMENTS:**

• All 120/240Vac main wiring shall be stranded THHN wire and run in non-metallic Carlon Carflex liquid tight conduit.

• All electrical circuits and appliances shall conform to applicable national electrical codes.

**12VDC ELECTRICAL SYSTEM:**

• Six (6) 6Vdc Absorbed Glass Mat (AGM) batteries. Batteries shall be installed underbody in slide out weather resistant compartment. Four (4) batteries will be separated for auxiliary equipment and two (2) batteries will be for communications equipment.
• Three (3) electronic converter/chargers, 80 amp minimum output each installed underbody in weather resistant climate controlled compartment to draw ambient air from interior of truck and will have thermostatically controlled exhaust fan to circulate warm air to exterior.

• Converter/charger features:
  • Charges three banks of batteries at the same time.
  • UL listed for safety.
  • Manual reset circuit breaker.
  • Reverse battery protection.
  • Electronic current limiting.
  • High voltage protection.

All DC electrical and metering switched and monitored through the vehicle automation system.

• *Sure Power* 3003 (or current model) isolator.

• Thirty one (31) Ceiling day lights shall be, *Orion* 6” LED, neutral white with polished bezel.

• Ten (10) Ceiling day/night lights, *Orion* 6” LED, neutral white / red with polished bezel.

• *Eight (8)* Whelen 810 Series white quartz halogen scene light with 8-32° optics, model number 810CA0ZR (or current model).

• Six (6) Whelen Perimeter Enhancement Light, Super-LED, Steady White with chrome flange PELCC #16070117.

• Six (6) 15A-12Vdc power outlet.

• *Whelen* 295HFSA5 siren with 9 low current lighting control switches.

• *Federal Signal* TS-100 (or current model) 100 watt speaker behind grille/bumper.

**12VDC EMERGENCY LIGHTING:**

• *Whelen* model 800DHGP (or current model) green command strobe mounted on antenna raceway.

• *Whelen* LED Opticom mounted on front of body.

• Two (2) *Whelen* TIR3 series Super-LED light head with internal flasher, colors to be determined. Includes chrome flange RFLANGEC (or current model). Located in the grille.

• Two (2) *Whelen* 600 series Linear Super-LED light head with internal flasher, colors to be determined. Located on the rear in the taillight housings.

• Six (6) *Whelen* 700 series Linear Super-LED light head with internal flasher, colors to be determined. Includes chrome flange 7EFLANGE (or current model). Located on lower sides and side of hood.

• Twelve (12) *Whelen* 900 series Linear Super-LED light head with internal flasher, colors to be determined. Includes chrome flange 90FLANGC (or current model). Located on sides and rear upper.
12VDC WIRING REQUIREMENTS:

- 2-gauge minimum copper stranded battery cable shall be used for 12Vdc main supply lines. All cable runs shall be full length, no splices. All cable terminals shall be staked and soldered. All cable shall be enclosed in convoluted polyethylene tubing and the ends of the cable shall be sealed with color-coded shrink-wrap identifying the function of the cable.

- All added electrical circuits shall be protected from over-current by resettable circuit breakers appropriately rated for the load. Only circuit breakers shall be used in the installation of added electrical wiring (plug type fuses are unacceptable).

- Circuit breaker functions shall be identified by engraved or printed labels.

- All added wiring for load runs shall be AWG 8, 10, 12, 14 and 18 and must conform to MIL-W-16878F.

- Wire terminals for added circuits must conform to MIL-T-7928. Terminals shall be insulated, insulation grip, TYPE II, CLASS 2 and shall be crimped with tooling recommended by the terminal manufacturer.

- All wiring shall be numbered or lettered on 6” centers minimum.

- Wiring shall be protected from chafing and abrasion with convoluted polyethylene tubing (wire loom) as required.

- Where wire passes through sheet metal, bulkheads and structural supports, plastic grommets shall be used to protect both wiring and wire looms.

- All wire bundles shall be tied with trimmed nylon ties.

- Extreme care shall be exercised to provide for easy serviceability of the system in future years.

- Extreme care must be taken in the installation to avoid the engine manifold, engine exhaust, and muffler, which could expose the wiring to severe overheating during long periods of operation. Proper insulation and heat deflection panels must be installed in such areas.

- A 12Vdc system wiring schematic shall be provided.

- These are the minimum acceptable 12Vdc wiring requirements.

AUDIO/VIDEO:

- Eighteen (18) Samsung 19” LED TV model UN19F4000 (or current model) with wall mount bracket for work stations. Product features:
  - Resolution 720p
  - Inputs: (2) HDMI, (1) USB, (1) Composite, (1) component, (1) RF

- Three (3) Samsung 46” LED SMART TV model UN46ES7100FXZA (or current model) with wall mount bracket. 1-rear room, 1-rear room, 1- exterior. Product features Full HD 1080p Resolution Smart TV Web Browser Smart Hub Wi-Fi Built-In AllShare Play Dual Core Processor & ConnectShare.
• In Focus 55” MondoPad located in front room. Features:
  • Advanced multi-touch high definition 55 inch display
  • Flexible and expandable with built-in Windows PC
  • Digital interactive whiteboard and document annotation
  • Business-class video conferencing
  • Share, view and control from your tablet or smartphone
  • Full copy of Microsoft® Office ensures file compatibility
  • Ordered with PC-I7-4770tm - I7 Processor
  • Ordered with USB - HDMI TV Tuner to display modulated video system on MondoPad

• Weatherproof exterior compartment with fold up door to house the 46” TV and Exterior Work station. Door to be constructed from 0.125” aluminum with all welded seams.
  • LED compartment lighting with automatic switch
  • Gas charged lift support on upper door.
  • Fold down shelf for workstation area.
  • Exterior work station will include the following items:
    • AC outlet
    • DC outlet
    • Telephone
    • Network Jack

Include photo of proposed work station design or 3D drawing with bid proposal.

• Honeywell HRGX81 (or current model) 8 Channel Digital Video Recorder with 1TB HDD Inputs to be Microwave Downlink, Mast Camera, Perimeter Camera Quad, (4) Exterior Video Inputs

• Winegard Trav’ler SK-SWM3 Slimline (or current model) Satellite TV System for DirecTV HD

• Two (2) SATTV H-25 HD Receivers

• Middle Atlantic rack mount kit (custom fitted for DirecTV receivers).

• Multi camera surveillance system. System includes:
  • 1 - Quad View Multiplexer with looping outputs
  • 1 - Day/Night Color camera, rear view (For Backup Camera)
  • 1 - Day/Night Color camera, rear view (For Perimeter Camera)
  • 1 - Day/Night Color camera, front view
  • 1 - Day/Night Color camera, left side view
  • 1 - Day/Night Color camera, right side view

One Rear Camera and the two side cameras shall be connected to the Peterbilt Smart Nav system for backup and turn signal cameras.

• Four (4) exterior audio/video input (RCA audio jack, BNC video jack).

• Exterior audio/video output (RF jack).

• Winegard Sensar RVW-395 Digital amplified HD TV antenna with outlets at each TV location. Includes warning system with interlock through vehicle automation system to prevent moving the vehicle with antenna raised.
• Digital HD Modulated Video System for A/V and Selected Computer Outputs. Includes:
  • 4 - ACT1000 Transcoders for (4) Over the Air Channels
  • 1 - RMT150 Chassis
  • 1 - Power Supply
  • 1 - EH244 Encoder Host (Hosts Capable of up to 6 Cards)
  • 4 - SDE24 (2 Channel) Digital Encoders for Standard Definition Inputs
  • Input will include Honeywell DVR, (4) A/V Inputs, Perimeter Camera Quad, Microwave Downlink, and Mast Camera
  • 4 - HDE24 (1 Channel) Digital Encoder for High Definition Inputs.
  • Inputs will be the (2) SATTV Receivers.
  • 3 - BT HDE-CHV-QAM Encoders for Computer

• HE Series 24 position Passive Combiner.

• Prewire and make installation provisions for customer owned Broadcast Microwave Services, Inc. microwave receive system with antenna on dedicated 39' mast.

• All RF cable for DSS antenna systems (when specified) shall be Belden #9116 series 6 broadband coaxial cable. All other video cabling shall be Belden #1505A RG-59/U precision video cable.

**MAST AND MAST MOUNTED EQUIPMENT:**

• Tempest 2200 series heavy-duty non-locking telescoping pneumatic mast.
  Mast features:
  • 265 lb. max top load capacity
  • 26' 5" extended height
  • 6' 1" nested height
  Includes:
  • KEY-WAY breakaway nylon key prevents tower rotation. Easily replaceable.
  • Air safety valve for over pressure release and condensation drainage.
  • Water drainage holes to avoid freezing at low temperatures.
  • Interlock to prevent vehicle from being driven with mast raised.
  • Fireco tower does not require routine lubrication.
  • Mast cap covers the top of all tower sections when the tower is in the retracted position keeping dirt and moisture out of the tower when stowed.

• Tempest 2300 series heavy-duty non-locking telescoping pneumatic mast.
  Mast features:
  • 187 lb. max top load capacity
  • 39' 4" extended height
  • 6' 9" nested height
  Includes:
  • KEY-WAY breakaway nylon key prevents tower rotation. Easily replaceable.
  • Air safety valve for over pressure release and condensation drainage.
  • Water drainage holes to avoid freezing at low temperatures.
  • Interlock to prevent vehicle from being driven with mast raised.
  • Fireco tower does not require routine lubrication.
• Mast cap covers the top of all tower sections when the tower is in the retracted position keeping dirt and moisture out of the tower when stowed.

• **Gast** 3/4-hp compressor with remote mount 7 gallon air tank mounted in exterior compartment.

• Custom fabricated 0.125” aluminum triangle shaped antenna bracket mounted on 26’ mast. Includes:
  
  • Bracket shall be form welded C channel with supports running from each corner to center support to eliminate snow and ice build-up. Photos of top and bottom view to be supplied with bid.
  
  • Three (3) **Maxrad** MTPM800 (or current model) antenna bases
  
  • LMR 240 antenna cable.
  
  • Custom fabricated 0.125” aluminum Nycoil cylinder painted to match body color. No nycoil shall be visible when mast is in cradled position.
  
  • 40' of 1” Nycoil conduit and weather-tight fittings.
  
  • Antenna Base, Rain Cap Bright Chrome

  Note: Video camera pan/tilt will be positioned in the center of the antenna bracket.

• Custom fabricated 0.125” aluminum cover shall be installed on each mast to cover mast tube from bumper to nycoil cylinder and painted to match body color.

• Camera system installed on 26’ mast. Includes:
  
  • 1 - Pelco PT57024P (or current model) medium-duty pan & tilt.
  
  • 1 - PTZ Coaxitron/RS422 receiver (or Current model)
  
  • 1 - KDB300A Keyboard Controller (or current model)
  
  • 1 - Pelco EH4722-2 (or current model) 22” outdoor camera enclosure with heater/blower.
  
  • 1 - Altronix T24130 (or current model) 24Vac / 100VA transformer.
  
  • 1 - Ganz ZC-NH250N (or current model) 24VAC 1/3” CCD high-resolution day/night camera. Color camera automatically switches to black-and-white as light decreases. When no light is available, the camera will switch to IR mode. Exceptional low light sensitivity of 0.04 lux.
  
  • 1 - Pelco 132D5.5X30 (or current model) 1/3” CS mount CCD lens with a 30X f1.8 lens range from 5.5 to 165-mm
  
  • 1 - AEGIS UFLED LED IR Illuminator

• Hand held pendant for both Mast Up/Down switches and Look Up Light Activation.

• Mast lookup light mounted on each mast.

**RADIOs:**

• Primary 12Vdc power leads for communications radios shall be minimum 2-gauge copper stranded wire with soldered crimp-on end connectors (gauge based on radio requirements). Cables shall be enclosed in convoluted tubing and function identified with colored shrink-wrap.

• Power to radios shall be controlled by a continuous-duty switch actuated by the vehicle automation system.

• Prewire and make installation provisions for sixteen (16) communications radios. Installation includes:
  
  • NMO-style base on antenna raceway.
  
  • LMR195 antenna cable routed to radio transceiver location in Carlon Carflex ENT conduit.
MOBILE COMMAND VEHICLE SPECIFICATIONS
IFB 6100035267

- 12Vdc power routed to radio transceiver location.

- Additional antenna runs for eight (8) Multi-Band Radios.

- Fabricate and install 3” x 3” square extruded aluminum tubing antenna raceway on the roof of the vehicle. Antenna raceway will penetrate the roof at antenna patch panel location and all electronics mounting locations and be welded to roof in each area. The raceway shall be totally enclosed and waterproof.
  - 3” high x 3” long aluminum access covers at each antenna base location on the side of the tubing for access to antenna base and coax cable.
  - Access covers with watertight gasket and attached with four (4) stainless steel machine screws.
  - Raceway tube to have nut-serts installed for access cover attachment.

Include photos and dimensions of proposed antenna raceway system with bid.

- Radio antenna termination panel for up to thirty (30) Antennas. Includes:
  - TNC bulkhead jack in panel for each radio antenna on the raceway
  - Antenna leads from radio locations to panel routed through Carlon

- Carflex ENT conduit with 18” of extra cable at panel to allow customer to reconfigure panel as required.

- Two (2) Motorola APEX7500 dual band (UHF/500MHz) mobile radios with dual control head and encryption

- Midland 79-290 (or current model) 40 channel CB radio with externally mounted antenna.

- Seven (7) Motorola Headset Jack

- Prewire and make installation provisions for Two (2) department supplied radio rack charger and/or flashlight charger.

TELEPHONE SYSTEM:

- Four (4) land Line inputs.

- Two (2) land Line input dedicated to fax machine

- Ten (10) telephone extension jack.

- 66-style punch-down block.

- Panasonic KX-TA824 (or current model) Electronic Modular Switching System. Base system has capacity for three (3) incoming lines and eight (8) extensions.

- Panasonic KX-TA82483 (or current model) Expansion Card, adds three (3) incoming lines and eight (8) extensions.

- Panasonic KX-TA82481 (or current model) Expansion Card, adds two (2) incoming lines and eight (8) extensions.
• Nine (9) *Panasonic* KX-T7731-B (or current model) black twelve-line speakerphone telephone with 16-digit alphanumeric LCD display.

• Polycom SoundStation 2 wireless conference phone.

• *Cast Products* EB00013-1 (or current model) cast aluminum weatherproof box with key lock for land line input connections.

• Custom aluminum shroud with weatherproof pass-through hatch installed in the door of the landline input box.

• Exterior phone box door painted to match body.

• Three (3) fixed wireless terminals with *Maxrad* low profile antenna.

• *Note:* Model to be determined based upon cellular standard of local service provider.

• *Bogen* TPU-15 (or current model) paging amplifier with four (4) *Whelen* SA314B (or current model) speakers interfaced with P/A features of the telephone switching system.

• All telephone lines and cellular antenna cable shall be installed in Carlon.

• Flex-Plus ENT conduit or raceway (as applicable).

**COMPUTER NETWORK AND EQUIPMENT:**

• Thirty (30) RJ-45 CAT6 computer network jack with CAT6 cable routed through *Carlon* Flex-Plus ENT conduit or raceway (as applicable).

• *Leviton* 69270-U48 (or current model) 48-port Cat6 rack mount patch panel.

• Thirty (30) Certified 18" CAT6 patch cord.

• Two (2) Certified 36" CAT6 patch cord.

• Cable Certification Report confirming that network wiring complies with CAT6 specifications.

• Two (2) *Allied Telesyn* AT-GS950/24-10 (or current model) 24-port 10/100/1000T Unmanaged Gigabit Switch.  
  Product features:  
  • Wirespeed performance  
  • Auto-negotiation Gigabit ports  
  • Auto MDI/MDIX on TX ports  
  • Transparent to VLAN packets  
  • Full duplex flow control

• *Cradlepoint* AER2100 series cellular router with a Verizon and Sprint modem.  
  Also includes antennas run to the roof for modems.
• Two (2) HP Office jet Pro 8620 (or current model) Premier All-in-One Printer. Product features:
  - Color printing, color copying, color scanning, color faxing, black-and-white printing, black-and-white copying, black-and-white scanning, black-and-white faxing
  - Ethernet, Wi-Fi 802.11b/g, 802.11b/g Wireless Technology

• HP T790ps (or current model) Color Ink Jet (24") plotter.

• Black powder coated slide out tray for Plotter

• Seven (7) dual USB wall plate mounted in raceway. USB cables connected to docking station on slide out tray.

**MISCELLANEOUS ELECTRONICS:**

• *Napco* Gemini alarm system. System includes magnetic contacts on all entry doors, exterior storage compartment doors, battery box doors, generator compartment doors and hood. Two (2) key fobs, key pad, 360° ceiling mounted motion sensors, siren and bell.
  
  *Note:* If applicable, one (1) fixed wireless terminal will be interfaced to the alarm system to allow the customer to program a telephone number that will be dialed automatically if the alarm system is triggered. Fixed wireless terminal will be connected to a constant hot power source.

• *Columbia Weather Systems* Orion 510™ 9510-D-1 (or current model) Weather Station with WeatherMaster Software and Weather Display Console. System includes the following:
  - Orion 510 Transmitter housed in a Self-Aspirating Radiation Shield
  - Temperature Sensor
  - Relative Humidity Sensor
  - Digital Barometer
  - Ultrasonic wind Direction and Speed Sensor with alignment adapter
  - Impact Rain Sensor
  - Programmable Touch Screen LCD Display (rack mountable)
  - WeatherMaster 2000 software (includes Cameo/Aloha interface and electronic wind direction North-orientation offset program)
  - Havis Shields KR-SB-500-W4 (or current model) Bottom Raise Pole with Sensor permanently mounted on top. Pole has quick release handle that enables the pole to be raised approximately 24” above the roof line.

• Two (2) *Franklin Instruments* #FD254-I00-OP4 (or current model) clocks with 2.5" LED display and 12 hour or 24 hour modes.

• Middle Atlantic MRK-4026 (or current model) forty-space 19” wide x 26.5” depth (24” useable depth) open framed electronics equipment racks with caster base. Racks can easily slide out from a fixed position with quick release fasteners to allow side and rear access to rack equipment. Install as many racks as required to house all electronics and ensure proper airflow to keep equipment from overheating. Racks shall be installed in room areas where local control and access is required. Areas in each rack shall have open spaces for future installed equipment.

• Middle Atlantic MW-4QFT-FC top fan panel, with four (4) 50 cfm ventilation fans, QFAN installed in each rack.

• All racks shall include locking doors.
• 18-outlet power strips with 2 front-panel C19 outlets and 12 rear-panel C13 outlets. Minimal three per rack.

EXTERIOR STORAGE COMPARTMENTS:

• Single Fold Down Door underbody storage compartment with interior dimensions of 21.25" high x 72" wide x 25" deep constructed from 0.125” aluminum with all welded seams.

• Single Fold Down Door underbody storage compartment with interior dimensions of 21.25" high x 60" wide x 25" deep constructed from 0.125” aluminum with all welded seams.

• Single Fold Down Door underbody storage compartment with interior dimensions of 21.25" high x 30" wide x 25" deep constructed from 0.125” aluminum with all welded seams.

• Single Fold Down Door underbody storage compartment with interior dimensions of 21.25" high x 72" wide x 25" deep constructed from 0.125” aluminum with all welded seams.

• Single Fold Down Door underbody storage compartment with interior dimensions of 21.25" high x up to 60" wide x 25" deep constructed from 0.125” aluminum with all welded seams.

Compartments will be constructed to the following specifications:

- Sweep out type bottoms with 1/2” drain holes.
- 2” box pan doors and door frames fabricated from 0.125” aluminum.
- Door frames shall be riveted to the body and welded to the compartments.
- Compartments shall have a LED light that illuminates when the door is opened.
- Dri-Dek mat on compartment bottom.

Compartment doors will be constructed to the following specifications:

- Stainless steel hinges attached with stainless machine screws.
- Slam latches and flush mounted handles.
- 0.100” bright polished aluminum diamond plate on interior surfaces fastened with stainless hardware.
- Each door shall hold 800 pounds when open in shelf position.
- All doors shall be sealed with industrial grade neoprene gasket.
- No compartments shall hang below body side skirting.

• 2” box pan door and door frames fabricated from 0.125” aluminum installed in body to allow exterior access to each Middle Atlantic equipment racks. Paint exterior to match body and include diamond plate inner panel, key lock and gas shock.

• Tecniq ultra-thin surface mount LED lighting strips shall be mounted in pairs to light the back side of each electronics rack. Light turns on when door is opened and can be turned on at touch screen vehicle automation panels.

• Storage Compartments to be lined with Line-X protective coating (Grey)
• Custom aluminum shroud with weatherproof pass-through hatch installed in each rack door to allow cables to pass into the vehicle. Shroud painted to match body.

AWNING:
• 20' Girard Nova Double Pitch - Roof Mounted - Electric Lateral Arm Awning operated through vehicle automation system.

ROOF ACCESS:
• Zico Quic-Ladder swing out and down vehicle ladder, RL-2-7 (or current model). Product features:
  • Cast aluminum rungs with flat, non-skid surface
  • Steps are 3" deep x 15-1/2" wide
  • Handrails are 1-1/4" heavy-walled aluminum tubing

• 1.25" Diameter welded aluminum tube brush guard installed on street side and curb side of roof to protect all roof mounted equipment and antennas from tree branch damage.

LEVELING SYSTEM:
• Heavy-duty Quadra MFG. Inc. Big Foot™ model QE-2 (or current model) four point fully automatic one-touch leveling system. Includes:
  • 17,000-lb. capacity 26" jack with 20" stroke (4 total)
  • Air ride dump valve
  • Fully automatic control panel with manual feature operated through vehicle automation system.
  • Safety ignition interlock when jacks are deployed with override controlled through vehicle automation system.

• High density polypropylene, injection molded yellow colored Super Dolly Pads for use with leveling system jacks. Pads measure 15” x 17” x 1” thick with a grab strap on one side (set of 4).

MISCELLANEOUS ITEMS:
• 5 pound dry chemical fire extinguishers in cab and load space.

• First Alert 9-volt combination Carbon Monoxide and Smoke alarms installed in each room.

• Life Saver Plus First Responder First Aid Kit, LS-Plus (or current model).

MANUALS:
• Complete manual set on paper and CD, including the following:
  • As-built specifications with interior and exterior drawings as used for production of the vehicle.
  • Chassis and body owner’s manuals.
  • 12Vdc and 120Vac legends showing wire gauge, color, number and function.
MOBILE COMMAND VEHICLE SPECIFICATIONS
IFB 6100035267

- 12Vdc high current wiring diagram illustrating the battery systems, isolators, power converters, and alternator.
- Roof top antenna placement drawing and legend identifying antenna placements and termination points.
- Audio/Video cabling diagram.
- Telephone system punch block wiring diagrams.
- Warranty and Return Authorization procedures.
- Battery maintenance information.
- All individual component manuals and warranty registration cards as provided by component manufacturers.

TRAINING:

- At time of delivery, vendor representative shall provide eight (8) hours of training and inspection:
  - Automatic start-up and shut down procedures.
  - Manual start-up and shut down procedures.
  - Proper storage

- Additional eight (8) hours of training and inspection for additional people on second day:
  - Automatic start-up and shut down procedures.
  - Manual start-up and shut down procedures.
  - Proper storage