

## **PART 2 - TECHNICAL SPECIFICATIONS CONVERTED WINDOW VAN WITH WHEELCHAIR LIFT**

### **1. GENERAL INFORMATION**

This **converted window van with wheelchair lift** shall have a high roof for standing adults with a low doorstep, and a high quality interior trim and seating package. The converted window van should be on a Ford E-350, or approved equal, chassis and shall be available with all possible options which make the van suited to stop-start duty cycles. **Vendor shall provide a complete Floor Plan and mechanical description of vehicle, its construction and equipment including model year, model and manufacturer of vehicle being bid. The bid shall be submitted in a binder form with each section properly labeled with the required information attached to each section.**

**Vendor shall provide pricing for vehicles with one (1) wheelchair position and two (2) wheelchair positions.**

**Two (2) copies of the bid form shall be sent to the KPTA with One (1) clearly marked for the KPTA Division of Public Transit. One (1) copy shall be sent to the State Auditor's Office before the bid deadline.**

Quantity: Minimum zero (0) vehicle to be purchased with one (1) options to purchase additional vehicles for a maximum of one (1) vehicles per specification. In addition, KPTA/RTEC has the right to assign a portion of the contract awarded, to allow other transit agencies to purchase any remaining options.

### **2. GENERAL DIMENSIONS**

Length Overall	210" - 252"
Width	80" - 90"
Height Overall	117" maximum
Seating, minimum	10 ambulatory passengers
Turning Circle	50' (wall to wall)
Interior Headroom	72"
Width of Aisle	14" minimum
Minimum gross vehicles weight	9,400 lbs. minimum
Wheel Base Minimum	138"

### **3. APPLICABLE SPECIFICATIONS AND STANDARDS**

- 3.1 Federal - EPA Standards.
- 3.2 Federal - Motor Vehicles Safety Standards U.S. Department of Transportation.
- 3.3 Federal - U.S. Department of Transportation's Americans With Disabilities Requirements under 49 CFR Part 38.

### **4. REQUIREMENTS**

- 4.1 **Components, Materials, Workmanship, and Completeness:** These specifications reflect the Division of Public Transit's preference as to dimensions, materials, and major components. However, the vendor shall not omit any part or detail which goes to make the vehicle complete and ready for service, even though such part or detail is not mentioned in these specifications.

- 4.2 All units and parts shall be vendor's best quality and shall conform in material, design and workmanship to the best practice known in the automotive industry. All parts shall be new and in no case shall used, reconditioned or obsolete parts be accepted. The parts on all vehicles provided by the same vendor shall be interchangeable.
- 4.3 The price quoted in any proposal submitted shall include all items of labor, material, tools, equipment, and other costs necessary to fully complete the manufacture and delivery of the van pursuant to these specifications. It is the intent of these specifications to provide and require a complete vehicle of the type prescribed ready for operation. **The vendor shall assume sole responsibility for the entire vehicle as to warranty and after-sales parts and service.**
- 4.4 Warranty to become effective on the first day, after the date of final acceptance, of each vehicle by the Division of Public Transit.
- 4.5 The exterior customized vehicle paint scheme layout on individual vehicles shall be provided to the vendor upon award.
- 4.6 Numbers and special signing shall be applied to both sides of the vehicle by the Vendor at the factory. All vehicles will have the transit systems stripes and logos, the paratransit vehicles will have, as shown on sample, down both sides and may have agency names and phone numbers on both sides. The artwork for the logos will be provided by the Division upon award, as well as, a list of agency names and phone numbers. Signs and numbers shall be durable, fade, chip, and peel-resistant; NO painted signs, decals or pressure sensitive appliquéés. All decals shall be sealed with clear, waterproof sealant around the edges and on all exposed surfaces. The basic body color shall be white.

All vinyl shall be reflective vinyl and meet the DOT-C2 STANDARDS.

## 5. ENGINE

- 5.1 V-8 Engine displacement of at least 350 cubic inches, Gasoline.  
**Vendor shall submit description, warranty information and literature information of product with bid.**
- 5.2 Air Cleaner - Paper type.
- 5.3 Oil Filter - Replaceable type.
- 5.4 High Idle System- A high idle system, intended to maintain battery charging under heavy demand when the vehicle is stationary and the emergency brake is applied shall be provided. The fast idle switch will automatically disengage when the vehicle is placed in forward or reverse gear. **Vendor shall submit description, warranty information and literature information of product with bid.**

## 6. COOLING SYSTEM

Radiator surge or overflow tank shall be provided. Vehicle shall be equipped with radiator and fan of the maximum capacity available.

## 7. FUEL SYSTEM

- 7.1 Fuel tank shall be a minimum 30 U.S. gallon capacity.
- 7.2 An engine mounted fuel filter is required with replaceable type elements.

## 8. EXHAUST SYSTEM

The vehicle shall be equipped with an exhaust system which meets U.S. Government noise level and exhaust emissions requirements. The vehicle shall be equipped with an exhaust system, which directs emissions towards the street side of the vehicle.

9. **TRANSMISSION**

- 9.1 Transmission shall be fully automatic, power shift, hydraulic drive type. The transmission shall be installed such that removal as a unit without disturbing engine or final drive is possible with a minimum of 4 forward speeds. **Vendor shall submit description, warranty information and literature information of product with bid.**
- 9.2 Transmission shift lever shall be interlocked with starting motor to prevent engagement of starter in any gear possible other than neutral or park.
- 9.3 Backup buzzer: A backup buzzer shall be provided that is audible outside the vehicle when transmission is in reverse.
- 9.4 Drive shaft shall be equipped with a guard to prevent it from striking the floor or ground when broken.

10. **FRONT SUSPENSION**

- 10.1 Axle capacity shall be a minimum of 4,200 lbs. **Vendor shall submit description, warranty information and literature information of product with bid.**
- 10.2 Capacity of each spring shall be 1,915-lbs. minimum at ground. The heaviest available gas filled shock absorbers shall be provided - 1 3/8 inch diameter minimum. Shock absorbers and suspension shall be matched to the vehicle's gross weight.

11. **REAR AXLE AND FINAL DRIVE**

- 11.1 Axle capacity shall be a minimum of 6,300 lbs. **Vendor shall submit description, warranty information and literature information of product with bid.**
- 11.2 Capacity of each spring shall be 2,750-lbs. minimum at ground. The heaviest available gas filled shock absorbers shall be provided - 1 3/8 inch diameter minimum. Shock absorbers and suspension shall be matched to the vehicle's gross weight.
- 11.3 Vehicles shall be equipped with factory installed positraction. (Limited slip differential)

12. **STEERING**

Power steering is required with power steering unit being an integral part of steering gear.

13. **BRAKES**

- 13.1 The brake dimensions shall conform to the following minimums:

Dual Hydraulic with Vacuum Assist  
12.52" X 1.19", disc type  
12" X 3.5", drum type  
All Wheel Anti Lock Brakes (ABS type)

**Vendor shall submit description, warranty information and literature information of product**

**with bid.**

- 13.2 Parking brake shall be capable of stopping vehicle at a deceleration rate equivalent to a stop within 50 feet from a speed of 20 m.p.h., on dry pavement with a fully seated load. Brakes shall be capable of holding a fully loaded bus on a 20 percent grade.

**14. WHEELS**

Vehicles shall be equipped with the heaviest duty available ventilated pressed steel wheels, single front and rear. All wheels shall be interchangeable. Extra heavy duty wheel bearings shall be required. Wheels shall be matched to the vehicle's gross weight including spare. **All Wheels shall be painted white inside and outside.**

**15. TIRES**

- 15.1 Vehicles shall be equipped with five (four regular and one full size spare) steel belted radial tires, load range E (Equal to 10 ply rating). Tires shall be supplied with the vehicle from the factory. Tire treads shall be all weather type. Tires shall be matched to the vehicle's gross weight and be adequately inflated prior to delivery. **Vendor shall submit description, warranty information and literature information of product with bid.**

15.2 Spare wheel and tire shall be mounted under the rear of each van.

15.3 Each vehicle shall be equipped with one set of appropriate size tire traction chains for winter driving. Chains are to be secured under a rear single seat. The Division of Public Transit must approve the location and type of securement.

**16. ELECTRICAL SYSTEM**

16.1 An alternator of at least 130 or highest OEM ampere rating. **Vendor shall submit description, warranty information and literature information of product with bid.**

16.2 Radio noise suppressing ignition system.

16.3 The supplemental wiring harnesses, junctions, fuses and circuit breakers shall be coded and grouped together and accessible from a lockable access box mounted near the driver's seat. The location shall not be beside the driver's seat.

16.4 Wiring shall be adequately supported and enclosed in non-metallic loom.

16.5 Where penetration of structural members occurs, grommets or similar devices shall be used to prevent chafing.

**17. INSTRUMENTS AND CONTROLS**

17.1 The following instruments shall be provided:

- AM/FM digital CD/radio with clock – **Vendor to provide literature and warranty information.**
- Speedometer with recording odometer
- Ammeter or voltammeter gauge
- Low-charge warning light
- Oil pressure gauge
- Fuel tank level gauge(s)
- Engine temperature gauge

- Headlight on indication and headlight high beam indicator
- Directional signal and flasher action light

- 17.2 The following controls, in addition to the normal steering, braking, and transmission functions, shall be provided:
- Master exterior light switch, and auxiliary switches for any clearance or marker lights.
  - Separate switches and temperature controls for rear passenger compartment heater and air conditioner.
  - Separate switch and temperature controls for driver's heater, defroster and air conditioner.
  - Two speed wiper control.
  - Passenger compartment lights.
  - Tilt Steering Wheel
  - Intermittent Wipers
  - Cruise Control
- 17.3 All controls shall be within the driver's arm reach when his seat belt is fastened.

## **18. BODY STRUCTURE RAISED ROOF**

- 18.1 The body structure shall be a fully integrated structural unit, constructed at all points and corners where stress concentration may occur, to adequately carry required loads and stand road shock. **Vendor shall submit description, warranty information and literature information of product with bid. Water Testing Report shall be submitted with procedures and details.**

The roof modification shall include a FMVSS-220 Certified Roll Cage. Roll cage shall be comprised of 1"x 2", 11 gauge tubular cross members, welded to and integrated with the body on frame construction of the van. All joints must be welded.

Roof and Liner shall be one piece fiberglass components reinforced by roll cage, and insulated against weather and sound by R-8 fiberglass (minimum).

Minimum headroom from floor to headliner shall be 74 inches at center aisle.

Roof and headliner shall be cosmetically joined to the van to form a water resistant seal.

- 18.2 Before assembling, all metal parts shall be given a thorough anti-corrosion treatment. Interior surfaces of body panels and posts which are covered by trim materials shall also be given protection against corrosion.
- 18.3 All nuts, bolts, clips, washers, clamps and like fasteners shall be zinc or cadmium plated or phosphate coated to prevent corrosion. All exterior panels shall be riveted in place or otherwise securely fastened.
- 18.4 A lowered ambulatory passenger entry step shall be installed at the right front entrance door stepwell. This step will consist of a non-skid tread with contrasting edge markers and be no higher than twelve (12) inches above ground.
- 18.5 Stepwells shall be of either formed aluminum, or corrosion resistant steel, with coved corners and adequate reinforcement to prevent deflection. Stepwell shall be the full width of the door opening. The leading edge of each step shall be marked with bright yellow or white marking with **abrasive strip** insert not less than one (1) inch wide, preferably of a reflective type material. **All Flooring shall be Blue with the entrance area covered with 3/16" ribbed floor covering and the flooring under the seats shall be smooth 1/8" floor covering. White Flooring will not be accepted. Aisle and securement area shall be 3/16 ribbed floor covering. Vendor shall submit description, warranty information and literature information of product with bid.**
- 18.6 Individual risers shall not exceed nine (9) inches in height, and in the case of more than one riser, all shall be the same height.

- 18.7 The wheelhouse shall be of sturdy construction of galvanized or treated corrosion resistant steel providing ample clearance of front and rear tires, under load and under all positions of the front wheel while steering.
- 18.8 Splashguards shall be provided on each vehicle and be made of not less than ¼ inch fiber reinforced rubber. Splashguards shall be mounted at the rear of each wheel housing. Rubber mudflaps shall be provided at all wheels. No Hard Plastic flaps will be accepted.
- 18.9 The vehicle shall be fully undercoated and rustproofed at the point of manufacturer before delivery. The warranty shall be 5 years on the undercoat and rustproofing. **Vendor shall submit description, warranty information and literature information of product with bid.**

**19. DOORS**

- 19.1 The vehicle shall be equipped with a rectangular, fully glazed, electric operated, single leaf or double leaf "transit style" door located opposite the driver. **All controls to door shall be mounted on the console or dash for easy access to driver. Vendor shall submit description, warranty information and literature information of product with bid.**

- 19.2 The door shall have a clear opening width of 25" (minimum) and the full height of 74" (minimum) clear "walking" headroom as measured from the top of the front step to the entrance header. **The entire entrance door frame shall be stainless steel or aluminum construction only.**

The door opener shall be placed so as to be operable by the seated driver and not interfere with the boarding passengers. The passenger entrance door shall have a key switch outside in order for the driver to access the vehicle from the passenger entrance door.

All parts must be interchangeable and the recipient agency shall be able to replace each part of the door opener without purchasing the complete unit. Door mount on the entrance door shall be of solid construction.

- 19.3 Vehicle shall be equipped with dual rear opening emergency doors, with a standard 3-point safety latch with appropriate operating instructions affixed and Emergency Exit decal, denoting exit, affixed.
- 19.4 An audible door ajar alarm shall be provided for any rear emergency door.
- 19.5 A driver side stainless steel running board shall be provided for driver access into vehicle.

**20. WINDOWS**

- 20.1 Glass shall be safety glass, with all latch mechanisms recessed
- 20.2 Windshield shall be fixed type, glazed with safety laminated glass, tinted above eye level (Gradutint).
- 20.3 Passenger windows shall be OEM's and approximately 40" x 30" in size.
- 20.4 Dual (2) rain drip moldings to be provided for the full length of body.

**21. HEATING AND VENTILATION**

The heating and ventilating system shall consist of one (1) fresh-air high output chassis heater and rear under seat auxiliary heater that when combined provide a minimum of 55,000 BTU's. The heating and

ventilating system with loaded bus in motion shall provide one complete change of air per minute. Heating system shall include a multiple fan speed forced-air ventilation system. **Vendor shall submit description, warranty information and literature information of product with bid.**

**22. INTERIOR LIGHTING**

- 22.1 Interior shall be illuminated so as to provide a minimum of twelve (12)' candles of illumination measured at thirty-six (36) inches above the floor over each two-passenger cross seat. Lights shall operate with or without engine running. Front door hooded stepwell light shall be mounted and wired to light when the front door is open so stairwell and immediate outside area is illuminated.
- 22.2 A wheelchair lift light which illuminates the lift device and the area outside the vehicle, in front and to the side of the lift shall be provided and shall operate automatically when the side doors are opened.

**23. EXTERIOR LIGHTING**

All exterior lights shall meet State and United States Department of Transportation requirements. Headlights shall be daytime running.

**24. INTERIOR**

**Vendor shall submit description, warranty information and literature information of product with bid.**

- 24.1 Floor shall be of 3/4 inch minimum thickness exterior grade plywood, with all edges properly sealed to prevent entrance of moisture. Flooring shall be securely fastened to the under frame members by bolts. Self-tapping screws will only be accepted if they are used with tapping plates equal in thickness to a standard nut.
- 24.2 All flooring shall be RCA Transit Flooring or Approved Equal. **Floor covering to be Blue** and shall contrast with seat cover colors. Entrance area shall be covered with three-sixteenth (3/16) inch ribbed floor covering. All step edges to be marked in accordance with FTA/ADA requirements. **(White is the preferred color)**. Floor covering under seats shall be one-eighth (1/8) inch smooth floor covering. Aisle front entrance and securement areas shall be covered with three-sixteenth (3/16) inch ribbed floor covering. A white standee line is required.
- 24.3 All interior panels shall be of ABS plastic, fiberglass or vinyl-type material, to cover major surface areas and jointed area between raised roof and body. Interior panels, materials and treatments shall be flame retardant and treated to be easily cleaned. Colors of covering shall harmonize with exterior vehicle colors. Inside walls and ceiling shall be adequately insulated to prevent condensation, preferably with three (3) inch fiberglass blankets or urethane foam sheets 3/4 inch thickness and 1.5 density.  
**Vendor shall submit description, warranty information and literature information of product with bid.**
- 24.4 Passenger assists shall be constructed of corrosion-resistant tubular stock having an outside diameter of 1.25 inches. The diameter or width of the padded gripping surface of assists and stanchions shall be 1.25 inches to 1.50 inches. Padded stanchions and padded grab rails shall be provided in the entry area, within reach from the ground, to assist passengers in both boarding and exiting. Some vehicles may require two (2) sets of handrails, one (1) for adults and one (1) for small children. Stanchions and grab rails shall be padded and shall be positioned at both the left and right side of the stepwell entry area.

24.5 All sharp edges, protruding fasteners, brackets, etc., that can cause injury to the passenger or catch on clothing shall be eliminated.

24.6 Interior Decals:

- 1) "No Smoking" at the front top of vehicle;
- 2) "All Passengers Are Required To Wear Seat Belts When Vehicle Is In Motion" at the front top of the vehicle;
- 3) "Clearance \_\_\_\_\_ feet \_\_\_\_\_ inches" above driver's visor. (The specific figures on clearance will be determined by exact dimensions of vehicle.)
- 4) Emergency Telephone Numbers  
Police:  
Ambulance:  
Fire:  
Transportation System:

5) EMERGENCY EQUIPMENT - Apply to the storage compartment above the driver's seat.

24.7 Exterior Decals:

- 1) "This Vehicle Makes Frequent Stops" on the back of the vehicle.
- 2) The International Wheelchair Accessibility Symbol on the back of the vehicle.
- 3) "CAUTION: Loading and Unloading Passengers" on the back of vehicle.

The exterior decals shall have 3" lettering shall be white letters on red back ground. **Location to be approved by the Division of Public Transit.**

24.8 Storage Compartment: A storage compartment capable of accommodating the first aid kit, blood borne pathogen kit, reflectors, fire extinguisher, jumper cables, seat belt cutter and other items shall be provided in the front header above the driver. The compartment will be lockable and be provided with a latching or other mechanism to hold it in the open position. Bottom hinged compartment doors will be provided with restraint straps to limit its movement to 90 degrees. **The Division of Public Transit must approve location and size.**

## 25. **SEATING (SEE DIAGRAMS) in Part 6**

**Vendor shall submit description, warranty information and literature information of product with bid. Proposed seating configurations are to be supplied with bid submittal.**

25.1 Passenger seats shall be all forward facing. Wherever possible, all seats shall be covered with commercial grade (3) vinyl, or equal, and heavy duty, fully padded construction. Minimum seat cushion depth sixteen (16) inches, width eighteen (18) inches per passenger. Seat cushions shall have a minimum of five (5) inch padding and springs on seat with two and one-half (2½) inches on back support. The back of the seat shall be a minimum of eighteen (18) inches, maximum of twenty-two (22) inches high, measured from the top of the seat cushion. Passenger seats, excluding the rearmost, shall have padded horizontal grab rails across the top of each seat, with a

minimum of one and one-half (1½) inches between the grab rail and the seat top. Seats shall be a maximum of seventeen (17) inches from the floor to the front edge of the seat cushion. At least twenty six (26) inches of hip to knee room shall be provided.

All seats shall be equipped **with under-seat retractable** seat belts. **Vendor shall submit description, warranty information and literature information of product with bid. C.E. White #1-2096-02-A or Freedman Seating USR shall be used or Approved Equal.**

Each vehicle shall be equipped with one (1) seat belt extender.

All seat belt assemblies shall meet the Current Edition of the Federal Motor Vehicle Safety Standards. **The Division of Public Transit shall approve the seat belt extender.**

The center or side aisle shall be a minimum width of fourteen (14) inches and shall extend the length of the vehicle such that there is a clear path to all doors and dual purpose safety vent. All materials used in the seat assembly shall meet the flammability requirements of the Current Edition of the Federal Motor Vehicle Safety Standards.

- 25.2 Driver's seat shall be an OEM or Body Chassis Manufacturer Power cloth deluxe high back bucket type with standard seat belt. Seat shall be adjustable forward and backward. A fold up armrest will be provided on the right side of the seat. **Vendor shall submit description, warranty information and literature information of product with bid. The power seat can be body chassis manufacturer.**
- 25.3 Seat color shall be approved by procuring agency to provide a harmonious interior with suitable contrast to the floor covering.
- 25.4 All exposed metal shall be padded with a minimum of one and one-half (1 1/2) inches of padding.

## **26. EMERGENCY/SAFETY EQUIPMENT**

- 26.1 First Aid Kit - First-Aid Kit shall comply with Federal Motor Vehicle Carrier Safety Regulations Part 393(h), Section 393, Part 96(c), with a minimum of 15 units. First-aid kits shall be stored in storage compartment or mounted so as to provide for easy access in the event of an accident, away from foot traffic.

Kit shall be housed in a metal box which contains at least the following items:

Instant Cold Pack (1)	2" x 6 yds. Gauze Bandage
Certicaine Burn Spray (1 oz.)	1/2" x 2.5 yds. Adhesive Tape
1" x 3" Adhesive Bandages (25)	Burn Ointment (1/8 oz.) (4)
3/4" x 3" Adhesive Bandages (10)	Insect Sting Swabs (4)
Extra Large Adhesive Bandages (10)	PVP Iodine Swabs (4)
3" x 3" Gauze Pads (10)	Tweezers (1)
Antiseptic Wipes (10)	Scissors (1)
Alcohol Prep Pads (20)	Safety Pins (5)
Ammonia Inhalants (10)	

- 26.2 Fire Extinguisher - A 5 lb. dry chemical fire extinguisher with a minimum of a 20-A: 180-B:C rating shall be provided in vehicle and shall be mounted in an access compartment with a hinged door or on a vehicular-type quick access bracket away from foot traffic.
- 26.3 Reflectors - Three bi-directional emergency reflective triangles conforming to requirements of FMVSS No. 125, Section 571.125 shall be secured in the storage compartment of the vehicle.

26.4 Jumper Cables - Jumper cables of stranded copper, 4-6 gauge, seven (7) feet minimum length shall be secured in the storage compartment of the vehicle.

26.5 Bloodborne Pathogen Protection Kit - A 10 unit (minimum) kit housed in a polypropylene or metal box and containing at least the following items:

Gown/Cap (1)	Antiseptic Towelettes(4)
Goggles (Eye Shield) (1)	Disinfectant Towelette (4)
Mask (1)	Mouth to Mouth Barrier (1)
Sets of Gloves (3)	Scoop Bag (3)
Scraper (1)	Infectious Liquid Control Powder (2 oz.)
Crepe Towels (2)	
Red BioHazard Bags with Ties (2)	

26.6 Wheel Jack & Lug Wrench secured **in a location approved by the Division of Public Transit.**

26.7 Seat Belt Cutter - A Tie Tech, Inc. Safecut Webbing Cutter, or approved equal, shall be secured in the storage compartment of the vehicle.

26.8 INTELLIGENT AUDIBLE ALARM

An audible warning signal that alerts the driver to the presence of an obstacle in the monitored zone. Echovision or approved equal. **Vendor shall submit description, warranty information and literature information of product with bid.**

27. **MIRRORS**

27.1 Interior One rearview at least 5" X 9" which affords driver view of all passengers.

27.2 Exterior Two rearview, one right and one left Metegal 6 ½" x 9 ½". When installed, need to allow for logo. **Vendor shall submit description, warranty information and literature information of product with bid.**

27.3 Each vehicle shall be equipped with a Fresnel flat, wide-range lens ready for installation/placement by the purchaser upon delivery of the vehicle.

28. **AIR CONDITIONING** **Vendor shall submit description, warranty information and literature information of product with bid.**

The OEM chassis supplier's heaviest duty air conditioning system shall be supplied plus such other components as necessary to ensure effective, uniform cooling throughout the vehicle. At a minimum, the system shall consist of:

- a) The OEM's dash mounted evaporator system;
- b) The OEM's engine driven compressor with a minimum displacement of 9 cubic inches;
- c) A 2 fan skirt mounted condenser, Carrier CM-2 or approved equal;
- d) A ceiling mounted evaporator at the rear of the passenger compartment with a minimum capacity of 32,000 BTU's, Carrier EM-4 or approved equal;
- e) The Quick Click Hose System or approved equal shall be used.

29. **DUAL PURPOSE SAFETY VENT**

Each vehicle shall be equipped with a 5 way 23" x 23" Model 1900 or Approved Equal dual purpose safety vent as manufactured by Transpec, Inc., or an approved equal, capable of being used as a multi-position roof

ventilator and as an emergency exit in compliance with FMVSS 217 and 302. **Vendor shall submit description, warranty information and literature information of product with bid.**

**30. WHEELCHAIR SECUREMENT SYSTEM - Vendor shall submit description, warranty information and literature information of product with bid.**

Wheelchair securement areas and systems shall fully comply with all applicable U.S. Department of Transportation's Americans With Disabilities Requirements.

- 30.1 Vehicle shall be equipped with one (1) or two (2) wheelchair positions. At each required wheelchair position a wheelchair securement system shall be provided to securely hold the wheelchair in the wheelchair position.
- 30.2 Provisions shall be made, in the wheelchair position area, to stow the straps and buckles off the floor when they are not in use. The stored straps shall not interfere with passenger movement or sitting space. **Vendor shall submit description and location of product with bid.**
- 30.3 The vendor shall provide with each vehicle upon delivery a pamphlet, brochure or similar literature describing and instructing the use of the wheelchair securement system and shall **demonstrate** to the recipient the proper method of using the system. Demonstration of the securement system **must** be performed to insure correct use of the system.
- 30.4 A Freedman Seating 3 Step Forward Facing Fold Down Double Seat, or approved equal, shall be used in every wheelchair position for use by non-disabled persons when the securement system is not needed. When folded up, the seat shall not interfere with the use of the wheelchair positions by passengers in wheelchairs. An under-seat retractable seat belt shall be provided for each seated position.
- 30.5 Each wheelchair station shall have a securement system fully complying with ADA requirements and capable of securing most common wheelchairs and other mobility aid devices. Each wheelchair space shall have at least 3-5" in between each space for easy access of driver.

**31. WHEELCHAIR OCCUPANT RESTRAINT SYSTEM**

A restraint system shall be provided for the occupant of the wheelchair at each wheelchair position. The restraint system shall be a seat belt assembly permanently attached to the floor or side of the vehicle or to the wheelchair lock supports. The restraint system shall be capable of securing a passenger in all types of wheelchairs or Scooters, while the chairs are locked in position. The seat belt shall be at least eighty (80) inches long and shall be easily fastened and unfastened by the wheelchair occupant. Each seat belt shall be equipped with a retractor or other device, which keeps the seat belt webbing or strap off the floor when the seat belt is not in use. **Vendor shall submit description, warranty information and literature information of product with bid.**

A complete retractable wheelchair and occupant restraint system with S-Hooks shall be installed at each wheelchair location. The system will have automatic belt retractors; tensioning knobs; and easy to use tension release mechanisms. The system shall be a Kinedyne Sure-Lok FF6612S; or approved equal. **L-Track System to be used. Vendor shall submit description, warranty information and literature information of product with bid.**

**32. LIFT: Vendor shall submit description, warranty information and literature information of product with bid. Lift must meet the new Federal Regulations concerning wheelchair lifts starting December 27, 2004.**

The lift shall meet or exceed all the U.S. Department of Transportation's minimum Americans With Disabilities Act requirements.

- 32.1 Vehicle shall be equipped with one (1) fully automatic wheelchair lift, Braun L917B Millennium or Vista Lift Model, or approved equal, mounted on the right side of the vehicle. An extra leaf spring shall be added to the rear suspension on the wheelchair lift side of vehicle.

The wheelchair door shall be located on the right (curb) side of the vehicle, behind the front entrance door and in front of the rear wheels. **The frame of the wheelchair door shall be stainless steel construction only.**

The wheelchair door shall provide 64" (minimum) of walk-in-headroom as measured when lift is in full raised usable position. The lift door shall have 42" (minimum) clear opening width.

Lift door shall be equipped with a metal safety device to hold door securely in full open position when lift is in operation.

Lift door shall be equipped with a locking door handle and each vehicle shall be provided with at least two (2) sets of door keys.

Lift door shall also be equipped with a Back-up door locking mechanism in case the primary door handle fails while the vehicle is in motion.

- 32.2 The lift shall have a self-cleaning, see-through, non-skid platform which can be folded and unfolded by one person. The controls shall be placed adjacent to the lift in such a position to enable the attendant or the disabled person, once the person is on the platform, to operate the lift.

In the fully lowered position the platform shall measure at least thirty three (33) inches wide and have an effective length of at least forty eight (48) inches. A safety barrier shall be the full length of the curb side edge of the platform and shall be a moveable hinged surface to provide a barrier to prevent the wheelchair from rolling off the lift during operation. A two (2) inch high barrier shall also be provided on each side of the platform to prevent wheelchairs from rolling over the edge. Two (2) automatic fold handrails shall be provided one on each side of the platform.

- 32.3 Power unit shall be twelve (12) volt electro-hydraulic operated. Power unit shall be readily accessible for service. A manual hand crank shall be installed for lift operation in the event of power failure.

- 32.4 Lift shall be capable of being used from curb level or ground. The lift should be capable of safely lifting a minimum static-load of six-hundred (600) pounds. The lift platform should be capable of being raised or lowered with a load in no more than twelve (12) seconds. All power units, operating joints, linkage, and mounting points to the body shall be certified by the manufacturer as being adequate for the loading. The operation of the unit shall provide a smooth, jerk-free ride in both up and down directions.

- 32.5 Systems control valve shall be solenoid controlled and shall be externally mounted for easy maintenance.

- 32.6 All sliding surfaces and load bearing pivot points shall be free of exposed grease and constructed with ball and roller bearings. All electrical and hydraulic lines and units, all control mechanisms and cables shall be securely fastened and placed so as not to interfere with passenger ingress and egress, or with any moving parts. All moving parts shall be shielded from contact with passengers and operator.

- 32.7 Platform shall fold into door area for storing while not in use. Platform in stored position shall not intrude into vehicle body more than 14 inches. Lift shall be adequately restrained in stored position to prevent lift from coming adrift while vehicle is in motion. The lift in its stored position

shall not rattle.

32.8 Lift control switch shall be completely weather proof and labeled as to function.

32.9 It is the vendor's responsibility to provide instructions on the use of securement system to meet the specified performance standards, and on the safe operation, maintenance and service of the lift, as well as warranty information. **An instructional video explaining the lift operations and lift maintenance shall be provided with each vehicle.**

32.10 Lift controls shall be interlocked with the vehicle brakes and transmission and door, or other approved means, to ensure that the vehicle cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlock mechanism(s) are engaged. The lift must not be able to be deployed without engaging the interlock system and the interlock must prevent the vehicle from being moved until the lift is stowed. Any interlock which can be disengaged prior to lift stowage will cause the vehicle not to be accepted. **Intelligent Lift Interlock System Model # ILIS501 or approved equal.**

### 33. MANUALS

The vendor shall furnish each vehicle with complete driver, parts and maintenance manuals, including wiring schematics of auxiliary circuits, air line diagrams and all other necessary prints for the maintenance of the wheelchair lift, auxiliary air conditioning unit and any other optional items added by the vendor during conversion.

### 34. OPTION A – FIXED ROUTE PACKAGE

#### FAREBOX PROVISIONS

Prewiring and mounting plate and stanchion for farebox installation shall be provided. **Vendor shall submit description, warranty information and literature information of product with bid.**

Farebox mounting arrangements shall be provided adjacent to the driver's immediate right.

#### DESTINATION SIGN

**Vendor shall submit description, warranty information and literature information of product with bid.**

Only a front destination sign shall be provided. Sign shall be an **electric scroll type**. Sign shall have a minimum of 28" clear opening capable of displaying approximately 15 characters at a minimum letter height of 5". The sign shall contain 25 blanks for locations, with provision for the vendor to complete the curtain with the destinations provided by the Division of Public Transit.

The destination sign shall be illuminated by means of incandescent or fluorescent lighting.

Readings shall be indexed for proper centering of the destination displayed and compatible with a viewing window to be provided in the access door of the destination sign.

Sign shall be electrically gear driven with circuit breaker protection and provision to avoid creeping of the sign.

#### PA SYSTEM

Mobile PA with hand held mic with one external speaker and 2 internal speakers shall be provided. PA system shall be separate from the radio system. **Vendor shall submit description, warranty information and literature information of product with bid.**

#### PASSENGER SIGNALLING SYSTEM

A pull cord system stop request and chime with touch tape at the wheelchair positions shall be provided. **Vendor shall submit description, warranty information and literature information of product with bid.**

#### STROBE LIGHT

A protected or guarded strobe light shall be installed on the top of the vehicle to the rear. **Vendor shall submit description, warranty information and literature information of product with bid.**

#### 35. **OPTION B - NON-ACCESSIBLE VEHICLE**

Quote for a vehicle having at least 12 fixed forward facing seats. **Proposed seating configuration shall be provided by the vendor with bid submittal.**

#### 36. **OPTION C - PAINING VEHICLE SKIRT**

Painting the vehicle skirt, raised roof and chassis cab may be required on some transit system's paint and logo schemes. The paint must match the colors in the transit system's logo scheme.

#### 37. **OPTION D - REPEL CLOTH PASSENGER SEATS**

Passenger seats shall be covered with commercial grade, heavy-duty cloth material. Freedman Seating Company or Approved Equal. Cloth shall be repel fabric (Water Resistant) which is antimicrobial and antibacterial. All other requirements in **Section 25 - SEATING** must be met. **Vendor shall submit description, warranty information and literature information of product with bid.**

#### 38. **OPTION E - FLIP - UP PASSENGER SEAT ARMREST**

A Flip-up armrest for each outside passenger seat shall be installed. **Vendor shall submit description, warranty information and literature information of product with bid.**

#### 39. **OPTION F- CHILD RESTRAINT SEAT**

Option to upgrade one double mid-high to a double child restraint seat. Integrated child restraint seat which is capable of securing a child between the heights of 33" and 49" with weight between 20 to 60 lbs. Instructions for the securement shall be printed on the seat and shall be easy to understand. **Vendor shall supply description, warranty information and literature of product with bid.**

**15 passenger converted window vans with air conditioning, wheelchair lifts and securement systems as specified.**

**MODEL YEAR:** \_\_\_\_\_ **MODEL:** \_\_\_\_\_ **MANUFACTURER:** \_\_\_\_\_

**Price for each complete van with 2 wheelchair spaces \$\_\_\_\_\_**

**Price for each complete van with 1 wheelchair space \$\_\_\_\_\_**

**OPTIONS**

**OPTION A – Fixed Route Package \$\_\_\_\_\_**

**OPTION B - Non-accessible Vehicle \$\_\_\_\_\_**

**OPTION C - Painting Vehicle Skirt \$\_\_\_\_\_**

**OPTION D – Repel Cloth Passenger Seats \$\_\_\_\_\_**

**OPTION E – Flip –up Passenger Seat Armrest \$\_\_\_\_\_**

**OPTION F – Child Restraint Seat \$\_\_\_\_\_**

**Suggested Vendors List  
PTR05017**

Dave Clawson  
National Bus Sales and Leasing  
PO Box 6549  
Marietta, GA 30065-0549  
PHONE: 800-282-7981

David W. Burch  
Colonial Equipment Co  
1310 Bailes Lane  
Frederick, MD 21701  
PHONE: 800-GO-BY-BUS

ATEL Bus and Coach  
12120 Conway Road  
Beltsville, MD 20705  
PHONE: 800-457-2835

Jamie Lipka  
Champion Bus Inc.  
PO Box 158  
Imlay City, MI 48444  
PHONE: 800-331-5761

Jeff Koch  
Bus & Parts Sales Inc.  
12254 Greenleaf Ave  
Potomac, MD 20854  
PHONE: 240 -403-3246

Kingmor Supply, Inc.  
3400 Cross Keys Road  
Harrisonburg, VA 22801  
PHONE: 800-782-4474

New England Wheels  
3 Dunham Road  
Billerica, MA 01821  
PHONE: 800-886-9247

The Braun Corporation  
631 West 11<sup>th</sup> Street  
PO Box 310

Winamac, IN 46996  
PHONE: 800-946-6158