VEHICLE SPECIFICATIONS
ACCESSIBLE PARATRANSIT VEHICLES

ATTACHMENT A-1
(Rev 3)

Morongo Basin Transit Authority
Lead Agency for the
California Association for Coordinated Transportation
Vehicle Purchasing Cooperative

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SPECIFICATIONS FOR PARATRANSIT BUS

1.0 SCOPE

1.1 The basic vehicle, both chassis and body, must be a current year factory production cutaway model that is catalogued by the manufacturer and for which manufacturer's published literature and printed specifications are currently available. The bus manufacturer shall be ISO 9001: certified. A copy of this certification must accompany the bid submittals.

1.2 This specification is intended for use in the purchase of a complete vehicle unit and all equipment and accessories necessary for its operation. All parts shall be new. All parts, equipment, and accessories shall be completely installed, assembled and/or adjusted as required. Each unit is to be equipped with a right side mobility aid lift and door.

2.0 APPLICABLE STANDARDS, LAW AND REGULATIONS

2.1 The following standards, law and regulations of the issue in effect on the date of the Invitation for Bid form a part of this specification to the extent specified herein. The bus is required to meet all regulations, standards and laws including revisions, at time of bus acceptance and through the term of the contract.

- Federal Motor Vehicle Safety Standards (FMVSS)
- Code of Federal Regulations Title 49, Chapter V-National Safety Bureau, Part 38 Subpart B, Part 567, 568, 571 and 665
- California Vehicle Code and CCR Title 13 regulations as applicable to transit vehicles
- California Health and Safety Code
- California Air Resources Board and Environmental Protection Agency Standards and Guidelines
- OEM Body Builders Standards and Guidelines
- National Fire Protection Agency Regulations 52
- Society of Automotive Engineers (SAE) and International Standards Organization (ISO)

2.2 **ALTOONA BUS TESTING**: Bidders that are offering vehicles (either as a base vehicle or with optional engines or modifications to the fuel system) are required to test at a minimum for 5-year/150,000 mile service life to CFR 49 part 665. Class A vehicles are required to test at a minimum for 4-year/100,000 service life. Final test report (hardcopy and electronic version on thumb drive) shall be submitted with the bid. Bidders for CNG vehicles will provide documents to verify vehicles offered are delivered in compliance with 49 CFR 665. Altoona test must be completed and a satisfactory test report provided to the Cooperative's prior to final acceptance of the first vehicle by a recipient. Failure to comply with this requirement will result in nullification of conditional award. Offerors may not offer buses using the FTA's demonstrator/prototype model Altoona test exemption provision for five (5) or less vehicles for sale under this contract.

3.0 VEHICLE CLASSES:

Vehicles shall conform to the requirements of the following table:

VEHICLE CLASS	A Ford E350	A GM 3500	A** Ford T350	B Ford E350/ 450	B GM 4500	B-CNG Ford E450	C Ford/ E450 GM 4500	C-CNG Ford E450
SPECIFICATIONS								
Number of Wheelchair Positions	2	2	2	2	2	2	2	2
Minimum Seat Positions-Rear Lift	8	8	8	12	12	12	16	16
Minimum Seat Positions-Front Lift	7	7	7	11	11	11	14	14
Minimum OEM Gross Vehicle Weight rating in lbs.	11,500	12300	10,360	12,500	14200	14500	14,500	14,500
Wheel Base (Inches)	138	139	138	158	159	158	176-190	176-190
Minimum Entrance Door Height (Inches)	72	75	72	75	75	75	75	75
Minimum Clear Door Width (Inches) Front Lift Rear Lift	 27 30	 27 30	 27 30	 30 30	 30 30	 30 30	 30 30	 30 30
Minimum Engine Size-Gas(Liters)	6.8	6.0	3.7	6.8	6.0	6.8	6.8	6.8

*** Class
* One wheelchair position required for Class A front lift
** "Transit Chassis* conversion
**** All dimensions are +/- .5" to allow for differentiation in tolerances

4.0 SPECIFICATION REQUIREMENTS

These specifications apply to all components of vehicle Classes A through C unless otherwise stated within specifications.

4.1 VEHICLE LOADING: In no case shall the vehicle GVWR or the front or rear gross axle weight rating (GAWR) or any components therein, exceed the OEM Chassis rating, when the vehicle with all options installed is fully loaded with passengers 150 lbs. per ambulatory seated passenger and

driver, 250 lbs per mobility aid passenger. A weight distribution schematic and loading calculation must be shown for each floor plan and submitted with bid for each floor plan offered. Loading calculations must be made with full tanks of fuel.

4.11 UNLADEN WEIGHT: A copy of a weight certificate from a state (state of final builders location will be accepted for these purposes) certified scale showing the four corner unladen weight of the vehicle, with a full fuel tank, must be submitted at time of delivery.

4.2 ENGINE: California approved gasoline electronic fuel ejection (EFI) fuel management system.

4.25 CNG/PROPANE: When available engine to be equipped with gaseous fuel prep package. Areas where the alternate fuel system impacts the standard specifications (for gasoline/diesel fueled vehicles) may be waived for this contract. This includes such things as: gross vehicle weight rating, payload, engine displacement, emission rating, cargo volume and others directly affected by the fuel system modifications. The bidder may be required to substantiate the reasons for downgrading the base requirement. A minimum of 27-gallon gas equivalent capacity in three 3600 psi tanks shall be installed between the frame rails on the chassis. The CNG tanks shall have a production date of no more than 24 months from date the bus is delivered. The tanks shall be Type III aluminum and carbon fiber construction, twenty (20) year life that complies with NGV2-2007 and FMVSS 304. Type IV tanks are acceptable if installed within the frame rails of the vehicle. All fittings and hoses are to be stainless steel or flex tubing approved for use with CNG at 3600 psi. All lines are to be supported with split block high pressure retaining devices and or rubber insulated line clamps approved for use with CNG at 3600 psi. All fasteners are to be Grade 8 fasteners and installed in a manner that is compliant with applicable sections identified in 2.1. Conversion shall include dust and gravel shields to protect tanks and valves. Vehicle shall have OEM gas ready engine.
The system shall be installed by Engine System Manufacturers approved installers and include the following:

a) NGV-2 3600 psi rated fill receptacle sized at buyers choice, no extra cost
b) Electronic tank shut off valves.
c) Exterior fuel pressure gauge
d) Locking fuel door
e) Lockout switch for fuel filler door to prevent starting with fuel door open
f) De-Fueling Port.
g) Solenoid cylinder valves to have individual fuse protection
h) Wire harness to have IEC IP67 rating.

Proposer to offer as options, a Kidde Aerospace & Defense (KAD) or approved equal Automatic Fire Sensing and Suppression System (AFSS) complete with fire detector(s), control panel, manual activation switch and engine compartment and battery compartment and methane detection system. The purpose of the AFSS is to ensure coach and passenger safety and survivability in the event of fire. The AFSS shall detect fires in protected areas. Upon fire detection the AFSS shall immediately activate an audible and visual alarm in the vehicle operator's area. After a 15 second delay, the AFSS shall shutdown the vehicle engine and discharge extinguishing agent into the protected areas. The vehicle operator shall have the capability to extend or terminate the engine shutdown and extinguisher discharge delay. The completed AFSS shall be tested and certified by KAD. The test shall determine that the system has been properly installed and will function as intended; a Certification Report from KAD shall be provided indicating such at time of delivery.

4.3 PROPANE: For propane option, the engine shall be a dedicated propane system with the following specifications:

1. OEM Approved Alternative Fuel Supplier that maintains OEM Warranty.
2. Dedicated liquid injection with 41 plus usable gallons.
3. 6.8L V-10 (or approved equal) with hardened valve/seats – "alternative fuel package"
4. System must work with existing OEM diagnostics/OEM PCM. A separate controller will not be accepted.
5. EPA & CARB certified and meet all FMVSS, NHTSA and NFPA58 regulations.
6. Fuel tank must be packaged in same location as gas tank that is removed and must meet all ground plane clearance.
7. Fuel tank shall be designed for propane autogas with 41 plus usable gallons and shall mount using OEM hardware and bracket. Fuel fill shall be protected from weather.
8. System to be sourced from Manufacturers QVM Approved System Developer.
9. To be installed by Manufacturers QVM Approved Alternative Fuel Installer.

4.4 TRANSMISSION: Minimum Four speed automatic transmission incorporating an OEM installed air to oil type auxiliary transmission oil cooler and filler extension neck for adding fluid.

4.5 BRAKES: Dual hydraulic power-assisted system with four wheel disc-type brakes. A foot operated parking brake shall be supplied with a warning light on the dashboard. .

4.6 SPRINGS**:** The front and rear springs shall have a ground load rating equal to or exceeding the GVWR of the vehicle. Shim or comparable method that is recommended by the OEM, shall be installed on the lift side of the vehicle to keep the bus level.

4.7 SHOCK ABSORBERS: Each chassis shall be equipped with front and rear, heavy-duty, double-acting gas filled shock absorbers, the highest rating available from the OEM.

4.8 STEERING: Each vehicle shall be equipped with OEM power-assisted steering. Steering shall incorporate an OEM factory installed tilt wheel feature, proposer must offer optional cruise control.

4.9 WHEELS**:** Each vehicle shall be equipped with seven OEM matching steel-disc wheels. The rated capacity shall equal or exceed the GVWR of the vehicle. Rear dual wheels will have a brass or stainless valve extension installed and secured to the outside on each set of rear wheels to check and fill air pressure.

4.9 TIRES: Seven matching OEM steel-belted radial ply tires of equal size and rating. The combined load rating of the tires shall equal or exceed the GVWR of the vehicle. The spare tire shall be mounted to the wheel shall be secured insise the vehicle and shipped and delivered with the vehicle unless optional spare tire carrier is selecteded (carrier not available and does not apply to Class A vehicles).

4.95 BUMPERS: A rear anti-ride bumper shall be installed, equal to Romeo RIM, HELP and must have the HawkEye reverse assistance system integrated into the bumper and continue to operate after repeated 5-mph impacts.

5.0 AXLES: The sum of the front and rear axle ratings shall equal or exceed the GVWR of the vehicle. The rear axle shall be single-speed type.

5.1 DRIVESHAFT: Protective metal guard(s) for the driveline shaft(s) shall be provided to prevent a broken shaft from touching the ground or any brake/fuel line and prevent the shaft from contacting the floor of the bus.

5.2 ELECTRICAL**:** The electrical system shall be a 12-volt system. All electrical accessories except mobile radio, lights, and mobility aid lift must be wired through the ignition, and must shut off when the ignition is shut off. A wiring diagram must be submitted upon vehicle delivery that will match the as-built wiring for each vehicle. The fuse box must be properly labeled to identify each circuit with a corresponding label identifying the function attached to the fuse box cover. Mating harness and harness connectors shall use matching wiring and coding.

5.21 WIRING AND SWITCHES: All switches and wiring circuits shall be protected with either fuses or circuit breakers. All fuses and circuit breakers shall be labeled for identification and installed above the driver seat with a lockable cover (metal or plastic or vinyl covered wood). A diagram detailing the circuits must be installed on the inside of the cover. The OEM Chassis electrical protection may not be altered or modified in any way. All contractor-installed switches shall be of heavy-duty design. Switches or wiring installed on the engine cover must include quick disconnect harnesses and no electrical, stationary or mechanical device may block the removal of the engine cover inside the bus. All electrical terminals shall be heavy-duty, pressure - type terminals. Wire connections shall be crimped with Packard type connectors. All terminals shall be of the full ring type, sized for the terminal screw or stud. All wire terminals exposed to weather must be weather protected by heat shrink tubing, or approved equal. Samples to be provided for review prior to bid award. There shall be no exposed wiring inside the vehicle. All wiring must meet SAE standard requirements. All electrical wiring shall be automotive stranded and shall be loomed; color, number and or function coded every six inches with a schematic showing function code. No wires of the same color, number or function code in the same loom or harness. All harnesses that are added to the vehicle will be secured to the frame at a maximum of 24" intervals. Plastic wire ties are not acceptable. Added P-Clamps will be made available for appropriate support/protection as deemed necessary by the Cooperative. All wires or harness which pass through holes or by sharp edges shall be ran through loom or rubber grommets. All wiring connections shall be done with Packard connectors. No butt connectors will be allowed.

5.22 CHARGING SYSTEM: The vehicle charging system will use a OEM 12-volt alternator with the highest output alternator available from the chassis OEM.

a) A fast idle system equal to Intermotive Highlock shall be installed. (Inpower fast idle for Ford Transits) The fast idle system must be able to automatically increase the engine speed to 1,500 RPM on gas engines and 1200 RPM on diesel. The fast idle shall engage only when the vehicle is in Park and the vehicle is not in motion (must sense vehicle movement) and activate when vehicle voltage drops below 12.5 volts, the chassis A/C is commanded on, or when the coach A/C (non OEM) system is turned on.

5.23 LIGHTS: Unless otherwise indicated, all lights, taillights, brake-lights, turn-signal lights, collision avoidance lights, clearance marker lights, and back-up lights, shall be voltage regulated light emitting diode (LED) lights. Vehicle to be equipped with:

a) OEM daytime running lights.

b) Taillights will be grommet mounted and recessed. Taillights shall not protrude more than 2" from the body. A pair of amber hazard and conventional lights shall be provided. Rear lights shall include a pair of red taillights and red stoplights which may be combination lights (equal to a dual filament bulb).

c) The lamps shall be constructed with a single piece lens with the cavity seal accomplished via a potting process, a welded lens to the housing construction or a connector fastened through the body of the light is not allowed.

d) LED side signal lights, with marker, shall be provided independently, or be incorporated into the center of the bus. Location shall be in front of the rear wheel opening and provide visibility from behind the rear wheel opening.

e) LED Clearance marker lights shall be installed either recessed or surface mounted and armored, facing the front, rear, and each side at rear.

f) Center mounted LED light will be provided and mounted above rear window.

g) Two (2) LED back-up lights, one mounted on each side of the body rear cap, shall be provided.

h) LED step lighting will be provided, mounted to provide light for the entire step-well and portion of the ground area outside the bus. The step lights shall be extinguished when the front door has closed. Raised floor step lighting shall be provided by one LED Strip light mounted in the step riser. (Must be recess mounted to protect from accidental damage by passengers contacting light while using step.) Exterior step light shall be mounted away from wheel splash and provide light a minimum of three (3) feet beyond the first step on the ground area outside the bus.

i) Vehicle shall be equipped with LED rear center brake light.

5.24 BATTERIES: Each vehicle shall have two maximum capacity chassis batteries of equal capacity, rating and battery type. Mismatch of battery type is not acceptable, particularly mismatch of lead acid and maintenance free types. One battery shall be installed in an easily accessible tray described in Section 5.25 and the other shall remain in the OEM engine compartment location. Provisions shall be made to charge the auxiliary battery from the engine alternator. Battery cables installed in place of chassis manufacturer's battery cables shall be a continuous run and sized to match the electrical systems maximum current draw. The vehicle shall be equipped with a storage battery electrical power main disconnect switch. The disconnect switch shall be labeled in red lettering "Battery Disconnect, Emergency Use Only". Batteries to be installed using anticorrosive slide blocks for securement.

5.25 BATTERY TRAY: A locking weather protected sliding type battery box shall be installed on the curbside behind the passenger door with stainless steel bearing slides providing for an automatically latched tray to hold the battery in place and at a safe distance while the battery is being serviced. The battery tray shall be large enough to hold two OEM batteries. The battery tray slides shall have the ability to carry twice the weight of the bus batteries. The battery tray shall have adequate drain holes (a minimum of two). The battery box shall also be equipped with two drain holes preferably adjacent to the two battery tray drain holes when the tray is in the stowed position. The tray shall have the ability to extend a minimum of 3 inches beyond the opening of the battery compartment. Drain holes to be closely aligned when the battery tray is in the stowed position. Battery hold-downs should be properly sized and prevent the battery from shifting or moving in the battery tray which may require shift blocks Battery hold-downs should be properly sized and prevent the battery from shifting or moving in the battery tray which may require shift blocks made of an insulated material to prevent corrosion.. All battery securement devices and securement hardware, including slides and tray shall be stainless steel and be self-locking or tension retaining hardware. Battery box must be designed with full support under the tray. Battery trays that are built without structural support underneath will not be accepted. One thumb-release latch and one locking latch that will rotate 180 degrees from the closed position shall secure the battery door. A chrome retractable latch shall hold the door in the open position. A diagram showing the configuration of the battery cable installation shall be installed to the inside of the battery. Cables shall be long enough to allow specified pull out extension and shall be protected and flexible enough to fold away when stowed without shorting or damaging the cables. OEM installation for batteries is acceptable for Ford Transits.

5.26 GROUNDS: Three added grounds shall be installed on the vehicle; all shall be # 0 gauge. One ground shall be installed between the engine and the OEM frame. The second ground between the Cutaway Body frame and the OEM frame, and a third between the lift pump housing and the side battery, grounds must be continuous, without splices. For all ground connections, paint or foreign material must be removed and a coating of dielectric material applied to the cleaned surface where each ground attaches.

5.3 FUEL TANK: Gasoline Fuel tank(s) shall be the largest available capacity from OEM. The chassis OEM fuel system shall not be modified and be fully compliant with California Air Resources Board standards. .

5.4 INSTRUMENT PANEL: The instrument panel shall have lamps sufficient to illuminate all instruments. All instruments shall be accessible for maintenance and repair and shall be mounted so that each instrument and all indicator lights are clearly labeled and visible to the driver. Lights in lieu of the listed gauges will not be acceptable. Decals or Dymo Labels are not acceptable. Each vehicle instrument panel shall be equipped with at least the following:

a. Ammeter or voltmeter
b. Oil pressure gauge
c. Fuel capacity gauge
d. Engine temperature gauge
c. Speedometer
e. Emergency brake warning light

5.5 BACK-UP ALARM: Shall be connected with back-up lights to produce an intermittent sound to warn others while bus movement is in reverse, Equal to ECCO 530 or 575.

5.6 BODY MODIFICATIONS: The Vendors must be certified by the National Traffic Safety Administration to manufacture or alter vehicles in accordance with the Code of Federal Regulations, Title 49, and Parts 567-568. On "cutaway" conversions added bodies must be securely fastened to the basic vehicle structure and bolted securely through chassis rail flange at floor and with added reinforcing plates or comparable method. Method of attachment must conform to chassis OEM body builders' requirements. Attachments through bus side rails are not allowed. No welded securement to the basic vehicle structure will be acceptable. No second stage manufacturer welds, or holes, will be accepted if they are not a minimum of 1" from the top of the top flange and 1¼" from the bottom of the bottom flange. Welds, and/or holes that are in the center (the area between the top and bottom flanges as measured above) area of the web of the frame and comply with OEM requirements will be accepted. All OEM requirements must also be met. Vehicles that do not comply with these requirements will be rejected.

5.7 STRUCTURE: The vehicle body shall incorporate a welded steel or aluminum body frame or shall be constructed to provide maximum protection to passengers in case of rollover accident or a crash accident to the side or rear of the bus. The inside and outside body panels should be fabricated of contoured steel, fiberglass, fiberglass reinforced plastic with resin-hardened honeycomb, or aluminum. The frame shall be attached to the understructure and securely attached to the chassis so that the entire vehicle will act as one unit without any movement at the joints. The entire unit shall be adequately reinforced with structural steel to carry the required loads and withstand road shocks. The entire frame structure of bus body and attaching members shall have anti-corrosion product applied prior to mounting the bus body.

5.71 ROOF CONSTRUCTION: The roof construction shall be of sufficient strength to prevent vibration, drumming or flexing. The roof is to be designed and installed in a professional manner that is smooth and without bumps, waves or has an imperfection due to installation or material that will not allow the pooling of water. Roof shall be one-piece design from the front cap to the rear cap and extend over the sides of the bus.

5.72 BUS BODY: The entire unit shall be adequately reinforced and shall meet requirements of FMVSS 220, School Bus Rollover Protection. A current certification must be furnished with the bid. The test results shall not be more than two (2) years old on the production model bid unless the structure has not been significantly modified as defined by 49 CFR 665.

a) All exterior seams shall be constructed to shed water without leaking into the vehicle. All higher panels, including roof, must lap over their lower adjacent panels. In no case shall sealing of panels be dependent on caulking alone. All exterior joints and seams shall be protected by caulking, butyl rubber tape, or other approved material. No water leaks in the body will be acceptable. Testing shall be done with water nozzles appropriately placed to test the entire conversion. Minimum 20-psi water pressure for testing is required for a minimum of 10 minutes.

b) The body shall be free of cracks, dents, defects or physical damage.

c) All rivets, screws, bolts, nuts, washers, clamps and other types of fasteners used in the construction process, including those that would be exposed to the elements on the exterior and interior of the unit shall be properly plated to resist corrosion. No sheet metal screws shall be permitted unless fastened onto backing plates or secure fastening points. Fastener materials shall be compatible with materials being fastened. Where self-tapping fasteners are used, body panels shall be reinforced with steel backing, aluminum backing or stainless steel backing.

5.8 SEATING**:** All seating, including driver, shall meet the following requirements: All vinyl seat covers for the base bus shall be compliant with Docket 90-A, FTA Recommended Fire Safety Practices for Transit Bus and Van Materials Selection. Foam cushions, seat and back, shall be molded polyurethane with a minimum density of 2 lbs. per cubic ft and need not comply with Docket 90-A. However, all cushions must be fully enclosed by the seat fabric, vinyl or flame blocker material. If optional cloth, seat fabric shall be a minimum 100,000 double rub woven material, anti-bacterial and anti-microbial; the seat fabric shall have a moisture repellant treatment that prevents liquids from passing through fabric.

All seats shall meet the following minimum requirements:

a) All applicable FMVSS requirements, including FMVSS 207, 209,210, and 302 for all seats and seat belts to be installed in the bus. Documentation of current model testing with seats installed as specified within shall be provided prior to award. Testing by an American Association for Laboratory Accreditation or equal, accredited test facility of individual components independent of the vehicle will be accepted if done on a representative floor, and vendor can validate that test results meet all FMVSS requirements, and could be duplicated in the production vehicle. Any alterations to OEM seats or mounts that affect these tests must also be tested. Detailed seat installation instructions and test data must be made available to the Cooperative prior to award of the contract. This test is required for all seats, including optional seats installed over wheel wells that buyers may choose.

b) Cushion and seat cover shall be of the slipcover type, removable and replaceable without removing the entire seat.

c) Under seat retractable seatbelts, equal to Freedman USR, shall be provided for all seats. Driver seatbelt shall be OEM lap/shoulder belt. Two 24" belt extenders shall be provided with each vehicle.

d) All exposed metal surfaces shall be powder coated.

e) All seats shall have not less than 27" hip to knee room spacing between seats. All seats shall have a minimum cushion depth of 17", and a thickness of not less than 2.5". Seat bottom cushion height shall be 17.5", plus or minus ½ inch, as measured from floor to top of the cushion.

f) All passenger seats are to have molded energy absorbing grab handles at the top of each forward facing seat. The handles must be securely attached to a welded seat frame structure. Seats along rear wall do not require grab handles. Aisle seats are to include black folding US arms, or equal.

g) A minimum clear aisle of 14". This must be maintained with any optional seat chosen as well. There shall not be a mobility aid position blocking the aisle or directly in front of the mobility aid lift except when there is a rear lift. Random movement to any seat position for ambulatory passengers must be maintained.

h) Folding seats must be equal to Freedman mid/high back, three step folding seat. Folding seats must be installed so that rubbing/chaffing does not occur during fold operation. Seat cover must not touch sidewall or structure during fold/unfold. Optional folding seats placed over a mobility aid tie down space shall include Freedman T.D.S.S. (tie down storage system). Folding seats must be mounted to steel structure that is an integral part of the final stage builders under floor structure, minimum thickness 1/8th inch. Steel plating for seat securement must be designed into floor, added steel plating similar to large washers would not be accepted. All Seat mount bolts and wheel chair shoulder harness mount bolts that are not fastened to seat track will be mounted to the above required structural steel members. No fasteners will be allowed within 1-½ inches of any flat steel components edge. This requirement does not apply to fasteners through box beam type of structure.

i) All seats and restraints in the vehicle as specified must comply with current FMVSS standards, including 207, 209, 210, and 302. Documentation of current model testing and seats as specified within shall be provided prior to award. Testing by an American Association for Laboratory Accreditation or equal, accredited test facility of individual components independent of the vehicle will be accepted if done on a representative floor, and vendor can validate that test results meet all FMVSS requirements, and could be duplicated in the production vehicle. Any alterations to OEM seats or mounts that affect these tests must also be tested. Detailed seat installation instructions and test data must be made available to the MBTA prior to award of the contract. This test is required for all seats, including optional seats installed over wheel wells that buyers may choose.

j) A one-piece filler/cover shall be provided in tracking between fixed seat placements on the floor and wall tracks. Any order that deletes fixed seats will also automatically delete the floor track for that seat. Floor track will not be installed in any area not covered by a fixed seat. Track can extend 6 inches to the rear of the fixed seat area to allow for seat adjustment by end user to better accommodate their needs.

k) The Bidder shall provide floor plan and seating drawings, which are to scale and meet passenger-seating, and loading requirements. Drawings, at a minimum, shall show the location and dimensions of all seating positions, drivers' position, aisles, doors, modesty panels, stanchions, grab rails, tie down locations, and other passenger assists. In addition, all major body interior dimensions must be shown. Proposed seating plans must be approved by each procuring agency prior to production, and must comply with standards established with the original seating proposals. This requirement does

not preclude other optional seating requests as long as they meet all the requirements set forth in this specification, such as aisle width and hip to knee.

l) **Passenger Seats**

All passenger seats shall be individual modules similar to Freedman Feather Weight Mid/Hi, or equal, one or two position bench type modules of not less than 17.5 inches in width. All fixed seats shall be forward facing and track mounted for easy removal, and have an individual cushion. All back cushions shall be contoured to provide full lumbar support, color coordinated with the interior vehicle color. Prior to award, the Contractor shall submit a sample of the upholstery and cushion material to the Cooperative for approval. Seats for the Base Bus shall be covered in Docket 90 vinyl.

m) **Driver Seat**

Vehicle to be equipped with USSC G2E or Recaro LX-S (or approved equal) as standard equipment. Proposer to identify which seat model is to be standard issue and offer option price or credit for the other. Upholstery color will be grey cloth unless specified by the buyer to match passenger seats at no additional cost. Seat trim will include all OEM trim, even if an optional seat or seat base is ordered. OEM Driver seat acceptable for Transit 350, recovered in Docket 90 compliant upholstery.

5.9 FLOORS: The floor overlay shall have a minimum of 5/8" marine grade plywood securely fastened to the cross sills. All plywood edges are to be properly sealed for moisture unless plywood used is of marine grade type. Plywood is to be sanded and filled where needed to create a smooth surface to lay the floor covering..

5.91 FLOOR COVERINGS: The floor surface shall be covered with wall-to wall, slip-resistant, minimum 2.2 millimeter Altro Transflor Meta and/or Chroma, buyers choice no additional charge (or approved equal) color to be specified by buyer from Altro standard stock selection. All step edges shall have Altro T36T Aluminum Step edge (or equal) or Altro yellow nosing with band of 2 ½ inch of bright yellow Altro inserted into the step edge using contact adhesive (described below) running the full width of each step. An aisle width standee line of at least two (2") in width of bright yellow contrasting color shall be in the aisle just behind stepwell. The flooring shall be securely bonded to the sub-floor with an adhesive backed by a bus manufacturer's warranty of no less than five years for installation and adhesion. All edges shall be sealed and all seams heat welded to prevent water penetration. The flooring shall extend up the sidewalls to the seat rail line. It shall be coved with backing of molded plastic, fiberglass or extruded or press formed aluminum with a minimum one inch (1") radius at the floor/wall joint to form a smooth water tight transition. The floor shall be installed according to manufacturer's directions, using proper tools, accessories and adhesives

6.0 REAR EMERGENCY EXIT: The rear emergency window shall be large enough so that in conjunction with the rear view mirrors, blind spots are not created. Seat backs shall not intrude in required emergency exit window or door openings. Low back seats shall be used on rear wall when raised floor option is chosen.

6.1 ENTRY DOOR: The vehicle shall be equipped with an electric front entrance door. Door shall be a two-section door equipped with 2" elastomeric material on each section that overlaps a minimum of 1.5" to form a tight seal. The clear height and width of the

entry door shall be as specified in section 3.0. Entrance door system shall include exterior keyed entry. A rain molding shall extend over the doorframe to prevent water intrusion. The operation of the entrance shall be controlled from the driver's position. The entry doors shall open to a minimum of 90 degrees. The door glass shall be see-through, tinted (AS-2) safety glass, and shall be full-length sections. The door mechanism must be accessible through a service door above the doors. Entry door shall not be operable unless the vehicle is in park.

6.2 ENTRY STEPS: The front passenger steps and step well shall be heavy-duty welded steel, minimum 14 gauges, with adequate reinforcement to prevent deflection more than ¼" under a 300 pound load placed on an area 28" wide on the center of the step. Upon removal of the load, this step will rebound to its original dimension. A standee line is required with color to match step edges.

a) The individual step risers shall be a maximum of 9.5" in height with step tread a minimum of 9.5" deep (8.5" on raised floor buses). The bottom step tread shall be a minimum of 8.5" and not exceed 12.5" from the ground unloaded. The step well shall incorporate LED lights to illuminate the step tread area when the entry door is opened. A three-step entry is allowed only in a Class B bus with a front lift or if chosen as an option. The steps shall be designed so that water will not pool at any time.

b) Step risers shall be vertical. If risers are not vertical the usable step area shall be calculated by measuring the step area from the vertical line from the step edge above. Any step area that is in an area that falls under the step above it will not be accepted for measuring compliance.

6.21 DRIVERS RUNNING BOARD/ASSIST: The driver's door entry area shall be equipped with a running board. Running board shall be a minimum of 9" deep, maximum of 12". This will be measured from the OEM body at the flange at the bottom of the rocker panel. Running Board shall extend from the front edge of the front door opening to the rear of the OEM cab. Running board must be designed to hold 300 pounds without permanently changing shape, and be slip resistant diamond plated or punched aluminum, or equal. Driver entry area shall include a steel reinforced molded plastic grab handle, mounted to the rear of the door opening on the outside on the B pillar. Handle shall be a minimum of 6" grab area, durable, corrosion proof, and have no sharp edges. Installation with self-taping screws will not be accepted, must include bolts into threaded inserts and be able to support 250 pounds pull force. OEM Standard Driver entry with built in step acceptable for Ford Transit 350.

6.3 MODESTY PANELS, STANCHION AND HANDRAILS: An entry door modesty panel and stanchion post shall be installed at the left rear of the step well and in front of the curb side row of seats. A stanchion with modesty panel to rear of front mounted lift is required when a front lift is selected and another behind the driver. Stanchions shall be constructed from the floor to the ceiling. The lower 30" portion shall be constructed of a gray Formica laminate, or equal, with plastic edge molding, the color to match the interior. A 30"(minimum) handrail shall be installed on both sides of the entry door made of 1.25" 304 stainless steel that can be used by passengers standing at ground level to aid in boarding the bus as well as those passengers that are leaving the bus. The handrail must

be able to be used continually for help in boarding and deboarding the bus. Note: grab handles must not affect the clear entry door width. Two overhead grab rails using 1.25" diameter 304 stainless steel are required on both sides of the vehicle to run the full length of the available seating, handrail shall terminate into ceiling with radiused stainless steel ends without connections/elbows. All stanchions and handrails shall be securely fastened into structural members at all mounting points. A smoked plexiglass panel, 3/8" thick shall be provided behind driver from top of driver's seat to within 6" of bus ceiling. Panel must not impair driver's seat adjustments. Panel may be incorporated into stanchion and guardrail behind driver and must provide cutout area for handhold and be shock mounted to prevent rattle. Cutout area for handhold must have no sharp edges and all corners shall be radiused. Panel must have required marking for compliance to Title 13.

6.4 INTERIOR PANELING: All interior walls shall be paneled, including doors. All panels shall be the same color and coordinated with the interior colors of the vehicle. All interior panels may be made of scuff-resistant, vinyl-coated aluminum, textured paint on steel, or laminate/FRP finished material. Panels shall be securely installed to prevent noise/rattles.

6.5 WINDOWS: All windows, except the windshield, drivers side window, rear fixed window forward of entrance door and entry door windows to be a minimum of 860 square inches. All side windows, except street side rear that shall be fixed, shall be top vented to allow for ventilation. All side windows shall provide a clear view to the outside from each seat position. Windows shall be installed in the double entry doors, on the curbside of the vehicle. Caulking around windows shall be used only as a seal, not to make up for body defects or out of tolerance window openings. All rear and passenger glass is to be tinted to a maximum of 31% light transmission in the passenger compartment. A steel plate adequate to support shoulder straps anchorages must be installed above the windows.

a) Placement and installation of the windows shall not diminish the structural integrity of the vehicle. Structural reinforcement shall be added to compensate for the reduced structural rigidity. All windows, including emergency exit window, shall comply with FMVSS 217. There shall be at least one emergency exit window on each side of the bus, with their location indicated by a red LED light mounted above each exit window. Windows shall be placed to maximize access to emergency exit widows, while minimizing seat back interference with exit windows. Driver's door and entry door shall not be considered as an emergency exit.

6.6 INSULATION: Foam sprayed insulation, or equal, equivalent to 1.5" fiberglass shall be installed in the roof, rear wall, rear caps, sidewalls and extended door sections including lift doors. Front cap area shall be insulated with astro-foil reflective insulation. If additional insulation is necessary to meet this requirement the insulation shall be glued to the chassis body to prevent sagging. The insulating material of the body and sidewalls shall be of sufficient thickness to contact the inner and outer walls, insuring positive insulation vapor barrier (equivalent to 1.5 inches fiberglass). Insulation shall comply with all Federal requirements and shall pass the testing requirements specified in the Federal Transit Administration (FTA) Recommended Fire Safety Practices for Transit Bus and Van Materials Selection.

6.7 PAINT AND TRIM**:** Exterior surfaces shall be properly cleaned and primed as required by the paint manufacturer. Painted surfaces shall be impervious to diesel fuel, gasoline, and commercial cleaning agents. Exterior paint shall be high quality, VOC compliant and match the OEM paint of the chassis cab. Entire vehicle to be OEM white, any other colors (including two-tone) will be at buyers cost.

6.8 FRONT CAP: The exterior front cap must be of solid one-piece reinforced molded fiberglass covered with a gel-coated exterior surface.

6.9 UNDERCOATING: The underside of the body including floor members, side panels below floor level (if metal), and fender wells shall be undercoated per QVM requirements or equivalent, at the time of manufacture, with a nonflammable resin type polyoleim undercoating for bus applications. All openings in the floorboards and firewall shall be sealed.

6.91 WHEEL HOUSING: The wheel housing shall be constructed of a minimum 14 gauge galvanized steel or stainless steel and provide ample tire clearance during all operating conditions. Fenders and splash aprons (underskirt) of durable construction shall be provided so as to provide maximum deflection of the wheel splash. There shall be sufficient wheel well clearance for snow chains. Front and rear tire mud flaps are required.

6.95 AIR CONDITIONING: All vehicles require an OEM integral front air conditioner and an auxiliary rear air conditioner. Rear systems shall be completely independent of the front system, and sized as follows; Class A bus to be equipped with TransAir TA 712 Super with TA 71 Evaporator, SM 2CL Condenser, 10 CID Compressor, American Cooling Technology (ATC) ACT-40HD System, 10 CID Compressor, EZ 4 Evaporator and CS 2 Condenser or MCC model AC- 712MAX system comprised of a 10 cid compressor, EM-1 Evaporator and CM- 2 Condenser. Class B and Class C Gasoline and Diesel vehicles require auxiliary systems capable of producing a equal to or better than Trans/Air TA 73 Evaporator, SMC3L Condenser, 13 CID Compressor or ACT 532/21 compressor, EZ-5 Evaporator, with 13 CID compressor and CF 32 condenser or MCC model AC- 813MAX system comprised of a 13 cid compressor, EM- 1 Evaporator and CM- 3 Condenser or ACT-532/21 using, EZ-5 evaporator, with 13 CID compressor and CS-32 condenser. Passenger area air conditioning system shall utilize a minimum #16 (7/8" ID) suction hose to lower system pressures and maximize compressor life. Additional A/C systems from manufacturers not listed that meet the above requirements shall be listed as an option. No tie in A/C systems will be allowed.

a) All compressor installations must be completed with mounting hardware and pulleys that are warrantied and supported by the A/C manufacturer, and done without affecting the performance of OEM cooling system, including fan shroud. All controls for both air conditioners shall be located for ready access by the driver. The condenser for the air conditioner shall be skirt mounted and shall have fans cooling the condenser. Automatic reset breakers or fuses shall and fully enclosed in a loom. The cable shall be properly supported throughout the vehicle with insulated straps and mechanically attached to the vehicle body to protect the condenser. High and low pressure switches shall be equipped to protect the compressor. The air conditioning system shall use refrigerant R134A. Non-OEM refrigerant hoses to be SAE J-2064

Goodyear Type C or F, Aeroquip Type E or Ecofrigo Type D incorporating thermoplastic lining to reduce leakage. Fittings to be all steel using corrosion resistive coating**.** Added refrigerant lines shall have a minimum of fittings, any fittings solely for the purpose of joining 2 or more short hoses in place of one longer hose will not be accepted. A label must be placed in the engine compartment detailing manufactures name, refrigerant type and quantity, compressor oil type and quantity. The evaporator and condenser must be matched to the compressor as per manufacturers recommended installation instructions. All A/C and heater hoses shall be adequately supported with P-Clamps at a maximum spacing of 24". No hoses may cross over the exhaust system without shielding equal to OEM required shielding for floor protection. All hoses must be a minimum of 6 inches away from the catalytic converter and 4 inches away from exhaust pipes and muffler. All A/C systems must be independent of the OEM A/C system. No "tie-in systems will be allowed."

b) Evaporator drain shall run downhill from evaporator housing. Elbow, or turn down, shall be a minimum of ½ inch below the outlet on the housing. Drains must be installed to prevent puddles of water from being retained in the system.

7.0 HEATER: Each vehicle shall have a front mounted integral high output heater and a rear floor high output auxiliary heater mounted behind the rear wheel housing or under a rear seat. The rear heater shall be equipped with two brass ¼ turn valves that are clearly marked on the outside of the bus as to its location. The valves shall be located below or behind the driver's entry step well. (Final location to be confirmed at preproduction meeting) The total output of the auxiliary heater system shall not be less than 30,000 BTU for Class A, and 35,000 BTU for types B and C

a) Placement shall be designed to maximize passenger comfort foot spacing while seated for user behind seat and user in seat which has heater under it. The placement of the heater must be approved by the procuring agency. If user chooses a location that is not protected then a protective permanent barrier to protect against impacts with mobility aids shall be provided around the heater.

b) Heaters are to be controlled by two individual three-position switches (off, low, high). All controls for both heaters shall be located for ready access by the seated driver. All hoses, drains and wiring must be covered and adequately supported with plastic/rubber coated steel clamps secured at a minimum of two-foot intervals. All heater hoses are to be silicone, with clamps designed for use with silicone hoses. Combustion heaters are not acceptable

7.1 MOBILITY AID LIFT: A Braun Century or approved equal, will be installed in front of the rear axle or behind the rear axle.

. Lifts installed in the rear position will have front pumps for ease of service. The lift shall include a mechanism to ensure stowage and securement.

a) The lift platform shall have a minimum clear width of 32" at the platform, a minimum clear width of 32" measured from 2" above the platform surface to 32" above the

platform and a minimum clear length of not less than 50" measured from 2" above the surface of the platform. All scars/damage on the vehicle, due to mounting of the lift assembly, shall be repaired.

b) The mobility aid lift shall be installed in accordance with the lift manufacturer's recommendations and requirements.

c) All attachments of the lift assembly to the vehicle shall be done through structural support members. Bolting of any part of the lift assembly directly to the vehicle sheet metal walls will not be acceptable.

d) The lift platform shall be equipped with handrails on both sides. Any lighting installed on handrails must not interfere with Standees use of the handrails, and operate at a temperature that will not result in burns should skin come in contact with them even if left on for long periods of time.

e) The mobility aid lift system shall have one control station capable of controlling all lift functions. The control station cord shall be the coiled type and reach 12" in length beyond the length of an extended platform and have removable twist type connection. The Cooperative must approve the final routing and securement of the cord.

7.3 LIFT ENTRY DOOR: The side lift entry door shall provide a minimum clearance of 68 inches between the top of the door opening and the raised lift platform. Tallest door opening available must be provided, and widths to accommodate lift chosen by buyer.

a) The lift entry shall be two entry doors and each shall have windows with laminated or tempered safety glass set in neoprene or similar retention molding. The windows in the doors shall be tinted to match side windows. Windows shall be largest available, and a minimum of 30" high by 10 " wide in each door. Windows shall be located to maximize passenger vision when seated inside the bus. The lift doors must be properly installed so that the top and bottom of each door are square with each other. Lift door opening will include a rain gutter. Door opening frame will be powder coated a bright white to match vehicle exterior. Lift doors will be constructed with tubular 12-gauge, 304 stainless steel frame or and fiberglass or aluminum interior and exterior material. Aluminum structure is allowed if finished product appears consistent in appearance with the sidewall construction of the bus. Doors shall be designed for long life/heavy use and at a minimum be constructed of 14 gauge, 1" tubular steel around the perimeter. Hinges shall be full-length stainless steel, with minimum 3/16" stainless steel pins or stainless steel strap style hinge. Locking lift door must have a locking high quality lever-type door handle located at the inside center of each door. Door latch shall be vertical rotating; two point type with latch rod at top and bottom. Each door lock to have individual handle. Locking doors must have a vertical rotating latch at top and bottom and have a locking door handle on the door first opened/last closed. Latch adjustment plates shall be located at the top and bottom of the doorframe structure.

b) A positive factory-installed gas shock installed at top of door to assist in maintaining opened or closed position of door(s) and shall be installed to hold the lift entry doors

open while the lift is in use. An additional door tether shall be installed that will prevent the doors from opening past 100 degrees.

c) Automatic curb illumination lamps shall be provided for passenger loading inside the lift doorway.

7.5 CONTROL INTERLOCK: The controls for the lift shall be interlocked with the vehicle emergency brakes and transmission to ensure the vehicle cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlocks are engaged. The interlock shall be a fully automatic, solid state, microprocessor-controlled unit (Ref. Intermotive Highlock integrated with fast idle) or approved equal capable of self-diagnosis. Interlock shall utilize an LED display panel to show subsystem status

8.0 MOBILITY AID SECURITY AND OCCUPANT RESTRAINT SYSTEMS:

The QRT 360 series (dual knob) retractor, Surelock Titan 800 or approved equal. These will be by agency choice. Retractors MUST be AUTOMATIC SELF-LOCKING and SELF-TENSIONING.- retractor, or approved equal to secure wheelchairs facing forward, and must comply fully with the Americans with Disabilities Act requirements and ANSI/RESNA Section 4: WC-18." The system(s) shall be capable of securing a variety of common mobility aid designs and accommodate a wide range of occupant sizes. The Contractor shall provide detailed instructions to include a training video from the securement manufacture for mobility aid placement, tie-down belt operation, and torso belt placement. Each vehicle shall contain a sign(s) printed in clear type that indicates that seats in the front of the vehicle are priority seats for persons with disabilities. Each securement location shall have a sign designating it as such.

Wheelchair tie down and occupant restraint shall consist of two strips of heavy-duty Series L track the entire width of the vehicle when there are two side by side wheelchair lift positions and have separate lap restraint for the occupant. Floor anchorage track shall be high strength flange 6061 T6 alloy Series Omni L-Tracking utilizing and usable for front or rear tie downs or shared by both. Bottom of flange shall be flush with the floor. Track installation will include silver flange track end caps. The system(s) shall incorporate a continuous track capable and accommodate a wide range of mobility aid designs. The track shall be installed in a location/manner that will maximize the area while still meeting the securement manufacturer's installation requirements. The system anchorages and /or track shall be recessed and attached with flush fasteners in accordance with the requirements of the system manufacturer. A copy of the manufacturer's installation instructions must be provided prior to award. **Any deviation from manufacture's track installation instructions will require written approval from securement manufacturer.** End caps shall be installed with bolts, with large washers under the floor with securement nuts.

c) A closable box shall be provided and secured next to the wheel chair lift for storage of securement systems. Final location and type to be determined at preproduction meeting. The system anchorages and /or track shall be recessed and attached with flush fasteners in accordance with the requirements of the system manufacturer. A copy of the manufacturers installation instructions must be provided prior to award.

8.3 OCCUPANT RESTRAINT SYSTEM: For each mobility aid securement system installed in the vehicle, a corresponding occupant restraint system shall also be provided. The occupant restraint system shall consist of adjustable lap (pelvic) belt and an adjustable shoulder belt with a minimum of 12" height adjustment, and shall meet all applicable Federal Motor Vehicle Safety Standards (FMVSS), as amended. An additional four 12" straps per wheelchair positions to aide in tying down mobility aids are to be provided for each tie down position including optional positions added to the bus. Each strap must meet ANSI/RESNA WC 18.

8.4 SECUREMENT/RESTRAINT SYSTEM ACCESSORIES

a) A web cutter for emergency use shall be provided with each vehicle.

b) One torso pad approximately 8" X 12" with thickness of approximately 1" and belt shall be supplied to secure mobility aid users while riding on the mobility aid lift.

c) STORAGE CONTAINER: A secured container shall be provided to store straps, pads and assemblies. The container shall be recessed in the center front cap portion of the vehicle or positioned over the driver's area with a hinged lockable door or with a thumb latch at buyers option. The container must be sealed and not have any exposed wires, protrusions or sharp edges. If there is a destination sign installed access to the area as noted is required. Cooperative must approve final design.

8.5 ADDITIONAL EQUIPMENT: The following shall be furnished and installed in each unit. The mounting of any of the following items shall not interfere with passenger entry or exit:

a) One 5-pound ABC fire extinguisher conveniently mounted. The fire extinguisher is to be inspected and certified by a California inspector authorized to do so by the Sate Fire Marshall at time of delivery.

b) A minimum 16-unit First Aid Kit meeting the requirements of Title 13, California Code of Regulations (13 CCR) Section 1243 mounted per buyer's instructions

c) Three bi-directional emergency reflective triangles that conform to the requirements of FMVSS No. 125.

d) MIRROR
A fully adjustable 6"X 9" passenger view mirror mounted just above the windshield to the right of the steering wheel area. Mirror must provide full passenger seating area viewing. Two hinged exterior rear view mirrors, with remote control for flat portion adjustment, turn signal mounted on the exterior of the mirror housing or within flat portion of mirror surface, and black powder coat finish. Mirror mount must include reinforcement mounting plate that is inside the fender with through rivets into the Ford fender. Convex rear view mirror shall be provided for right and left hand mirrors, and shall offer extra wide angle viewing. OEM mirrors mounted on the

windshield shall not be removed. Sheet metal screws are not to be used to attach the mirror assembly to the bus.

e) Sufficient interior lighting (a minimum of eight incandescent) to illuminate the driver, passenger, entry area and the interior aisle to a minimum of eight candlepower measured at floor level. The switch for these lamps shall be mounted in the dash, back lighted, and labeled or on engine cover if provided with quick disconnect harness per 5.21.

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f) Exhaust: The tailpipe routing shall be configured so that it exits the vehicle on the street side with a turn down at the end of the pipe. Class A vehicles may route exhaust directly to rear of vehicle. Exhaust hangers shall be heavy duty and bolted to the frame. All altered exhaust joints shall be clamped and securely fastened to eliminate exhaust leaks. Aluminized steel exhaust tubing shall be used for exhaust modifications.

g) OPTIONAL TWO-WAY RADIO ANTENNA PREP: Roof access for installing radio antenna with 5/8" I.D. conduit with antenna pull wire terminating behind drivers seat. Access compartment must have an access panel/door. Cooperative must approve final design and placement. Panel/door must be color coordinated with interior of bus. **Not standard item unless called for as an option by customer.**

h) Manual: A complete operations manual will be provided that covers the conversion features on the vehicle as listed in this specification. The manual will provide complete, comprehensive instructions for the mobility aid accessories, mobility securement, and all options.

i) One blood borne pathogen protection kit incorporating a body fluid cleanup kit.

j) Chrome retractable coat hook in as accessible location to the driver seat location.

8.6 PAINTING, DECALS AND MONOGRAMS: All signs required by State and Federal law shall be affixed to each vehicle exterior and interior.

8.7 PARTS BOOKS, MANUALS AND DRAWINGS: The following shall be provided at time of delivery. The information shall be organized in a three ring binder format with each section clearly identified and provided in electronic format. That can be separated and sent. And posted on web pages. A draft copy must be available for review and acceptance prior to preproduction meeting.

a) A complete set of operating instructions, troubleshooting guide, inspection and service guide and detailed manufacturers parts list.

b) A complete "as built" electrical wiring diagram covering all electrical equipment and electrical circuits installed, complete with wiring codes for **each** vehicle or batch of vehicles ordered.

c) All manuals for the bus accessories, to include complete parts guide, and equipment to include mobility aid lift, air-conditioning system, tie downs, seating, heater, etc.

d) The Contractor shall have available complete bus maintenance manuals to include the engine, transmission and OEM chassis as well as a complete parts manual for each component. The contractor shall keep the manuals up-to-date and available to the Buyer for a period of three years after the date of acceptance of the buses under the contract.

8.8 RADIO OPTION: Units to be equipped with High Quality AM/FM/CD with Bluetooth and with MP3 input jack or OEM unit and 4 speakers installed in passenger compartment of bus. **Not standard item unless specified as an option by customer.**

9.0 Base Price (Pre-tax as specified in this submission). Mark "No-Bid" if your firm is not proposing for a particular vehicle class

10.0 OPTIONS

NOTE- TO BE PROPOSED IN ATTACHMENT C. OPTION PRICING IS NOT TO BE PROVIDED WITH INITIAL SUBMISSION, MBTA WILL REQUEST INFORMATION WHEN APPROPRIATE. WORKSHEET TO BE PROVIDED IN ELECTRONIC AND HARDCOPY FORM.

11.0 Antenna Access Plate

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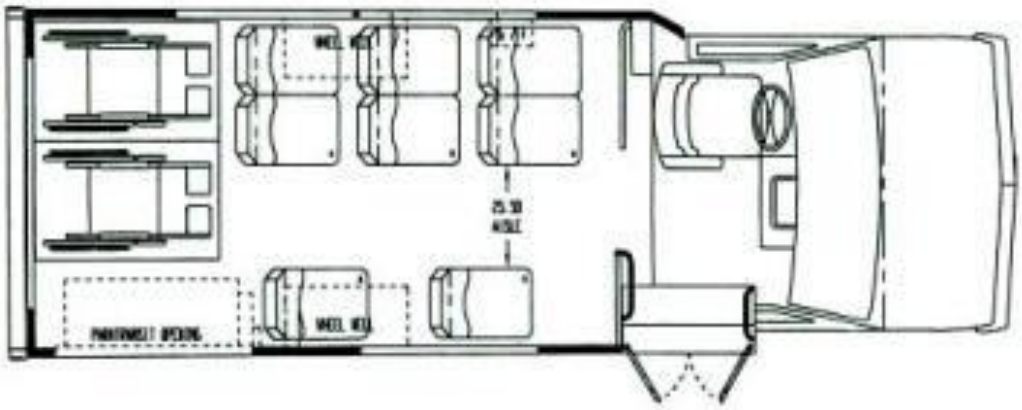
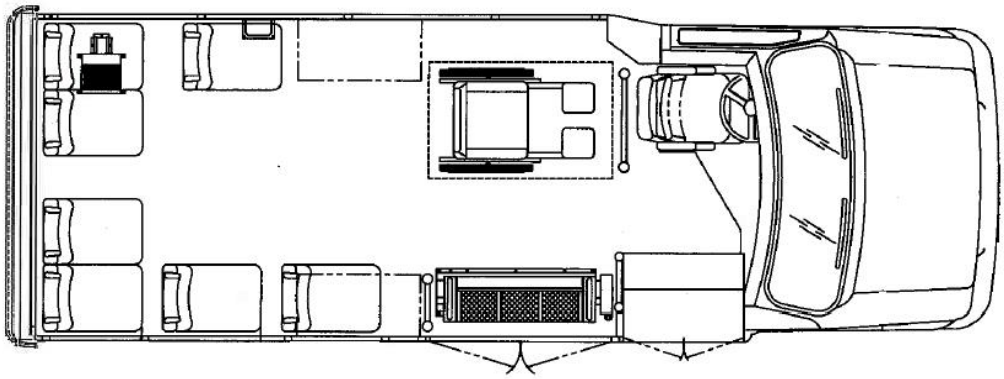
ANTENNA
ACCESS
PLATE

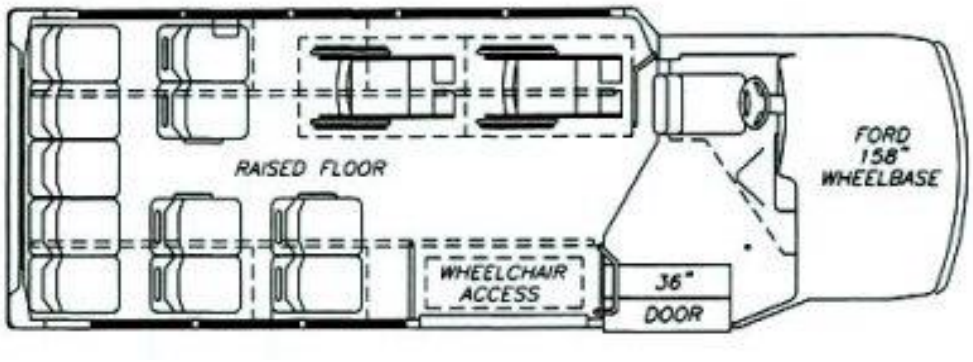
12.0 Floor Plans



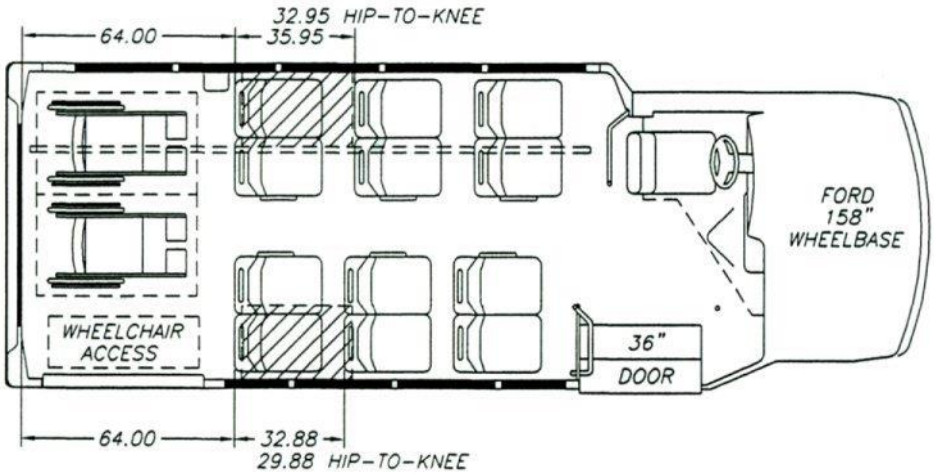
Class A, Rear Lift



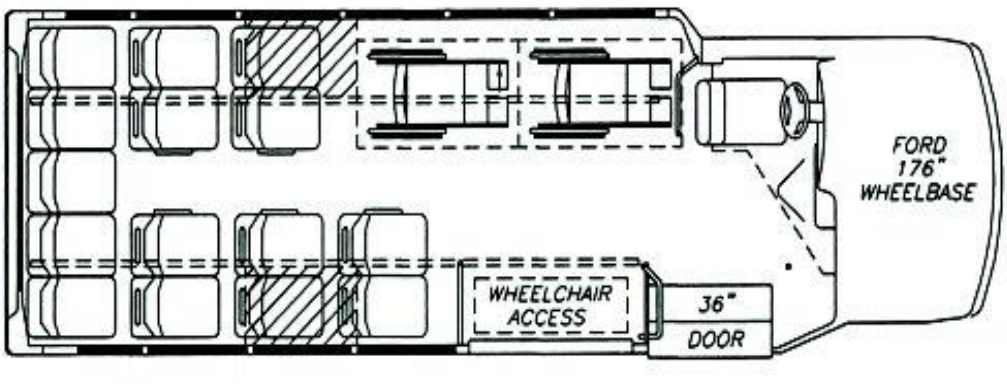
Class A, Front Lift



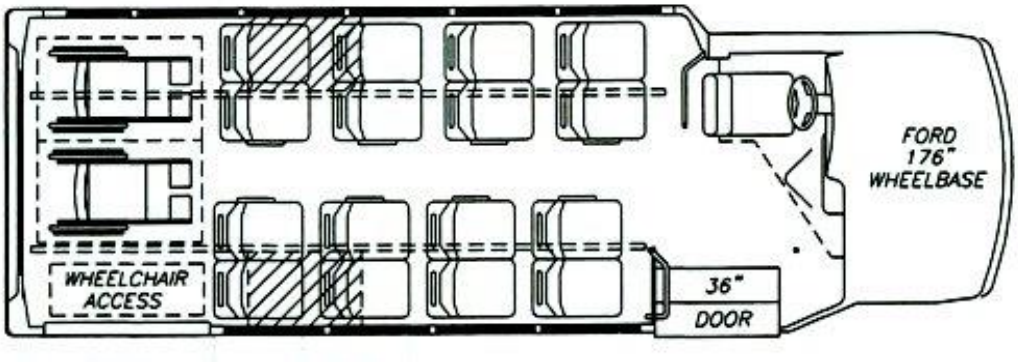
Class B Front Lift
Ford and GM Chassis



Class B Rear Lift
Ford and GM Chassis



Class C Front Lift



Class C Rear Lift