

**BID SPECIFICATIONS**  
**Town of \_\_\_\_\_**  
**Adult Passenger Mini Bus**  
**2 Wheelchairs w/ 24 Ambulatory or 28 Ambulatory Passengers**

*Bidder shall indicate, to the right of each section, "Yes" or "No" as to whether or not the vehicle offered fully complies with the specifications. All exceptions and deviations must be fully explained on the bidder's letterhead and shall reference each paragraph number where a variation exists. Comments such as "Differences may occur" or "We are equal to your specifications" without substantiation will result in the bid offer being deemed unresponsive.*

<b>SPECIFICATIONS</b>		Fully Complies	
		YES	NO
<b>1.0 SCOPE:</b>			
1.1	These specifications are for (a) current model year vehicle(s) meeting all applicable Federal, State and ADA "Demand Response" requirements.		
1.2	Vehicle type shall have been Altoona Tested for a minimum 7 year / 200,000 mile duty cycle.		
1.3	The manufacturer of the body must be certified to be in compliance with Quality Standards ISO 9001:2000 with regard to the Sale, Design and Manufacture of Customized Buses and Multipurpose Passenger Vehicles.		
1.4	The body manufacturer shall have been in business of manufacturing small and mid-size commercial buses for a minimum of 10 years prior to the date of bid.		
1.5	The bidder shall have operated as a licensed vehicle dealer, having distributed commercial buses and maintained a repair facility and parts distribution center for a minimum of 5 years prior to the date of bid.		
1.6	The bidder shall maintain both Products/Completed Operations Liability insurance coverage and Garage Liability insurance coverage, each with a minimum \$5 million aggregate limit.		
<b>2.0 BODY:</b>			
2.1	<b>CAPACITY &amp; FLOORPLAN</b>		
2.1.1	24 ambulatory passengers, 2 wheelchair positions with accommodation for 4 additional ambulatory passengers when the wheelchair positions are not in use.		
2.1.2	There shall be six rows of 2-passenger fixed seats on each side of the center aisle and two rows of double foldaway seats located on the street side behind the fixed seats.		
2.1.3	The wheelchair positions shall be located against the rear wall of the vehicle.		
2.1.4	The hip-to-knee room between seat rows shall be 30" minimum.		
2.1.5	The center aisle shall be 14" minimum.		

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YES	NO

## 2.2 DIMENSIONS

- 2.2.1 Exterior: Length - 385" maximum  
Width - 96" minimum
- 2.2.2 Interior: Height - 79" minimum at center aisle  
Width - 91" minimum at seat level

## 2.3 BODY CONSTRUCTION:

- 2.3.1 Body Assembly: The front, rear, sides and roof shall be interlocked to form a unibody design without any exposed fasteners or protruding moldings for easier washing and cleaning. It shall have been tested to meet or exceed FMVSS 220 for bus rollover protection and FMVSS 221 for body joint strength.
- 2.3.2 Crash Testing: The body design shall have successfully undergone side and rear impact testing. *Documentation of compliance with this requirement shall be provided with the bid.*
- 2.3.3 Floor Frame: Shall be fabricated with 1010/1020 low carbon hot rolled steel and have undergone finite element analysis demonstrating the ability to withstand 40,000 pounds with less than 1/16 inch of deflection at the perimeter.
- 2.3.4 Body Frame: Shall consist of perimeter 1"x1½"x2" steel Z-channels welded with 11 gauge cross-bridge bracing to 12 gauge seat rails to fully encase the passengers. The sidewall structure shall include two 1½" wide longitudinal steel members and 1"x2" zinc-plated angle sections above and below the windows, running the full length of the body.
- 2.3.5 Window Pillars: Shall be 1½"x1" zinc-plated tube.
- 2.3.6 Body Panels: Shall be of a structural composite material composed of non-corrosive fiberglass reinforced plastic so as to provide twice the strength to weight ratio of an all-steel frame structure.
- 2.3.7 Floor Decking: Shall consist of minimum ¾" thick plywood.
- 2.3.8 Insulation: Sides, roof and front and rear crowns shall be insulated by dead air cells sealed within the body assembly composite to provide a minimum R-6 thermo-barrier.
- 2.3.9 Steps and Stepwell: Shall be fabricated of 304 grade stainless steel and then powder coated to preclude corrosion.
- 2.3.10 Undercoating: The understructure and edges shall be completely undercoated by hand brushing before it is installed on the floor frame structure to provide 100% seal and protection from moisture penetration.
- 2.3.11 Water Testing: The bus shall be water-leak tested from all sides, above and below for a minimum of 10 minutes in a water spray booth that will accommodate the entire vehicle. Any leaks detected during the test shall be repaired and extreme leaks shall require a second water-leak test to assure repairs were effective.

## 2.4 EXTERIOR FINISH

- 2.4.1 Exterior Surfaces: Shall be a minimum .020" thickness of high-gloss white gelcoat to prevent moisture penetration and corrosion.
- 2.4.2 Body Side Molding: A non-metallic molding strip shall be installed along the top of the skirt to protect the vehicle from damage.

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- 2.4.3 Paint: Window pillars shall be black, commonly referred to as “window black-out”. There shall be an 8” transit stripe along each side of the body. The color is to be specified by the purchaser at the time of bid award.
- 2.4.4 Wheels: The exterior of all wheels shall be powder coated white.
- 2.4.5 Fuel Fill: Shall be molded fiberglass or equivalent. No exposed fasteners are permitted.
- 2.4.6 Skirts: Shall consist of curved reinforced fiberglass, easily removable for replacement.
- 2.4.7 Fenders: Replaceable contoured rear wheel fenders shall be provided.
- 2.4.8 Mud Flaps: Of 3/16” rubber composite shall be installed behind the front and rear tires.
- 2.4.9 Lettering: The name of the organization, funding acknowledgements and vehicle number shall be applied with decals on both sides of the body.
- 2.4.10 Destination Sign: A sign box shall be installed in the front cap consisting of a large clear panel, access door, finished interior, and light designed to back light the lettering.

## 2.5 BUMPERS

- 2.5.1 Front Bumper: Shall be provided by the chassis manufacturer.
- 2.5.2 Rear Bumper: Shall be powder coated 2” x 7”, 12-gauge wrap around channel.
- 2.5.3 Anti-Ride: A fiberglass reinforced plastic anti-ride fixture shall be integrated into the back wall of the bus located above the full width of the rear bumper to prevent standing on top of the bumper.

## 2.6 DOORS

- 2.6.1 Door Frames: All door frames shall be fabricated with 304 grade stainless steel, powder coated to preclude corrosion.
- 2.6.2 Passenger Door: Shall be an manually operated in-cab transit style door with two outward opening tempered glass panels, affording a clear opening of at least 30” x 85”.
- 2.6.3 Entry Handrails: Two assist rails shall be provided, one on each side of the passenger doorway. The rails shall be parallel to the steps to provide continuous support.
- 2.6.4 Stanchions & Modesty Panel: A vertical stanchion and modesty panel shall be provided behind the step well. A vertical stanchion, cross rail and a tinted 3/16” thick plexiglass shield shall be provided behind the driver’s seat.
- 2.6.5 Rear Door: A heavy-duty rear door, 32” x 54” shall be installed in the center of the rear of the bus. The interior and exterior surfaces shall be of molded gel coated FRP encasing high-density foam core. The door shall include a large 24” wide by 30” high tempered safety glass window, gas shock door opener and nylon restraint straps. The latch mechanism shall secure the door at both the top and the bottom. An audible signal shall be provided to alert if the door is ajar.

## 2.7 WINDOWS

- 2.7.1 Passenger Side Windows: Shall be tinted, at least 40” high with ventilating T-sliders at the top. A drip rail shall be installed above all side windows.
- 2.7.2 Rear Windows: Fixed windows shall be installed in the rear wall on each side of the emergency exit door.

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YES | NO

2.7.3 Egress Windows: Two emergency egress windows shall be provided on each side of the vehicle.

## 2.8 ELECTRICAL

2.8.1 Wiring: Shall be color, numbered and function coded. Circuits shall be protected by auto-reset circuit breakers and a circuit legend shall be laminated inside the electrical panel.

2.8.2 Driver's Controls: Shall consist of a console, mounted at an angle on the engine dog house for easy viewing and reach by the driver, containing permanently labeled and back lighted switches. Switches or gauges above the windshield are not acceptable.

2.8.3 Audio System: An AM / FM / CD stereo radio shall be provided with six speakers located throughout the interior.

## 2.9 EXTERIOR LIGHTING

2.9.1 Head Lamps & Front Turn Signals: Shall be supplied with the chassis.

2.9.2 Rear and Clearance Lights: Shall be LED type and meet all State and Federal requirements. Front clearance lights must be recessed into cap.

2.9.3 Brake Light: There shall be a set of LED brake lights that are separate and independent of any other function, flush mounted.

2.9.4 Side Turn Signals: Shall be mounted on each side of the body between the front doors and rear axle, LED type and protected by a chromed metal shield.

2.9.5 Entry Light: A shielded light shall be provided behind the passenger door as required by ADA, that automatically activates with opening of passenger door.

## 2.10 INTERIOR LIGHTING

2.10.1 Dome Lights: A minimum of nine overhead lights shall be installed in the passenger compartment, controlled by a master switch in the driver console and automatically with opening of passenger entry door.

2.10.2 Step Well Light: A light shall be provided in the step well which automatically activates with opening of entry door.

2.10.3 Driver Dome Light: A separate directional light shall be provided in the driver compartment, activated by opening of driver door and separate switch.

## 2.11 INTERIOR FINISH

2.11.1 Headliner: The cab and passenger area headliner shall be constructed of gel-coated fiberglass reinforced plastic for durability and easy cleaning.

2.11.2 Walls: Textured FRP side wall panels shall be installed from the seat rail to the ceiling.

2.11.3 Floor: Shall be covered in gray transit rubber, 1/8" smooth under seats and 3/16" ribbed rubber in the aisle and entry way. The ribbed aisle must meet step rubber on an angle for easy sweep out. A white standee line and integral white step nosing shall be provided.

2.11.4 Kick Panels: Smooth floor rubber shall be covered up the side walls to the seat rail without any seam for easier floor maintenance.

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2.11.5 Overhead Handrail: A stainless steel overhead handrail shall run the length of the passenger compartment as required by ADA on the driver's side of the bus.

## 2.12 SEATS

2.12.1 Fixed Passenger Seats: Shall be mid-back bucket seats.

2.12.2 Foldaway Seats: Shall be "notch back" type.

2.12.3 Upholstery: Passenger seats shall be covered in transit grade vinyl.

2.12.4 Seat Track: All forward facing fixed seats shall be secured to steel Unistrut channel in the floor and sidewall.

2.12.5 Arm Rests: Each aisle seat shall have a folding armrest with black molded rubber covering.

2.12.6 Grab Handles: Padded grab handles shall be provided on the top of each seat except those mounted against the rear wall.

2.12.7 Seat Belts: All passenger seats shall have seat belts with under seat retractor mechanisms.

2.12.8 Driver's Seat: Shall be high back, with lumbar support and right side arm rest. Covering shall be a Level 3 fabric.

## 2.13 HEATING & AIR CONDITIONING

2.13.1 Front Heat: Shall be the maximum size offered by the chassis manufacturer.

2.13.2 Rear Heat: Two 35,000 BTU 2-speed heaters shall be installed with a supplemental engine coolant booster pump to ensure sufficient flow.

2.13.3 Front Air Conditioning: Shall be factory installed by the chassis manufacturer consisting of compressor and in-dash evaporator.

2.13.4 Rear Air Conditioning: A minimum 90,000 BTU system shall be provided consisting of a two ceiling mounted evaporators, two skirt mounted condensers and dual compressors.

## 2.14 MIRRORS

2.14.1 Interior: A 4" x 8" convex mirror shall be provided above the driver for viewing passenger seating area.

2.14.2 Exterior Mirrors: Shall consist of integrated dual lens design composite heads containing separately adjustable flat and convex mirrors.

## 2.15 SAFETY EQUIPMENT

2.15.1 Reflector Kit: A set of three warning triangles shall be provided in a weather resistant storage container.

2.15.2 Fire Extinguisher: A fire extinguisher with gauge, rated at 10BC shall be secured in the driver compartment.

2.15.3 First Aid Kit: A first aid kit, minimum 10 unit, shall be installed on the vehicle.

2.15.4 Belt Cutter: A belt cutter shall be mounted in the driver's compartment.

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- 2.15.5 Back-up Alarm: The bus shall have an audible alarm which operates when the gear shift is placed in reverse.
- 2.15.6 Roof Hatch: A low profile ventilation/escape hatch shall be provided in the roof of the vehicle.
- 2.15.7 Belt Cutter: A seat belt cutter shall be mounted accessible to the seated driver.

## 3.0 MOBILITY EQUIPMENT

- 3.1.1 Wheelchair Doors: Shall be located on the curb side, behind the rear axle. The door frame shall be fabricated of powder coated stainless steel. The doors shall be two panel swing-out type, providing a clear opening of at least 44" x 70". A positive fastening device shall be provided inside the vehicle to hold the doors in the open position. Interior and exterior lights shall be provided to illuminate the lift area, both activated by opening the door. A 2" red light shall be provided in the driver's compartment to warn if the door is ajar.
- 3.1.2 Wheelchair Lift: A fully automatic arm, hydraulic lift shall be provided, meeting all ADA and FMVSS 403/404 requirements. Lift shall have a minimum useable platform area of 33" x 54" which folds to a stowed height not exceeding 55 inches. The depth of the installed lift shall not exceed 16 inches. Lift shall be equipped so that it may be manually raised in the event of failure of the power mechanism. A device shall be installed to prevent operation of the lift until the doors are open.
- 3.1.3 Wheelchair Securements: Two forward facing tie-down systems that have been crash tested at 30mpg/20g shall be provided. The systems shall include four heavy duty retractors with hood ends with adjustable and retractable lap/shoulder combo. The belts shall attach to Series "L" track recessed flush into the floor, running across the width of the vehicle. Pouches shall be mounted under the foldaway seats for storage of the floor belts when not in use.
- 3.1.4 Interlock: The vehicle shall have a lift interlock which requires the transmission to be in "Park" position before lift can be operate.
- 3.1.5 Signage: All interior and exterior signs required by ADA shall be provided.

## 4.0 CHASSIS

- 4.1 WHEELBASE: 233 inches, minimum
- 4.2 G.V.W.R.: 19,500 pounds min.
- 4.3 ENGINE: Diesel - 6.6 Liter 300 horsepower, min.
- 4.4 TRANSMISSION: Allison 1000 automatic 5-speed with synthetic fluid.

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4.5 ELECTRICAL

4.5.1 Alternator: 210 amp, minimum with fast idle.

4.5.2 Batteries: Two 12 volt batteries with total 1,400 CCA, minimum.

4.6 BRAKES: Power hydraulic four-wheel disc w/ four-channel ABS.

4.7 AXLES

4.7.1 Front: 7,000 pounds, min.

4.7.2 Rear: 11,000 pounds, min.

4.8 FUEL TANK: 60 gallon min.

4.9 STEERING

4.9.1 Power Steering: Full Time

4.9.2 Steering Wheel: Tilt

4.10 MISCELLANEOUS

4.10.1 Intermittent Windshield Wipers

4.10.2 Cruise Control

4.10.3 Engine Hour Meter

4.10.4 Tow Hooks, front

4.10.5 Block Heater

4.10.6 Automatic Engine Shutdown System with alarm

4.10.7 Stabilizer Bar, rear

4.10.8 Tire Valve Extensions, rear

**5.0 DOCUMENTATION**

5.1 Vehicle Training Videos: A comprehensive video describing the features and explaining the operation of the vehicle shall be provided with each vehicle.

5.2 Operators Manuals: Operators manuals for both the body and chassis shall be provided with each vehicle.

5.3 Parts Manual: A parts manual for the body shall be provided with each vehicle.

5.4 Electrical Schematics: Complete wiring diagrams shall be provided with each vehicle.

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**6.0 WARRANTY**

6.1 BODY

- 6.1.1 Basic: 1 year / 12,000 miles
- 6.1.2 Structural: 5 years / 100,000 miles
- 6.1.3 Corrosion: 10 years on metal parts when used instead of specified non-corrosive composite materials and stainless steel.

6.2 CHASSIS

- 6.2.1 Basic: 3 year / 36,000 miles – bumper to bumper
- 6.2.2 Engine: 5 years / 100,000 miles

6.3 COMPONENTS

- 6.3.1 Rear Air Conditioning: 2 years / unlimited mileage

**7.0 SUBMISSIONS REQUIRED**

7.1 EXCEPTIONS / DEVIATIONS: An attachment containing a full and precise explanation of all exceptions and variations from the specifications in the vehicle proposed by the bidder.

7.2 FLOORPLAN: Including the following dimensions

- 7.2.1 Overall length
- 7.2.2 Wheelbase
- 7.2.3 Seat spacing on both sides of the bus
- 7.2.4 Knee spacing on both sides of the bus
- 7.2.5 Aisle width

7.3 ALTOONA TEST: Copy of the Executive Summary from the Federal STURRA report.

7.4 PROOF OF BODY CRASH TESTING

7.5 ISO COMPLIANCE: Copy of manufacturer's ISO 9001:2000 certification.

7.6 INSURANCE: Evidence of the required coverage.

7.7 LICENSE: Copy of the bidder's Dealer License.

7.8 FMVSS: Complete listing of body manufacturer's FMVSS compliance.

7.9 WARRANTY: Body, chassis and component warranty coverage information per section 5.0.

7.10 BROCHURES: Body manufacturer's brochure for the specific model proposed.