VEHICLE SPECIFICATIONS
18/20 PASSENGER SHUTTLE BUS

Descriptions:

Compliance with criteria will be submitted with proposal. Bus must meet Federal and Kentucky Motor Vehicle Safety Standards. The contractor must supply documentation of Altoona Testing at time of bid. Bidder must furnish sufficient technical data test results to enable Kentucky Public Transit Association to determine whether the proposal is equal to that specified.

Quantity:

18/2: Minimum zero (0) vehicles to be purchased with (0) zero options to purchase additional vehicles for a maximum of zero (0) vehicle 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

20/2: minimum one (1) vehicle to be purchased with (1) one 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.

1. **GENERAL DIMENSIONS**
   - 1.1 Capacity: Twenty **(18/20) Ambulatory and two (2) Wheelchair passengers with Rear loading configuration.** Additionally **two- (2) double three-step foldaway seats** shall be mounted over the street side wheelchair position. Option for eighteen (18) ambulatory passenger + two (2) wheelchairs.
   - 1.2 Length: 355” - 359” (Under 30 category)
   - 1.3 Interior Width: maximum **96"**
   - 1.4 Interior Height: minimum, 80”
   - 1.5 Wheelbase: 196”- 213" maximum
   - 1.6 Top of first step height from ground: 12" maximum
   - 1.7 G.V.W.R.: minimum 19,500 lbs.
   - 1.8 **Latest current model Freightliner M2, Ford 550, or International 3200 Cutaway Chassis or equal**

2. **ENGINE**
   - 2.1 The engine furnished shall be a V8 6.2L gasoline powered engine, minimum. The engine compartment shall be insulated from the passenger compartment with a minimum 1 1/2" fiberglass material or equivalent to minimize interior noise level and heat. The engine cover shall be insulated for additional soundproofing. Interior noise level shall not exceed 80 dba under 45 mph and under no condition exceed 83 dba. Prefer engine below or equal.
   - 2.2 The engine shall be furnished with a large capacity full flow oil filter and engine oil cooler.

3. **COOLING SYSTEM**

3.1 Radiator shall be heavy-duty (4-core) with greatest available capacity recommended by manufacturer. A coolant recovery system shall be present to return expelled coolant to the system.

3.2 The largest radiator fan complying with manufacturer's standards shall be provided.

3.3 Vehicles shall have permanent ethylene glycol antifreeze providing protection for ambient temperatures from -20°F to +100°F while vehicles are used for prolonged transit purposes.

4. ELECTRICAL SYSTEM -12 VOLT

4.1 The alternator system shall be a **270 amp OEM, Penntex or approved equal** and all other components shall be selected and integrated to function in an environment characterized by low engine (alternator) speeds and high amperage demands. Alternator/regulator shall be protected from wheel wash.

4.2 A heavy-duty **12-volt horn** shall be provided. The horn shall be protected from the wheel wash.

4.3 The vehicles will be equipped with **dual OEM** batteries having a cold crank of not less than 700 amps each. The battery shall be lead acid premium construction, maintenance free. **A third 8D battery** will be mounted in a compartment with a slide-out tray on the side of the vehicle.

4.4 All wiring shall be color coded and function coded to enhance easy identification. The manufacturer explaining the coloring, function and all components of the system shall provide a wiring diagram. No butt or "T" connectors shall be used. All wiring shall be of sufficient size to carry the required currents without excessive voltage drops. All wiring shall be protected from heat, water, solvents, road splash, stones, grease, oil, fuel, abrasion, and chafing by proper insulation, conduit, or flexible tubing.

4.5 A **disconnect switch** that can be easily reached from the driver's seat shall be capable of disconnecting all body circuits.

4.6 The starter shall be capable of turning over the engine while SAE 10 W oil is in use and after ten hours cold soak at 0°F.

5. FUEL SYSTEM

5.1 The minimum capacity of the **fuel tank shall be fifty (50) gallons**.

5.2 There shall be an engine-mounted fuel filter with replacement elements.

5.3 Dual tanks are **NOT** acceptable.

5.4 The system shall be designed to keep fumes from entering the passenger compartment. All federal safety standards shall be met.

6. STEERING

6.1 The heavy-duty power steering system shall be self-centering with little or no driver effort.

6.2 The steering mechanism shall be constructed so as to make the wheel free from road shock and vibration.

6.3 The steering wheel shall be metal, covered with plastic or synthetic resin.

6.4 The vehicles shall have tilt steering and speed control feature.

7. TRANSMISSION

7.1 The transmission shall be heavy-duty, fully automatic power shift, hydraulic-drive type, 6-speed plus overdrive. Allison **or approved equal**

7.2 The transmission shift lever shall be **interlocked** with the starting motor to prevent engagement of starter in any gear position other than neutral and park.

7.3 A warning signal audible outside of the vehicles shall be activated when the transmission is in reverse. **(BU Alarm)**

7.4 An **auxiliary transmission oil cooler** shall be provided.

8. BRAKES

8.1 Dual Hydraulic, power, self-adjusting brakes with front disc and rear disc with 4 wheels ABS shall be provided. **Standard OEM** rotor diameter is required.

8.2 **Parking brake** shall be transmission mounted drum type and shall activate the rear wheel brakes. The handle or pedal that activates the parking brake shall be easily accessible to the driver but shall not hinder his or her movement to or from the driver's seat.

9. TIRES AND WHEELS

9.1 OEM wheels shall be heaviest duty available ventilated, pressed steel, **19.5"** minimum. They shall be designed to equal or exceed the G.V.W. All wheels shall be interchangeable. Vehicles shall have dual rear wheels and single front wheels. Wheels shall have **stainless steel wheel inserts** and **valve extenders** to facilitate recharge of inner tires on the rear axle

9.2 Tires shall be **LT 225/70 R 19.5 load range F.** Tires shall be balanced.

9.3 **Spare tire** mounted on wheel of same size and brand shall be shipped loose inside the vehicle.

10. SUSPENSION

10.1 Front axle capacity **7,000 pounds** with tapered leaf and OEM shock absorber
Rear axle capacity **13,500 pounds** with tapered leaf springs and OEM shock absorber

10.2 A rear stabilizer bar shall be installed.

11. REAR AXLE RATIO

11.1 4:41

11.2 Ratio is to be such that the vehicles shall be capable of maintaining a speed of 55 to 60 mph. for a prolonged period of time and at normal engine rpm.

0.1 A positive traction, limited slip type differential is **NOT** desired.

12. INSTRUMENTS, CONTROLS, BASE EQUIPMENT

12.1 Ammeter or voltmeter shall have numerical calibration or graduated charge and discharge.

a. Speedometer and odometer.
b. Oil pressure gauge.
c. Water temperature gauge.
d. Turn signal lever on column.
e. Emergency flasher control on column.
f. Turn signal and flasher indicator lights.
g. Fuel gauge.
h. Headlight high beam indicator.

12.2

a. Sun visor 6" x 30" that can be positioned at the windshield or to the left of the driver.
b. Two-speed minimum windshield wipers.
c. Two (2) front speakers wired to dash and Four (4) rear in passenger compartment.
d. Clearance (marker) lights controlled by headlight control switch.
e. Switches and temperature controls for passenger compartment heater, heater fan.
f. Passenger compartment courtesy lights and step well lights.
g. AM/FM/CD radio.
h. Tilt steering wheel.
i. Chrome grille and Bumper.
j. Reverse alarm (BU).

k. Driver's seat shall be four-way adjustable Level 2 vinyl with cloth inserts and an air ride suspension system. Color of seat will match other passenger seats. A quick release-type retract-able combination pelvic/upper torso seat belt shall be installed for the driver.

l. Front and rear mud flaps.

m. Fast idle switch in driver's area.

n. All gauges shall be clearly visible to the driver from a seated position. All switches shall be within reach of the seated driver and allow him or her to continue safe operation of the vehicles while engaging or disengaging switches.

13. EXHAUST SYSTEM

13.1 The exhaust system shall be the manufacturer's heaviest duty system available for the engine furnished. System shall be corrosion resistant and shall be securely fastened and routed to protect components from hazards. The exhaust shall exit straight out the back of the vehicles. The exhaust system shall be a standard OEM diameter**.** The system shall conform to the requirements of Federal Motor Carrier Safety Regulations.

14. BODY AND ACCESSORIES

14.1 The body structure shall be built as an integral unit adequately reinforced at all joints and corners where stress concentration may occur to adequately carry required loads and stand road shock.

14.2 The vehicles' body structure must incorporate a full jig-welded "cage" type construction. All structural support members shall be a minimum of 1 '/2" x 1 '/2", 16 gauge steel tubing. The following are acceptable:

a. 1"x2" 16 ga steel tubing.

b. 1½"x1½" 16 ga steel tubing.
1½"x3" hat section 18 ga steel.

c. 1"x1" 14 ga steel.
1"x2" 14 ga steel.

14.3 The body shall be bolted through the sub-floor structure to the chassis frame as recommended by the chassis manufacturer. Welding of any of the body understructure to the chassis frame will not be permitted.

14.4 All exterior panels (walls and roof) shall be metal or fiberglass composite. Side walls to be the equivalent of .063 aluminum minimum. Exterior panels are to be riveted, welded, or bonded to body framing. Pop rivets or sheet metal screws will not be acceptable for fastening the vehicles' exterior panels. All panels shall be installed so that they will shed water. Side panels below the floor line shall be non-corrosive and easily removable for service and repair.
The following are acceptable:

a. .04 aluminum laminated to Luan.

b. .30 gauge steel.

c. .04 sheet metal bonded to sheets of plywood.

d. Fiberglass composite exterior bodies will be acceptable.

14.5 Step wells shall be one-piece construction and adequately reinforced to prevent any deflection. Three steps shall be provided with minimum tread depth of 8.5 inches and **bottom step height no higher than 12 inches.** Steps and risers shall be in accordance with federal regulations governing elderly and handicapped transport vehicles. The **step wells shall be lit** and shall be continuous for the full width of the door opening.

14.6 Undercoating shall be applied to all metal parts that are subject to rust and corrosion by outside elements. Polyolueim, Ziebart, Quaker State Sound off, **Ashland Tectyl** 165G or equivalent shall be used. Automotive undercoating is not satisfactory.

14.7 All fasteners (nuts bolts, clips, washers, clamps, etc.) shall be of a type that will prevent corrosion (zinc, cadmium plated or phosphate coated). No sheet metal screws shall be used. All nuts and bolts shall be Grade 8 type, made in the U.S.A.

14.8 All major components (transmission, engine, radiator, battery, alternator, A/C compressor shall be easily accessible by access doors.

14.9 Vehicles are to have rear integrated step bumper.

.

14.10 At least two tow hooks shall be provided and shall be securely attached to the vehicles' understructure. **Tow hooks are to be mounted at the rear**. Tow hooks shall be located so that no damage occurs to the vehicle under tow.

14.11 Floor is to consist of **3/4" Marine Grade plywood** over steel out-riggers. **Wheel wells to be made of steel.** In the wheelchair lift position a minimum 11 gauge steel plate approximately 20" x 56" shall be welded to the floor assembly for strength.

14.12 Floor Covering: The floor covering shall be **Altro or approved equal**. **Color –Blue marble**. Also include a **yellow standee line** near front aisle.

Under Seat Area: The area under the seating area shall also be Altro floor covering.

Aisle: Aisles shall be of Altro floor covering, non-skid, wear-resistant rubber floor covering. Minimum over-all thickness shall be .1875 (3/16) inch measured from tops to ribs.

Bonding: Floor covering must be bonded to the floor with waterproof sealer. The covering must not crack when subjected to sudden temperature changes.

Step Tread: Step tread edges, including floor level, shall be covered with rally molded nosing. All **step edges shall have a two- (2) inch wide white diagonal striped band** running the full width of the step.

14.13 Doors:

a. **Passenger Entrance Door**: The front doorway will be provided on the right side of each vehicle. The door shall be two-leaf outward opening. The clear opening width shall be **minimum 32 inches and minimum clear opening height shall be 75 inches**. The passenger entrance door shall be **electrically operated**. Assist handles are to be mounted parallel on both sides of the stairwell. Doors and door wells are to be constructed to prevent drafts and entry of water to the extent practical. Door and door openings shall comply with federal regulations. **Exterior key switch shall be provided**.

b. Driver's Door: **Driver's door shall be at the left side of the driver's seat. A minimum of two steps shall aid the driver when entering or exiting.**

c. Emergency Exits: Emergency exits shall comply with F.M.V.S.S.517.217-76. It is required that clearly marked push-out windows be located on each side. The rear emergency exit is to be a **rear door with upper window and lower window**. Roof mounted escape hatch must be a **Transpec "Econo**" or approved equal.

d. Wheelchair **Lift Door**: The wheelchair lift door shall be mounted behind the rear axle and shall comply with all ADA regulations.

14.14 Windows:

a. Passenger, side: 3/16" thick side windows shall be of single density; tempered safety glass with 44% maximum to 28% minimum light transmission gray glaze. The windows shall have aluminum frames and shall be ventilating type with T-slides at the top sill. One window on each side of the body shall be the push-out type and clearly marked for emergency exit. All windows and frames shall meet or exceed the federal and state of Kentucky Standards including F.M.V.S.S. 217.

b. Driver's side window shall be gray glazed with 1/4 inch-tempered glass and shall be easily adjustable with one-hand operation.

a. A **van guard (rear window lens)** should be installed in upper rear window of the rear emergency door.

b. Windshield shall be 1/4 inch laminated safety glass with single density tint and shade band.

c. Entrance door windows shall be single fixed type, gray glazed, single density, safety glass that allows maximum practical visibility.

14.15 Windshield Wipers and Washers:

a. Two heavy-duty, electric, self-parking, two-speed minimum windshield wipers shall be furnished. Windshield washers with ample reservoir shall be located for easy inspection, maintenance, filling, and removal.

14.16 Heating and Defrosting Systems:

a. The heating system shall consist of at least three units, one front unit located in the driver's area, and **two 35K BTU units** so located as to uniformly heat the bus.

b. The front unit shall have one large heater core and heavy duty blower to provide sufficient heated air for defrosting the windshield and bus's heat. A minimum three-position switch on the driver's control panel shall control the blower motor.

c. An additional outlet shall be provided near the driver to allow heated air to the driver's area. A lever or knob shall control the distribution of heated air between the defroster plenum chamber and the bus's heating outlet. The control shall be located conveniently for the driver.

d. The intensity and temperature of the heated air shall be regulated by the driver at the driver's control panel.

e. The bus's rear heating unit shall be located to provide 65^{o}F, inside temperature (evenly distributed) at 0^{o}F ambient. The inside temperature shall be with an empty bus. A minimum three-position switch on the driver's control panel shall control circulation blower.

f. Combustion type heaters shall not be permitted.

g. The manufacturer shall add the required amount for permanent all-weather coolant after heaters have been connected to protect the cooling system to -20^{o}F tested at normal engine temperature.

h. Minimal heater output for the passenger area shall be 35,000 B.T.U each. Minimal driver heater output shall be 20,000 B.T.U. At least **one of the rear heaters shall both shall have a circulating pump.**

14.17 Air Conditioning and Ventilation

a. A complete factory air conditioning system shall be of a size capable of providing adequate cooling and dehumidifying capacity for passenger comfort. The system must be capable of maintaining a 72^{o}F interior temperature with a full load of passengers, with an ambient temperature of 98^{o}F and 70% relative humidity.

b. Minimal air conditioner output for the passenger area shall be 75,000 B.T.U. Minimal driver air conditioner output shall be 12,000 B.T.U. **AC industries 773 MAX** or approved equal.

c. There shall be multiple cool air outlets to evenly distribute cool air for passengers and operator comfort.

d. Bidder shall furnish complete details of the air conditioning system proposed for these vehicles.

Recommend using AC 733 MAX GEN V with **EM3 evaporator**, CM3 skirt condenser, DUAL OEM ALTERNATORS, DUAL COMPRESSORS

e. There shall be one dash unit for the driver area and one large heavy-duty internally mounted roof unit (with appropriate drainage to prevent leaking) for the passenger compartment. The evaporator must have a minimum of 1,600 CFM airflow. The condenser will be skirt mounted. There will be no exterior roof mounted equipment.

f. A ventilator in front of the driver capable of providing ample direct ventilation for the brake and acceleration pedal area during summer operation shall be furnished. The ventilator shall have a non-porous seal. Its control shall be operated easily by the driver and shall be accessible. The ventilator shall have the capability of being completely inoperable during cold weather.

14.18 Interior and Exterior Lighting

a. **Automatic LED access light(s) shall be installed at the passenger entrance** to sufficiently light the outside approach to the entrance and the step well. Light(s) shall be situated to avoid damage by bus's washer, tree limbs, etc.

b. **Automatic LED access light(s) shall be installed on the wheelchair lift**. The wheel chair lift light shall come on when the lift door is opened. The light shall be minimum 21 candle power, and shall be activated by a door jamb plunger switch.

c. Adequate lighting shall be provided to illuminate the aisles, passenger compartment, and seating positions. **Minimum of 7 LED interior lights, 4 street side and 3 curbside.**

d. A **driver's overhead light** shall be provided that will enable the driver to easily read or write at night while in the driver's seat.

e. The instrument panel shall be lighted to enable the driver to easily see all gauges from an upright seated position while driving.

f. All exterior light(s) must comply with federal and state requirements.

Exterior lighting shall include:

(1) Sealed beam headlights with high and low beam switch that is turn signal activated
(2) Front, rear, and side directional signals, operated by a lever on the left side of the steering column shall be the self-canceling type
(3) Two white or clear backup lights in the rear of the vehicles, automatically engaging when the transmission is in reverse
(4) Rear mounted, red, combination stop/signal tail lights; and tail light below both in one unit
(5) A single, white, rear license plate light
(6) Front and rear clearance lights
(7) A minimum of six reflectors; two red on the rear and one on each side; rear area, one on each side; front area, amber
(8) Front and rear identification markers, amber front and red rear
(9) A switch shall be provided to operate all directional signals simultaneously as an emergency warning signal, to be on steering column.

Note: All exterior lighting will be upgraded to LED per 16.2B

14.19 Seating arrangement/floor plan

a. Seating arrangement/floor plan of bus shall accommodate two (2) forward facing wheelchairs located at rear wall of bus and Twenty - (20/24) forward facing passengers. Additionally two (2) double three step foldaway seats shall be mounted over the rear most wheelchair position. Passenger capacity shall be 20 +2WC OR 24 +1 WC.

- Passenger seats shall be mid-back contoured seats with 16 gauge tubular steel frames. Standard width should be between 16¼"-18". Back height should be 22" from top of seat cushion. A polyurethane cushion and a No zigzag Spring shall be bolted to a heavy-duty 14 gauge steel frame.
- Vinyl seat covering is required (provide sample). Aisle seat will have a padded armrest on aisle side that flips up for easy access.
- All aisle seats shall have padded corner grab rails.
- Seating capacity shall be 20/24 seated passengers (see diagram Appendix A) and two (2) wheelchairs. All seating shall comply with F.M.V.S.S. 207 and 302.

g. **Retractable 75” seat belts** are required for all passengers. All passengers shall be provided with a pelvic seat belt with extra length (minimum 18" longer than standard). All seat belts shall be the standard buckle type. Seat belts and anchorages shall meet the requirements of F.M.V.S.S. 209 and 210. Seat belts must be compatible with infant and child restraint equipment. REMOVAL OF SEAT BELTS OPTIONAL FOR CITY BUSES

h. **Driver's seat shall be four-way adjustable Level 2 vinyl and an air ride suspension system.** Color of seat will match other passenger seats. A quick release-type retract-able combination pelvic/upper torso seat belt shall be installed for the driver.

14.20 Wheelchair Tie-downs

a. Tie-downs will be mounted flush to the floor surface, with no protrusion.

b. Each wheelchair tie-down location shall be equipped with shoulder-cross or torso belts, or other seat belt devices which are anchored to the floor, that meet or exceed state and federal regulations.

c. **Two "Q Straint" retractable tie down systems** or approved equal that meets ADA requirements wheelchair securement shall be provided which will be capable of securing standard, balloon tire and electric wheelchairs. The device shall have sufficient strength to restrain an occupied wheelchair load of 600 pounds under crash conditions. The device shall not cause or have the potential of causing injury to the wheelchair occupant or damage to the wheelchair or wheel mechanism.

14.21 **Interior paneling shall be fiberglass,** or otherwise covered with an easily maintained material. The basic interior color shall be frost white. The dash and instrument panel shall be finished to harmonize with the overall interior tones. Interior paneling shall have a minimum thickness of 0.1 inch.

14.22 Signage

All **ADA required signs,** including priority seating and international wheelchair signs are required.

14.23 **Handrails, Stanchions and Modesty Panels**

Passenger assists in the form of full grip, vertical stanchions or handholds shall be provided for the safety of standees and of ingress and egress. Handhold and stanchions shall be made of 11/4" stainless steel tubes. All handholds and stanchions shall be properly supported and held securely in place with stainless steel corrosion resistant, anti-rattle fittings. **Dual parallel entrance grab rails** shall be provided at the entrance step well. A **vertical stanchion shall be provided at rear of passenger door at the aisle.** A **horizontal handhold shall extend from this stanchion to the wall.** Door operation shall not create a hazard. A **vertical stanchion shall be provided as part of the driver's barrier with modesty panel behind driver with lexan shield mounted above.**
Overhead left and right roof grab bars shall be installed so that it is possible to move the full length of the coach without losing support. **Modesty panels** shall extend from 1½" above the floor to bottom of window. Finish shall match interior seat colors. Two diagonal grab rails of 3/4" to 1½" stainless steel shall be installed with at least 1½" knuckle clearance at the front door to aid boarding and exiting passengers. Installed one each side, they are not to infringe on the clear opening.

14.24 Mirrors

a. **Fully adjustable, outside right and left hand rear view mirrors shall be 6" by 9" minimum.** Frame and bracket shall be chrome-plated anodized aluminum or stainless steel and shall be retractable, break-away-type to prevent damage by bus's wash equipment. The right front mirror shall be mounted to prevent contact with pedestrian or boarding passengers.

b. A **low mount convex mirror** shall be furnished below the outside mirrors for localized vision.

An adequate **10" x 7" convex style rear view mirror** shall be installed for driver's view of the interior and rear of the vehicles. This overhead two-way adjustable mirror (minimum 15" x 6") shall be located in front of and over the driver's seat above the windshield. All mirror mountings are to be sufficiently rigid to prevent distortion from vibration.

14.25 **Emergency Equipment** shall consist of one five-pound fire extinguisher, one 21-unit first aid kit, Body fluid kit and three safety triangle reflectors. All emergency equipment shall be locked in an area easily accessible by the driver and will not interfere with passengers when not in use.

14.26 **Two way radio**

Successful bidder shall install **Kenwood TK8360HU or approved narrow banding equal** two way radio with a low profile antenna in an agency approved location which is easily accessible to bus driver.

14.27 Farebox

Vehicle shall include a **Main Fare box (color-black) Diamond Model H or approved equal** with Chicago lock keyed to match existing ABS vaults. **Must include two vaults.** Farebox location shall not restrict traffic or operation of driver's controls and shall allow driver to reach coin drop lever and view the change platform.

15. LIFT SPECIFICATIONS

15.1 Lift platform and mechanism shall be the **Braun Ability Lift** latest model or approved equivalent. The platform shall be a power-up, gravity-down system which is fully automatic including a required safety stop at the outer edge of the platform. The following specifications apply to the lift:

a. Install. Depth (folded): 12"
b. Usable platform width: 36"
c. Usable platform length: 51"
d. Floor to ground travel: 48"
e. Width (traveling frame): 39.5"
e Entry width (31")

15.2 The **lift doors shall be a dual panel doors** with "L" handle. It shall have a three-point latch with key lock. There shall be **one non-ventilating window,** 12" x 21", per door panel that shall have the same percentage of light transmission as the other side windows. There shall be heavy-**duty pneumatic holdbacks** for the each door that will hold open under any condition.

15.3 The size of the body opening shall in no way limit the full operation of the lift nor impede its proper maintenance.

15.4 An **Intermotive brake interlock system or approved equal** shall be provided to ensure that the vehicle cannot be moved while the lift door is open.

16. MISCELLANEOUS STANDARDS

16.1 Manuals and Catalogues

At or before the time of delivery of the vehicles, the manufacturer shall supply to AGENCY the following items:

Chassis Service Manuals	1 copy
Parts Manuals	1 copy
Wheelchair Lift Manuals	1 copy
Wiring Schematic Diagram	1 copy
Operators Manuals	1 copy
Wiring Key	1copy

Any other manuals such as wheelchair tie-downs, air conditioning chassis, body, seats, etc. that are not included in the main parts and service manuals shall be delivered.

16.2 Other items to be included in bid price:

A. Two Overhead grab handles to accommodate standees.

B. Upgrade all bus body exterior lights to **LED**

C. Lexan shield mounted on modesty panel behind driver.

D. Armoured bezels for clearance lights that are not recessed

E. Two **storage pouches** for tie down systems

F. Vehicle Height warning sticker

G. No food, smoke or drink sticker

H. This bus makes frequent stop stickers

16.3 Options to be priced separately

A. Option to upgrade to latest current chassis model for future purchases

B. Cost to upgrade to substitute diesel engine

16.4 Legal documents shall be delivered with the vehicles. Proper documentation to acquire license and registration is required at time of delivery.

16.5 After sale, service shall be continued while the vehicles are in service. This shall include, but not be limited to, service and parts manual up-dates, parts sales, guidance in solving mechanical, electrical, or other problems with the vehicles. When needed, agency maintenance supervisors shall be permitted to call the manufacturer at the expense of agency for assistance.

17. WORKMANSHIP

17.1 Workmanship throughout the vehicles shall conform to the highest standard of commercially

accepted practice for class of work, and shall result in a neat and finished appearance. The design of the body and equipment which the manufacturer proposes to furnish must be such as to provide vehicles of substantial and durable construction in all respects.

17.2 Welding procedures, welding materials, and qualifications of operators, shall be in accordance with standards of the American Society of Testing Materials and the American Welding Society. All welds visible to the public shall be ground smooth after the welding to present a smooth, workmanlike appearance. Where metal is welded to metal, the contact surface shall be free of scale, grease, and paint.

17.3 All exposed surfaces and edges shall be smooth, free from burrs and other projections, and shall be neatly finished.

17.4 All parts shall be new and in no case will used, reconditioned obsolete parts be accepted.

17.5 Manufacturer shall submit with its bid a detailed description and specifications of the frame structure, roof structure, and body with particular reference to materials used.

18. MOTOR VEHICLE STANDARDS

18.1 The manufacturer must certify that the buses comply with all U.S. Department of Transportation safety standards for bus applicable as of the date of manufacture, and complies with all Interstate Commerce Commission requirements for motor buses operated in interstate commerce.

18.2 The buses shall be in complete compliance with all requirements of the laws of the State of Kentucky as to lighting equipment and all warning and safety devices.

18.3 The manufacturer shall certify that the buses conform to the air pollution control standards set by the Federal Transit Administration for motor vehicles to be used on projects by FTA.

18.4 The vehicles must comply with the Americans with Disabilities Act (ADA) requirements that went into effect January 26, 1992, as well as the FTA transit accessibility program. NOTE: The vehicles being purchased will be part of a larger fleet of vehicles in a demand responsive system, which when viewed in its entirety ensures to individuals with disabilities a level of service equal to that provided to the general public. Therefore, it is allowable to have removable seating over all the wheelchair restraint stations. This approach is designed to give maximum flexibility and allow most efficient dispatching of vehicles.

19. TESTS AND TESTING

19.1 Each complete vehicle and all working and moving parts and operating devices shall be thoroughly tested and put in operating condition by the manufacturer.

19.2 The roofs, windows, windshields, and compartment doors of the vehicles shall be water tested in an approved manner and any leaks found shall be repaired in a workmanlike manner.

19.3 The manufacturer shall not attach any dealer identification, advertising, or similar material to the

vehicles. **Prior to acceptance of vehicles by THE AGENCY, the manufacturer shall service and adjust vehicles for operation to include, as a minimum, the following:**

a. Focusing of lights
b. Tuning of engine
c. Adjustment of accessories
d. Checking of electrical braking and suspension systems
e. Charging of battery
f. Inflation of tires
g. Balancing of all wheels
h. Complete lubrication of engine, chassis and operating mechanisms with recommended grades of lubricants for the ambient temperature at the point of delivery
i. Servicing of cooling system with permanent type antifreeze and summer coolant for - 20°F
j. Servicing windshield washer with water and appropriate additives
k. Four-wheel alignment (caster, camber, toe-in and thrust angle) shall be done on completed bus prior to delivery. Provide a copy of the alignment report with the vehicle.

19.4 In addition to the Certification for the Interim Bus Testing Program (49 CFR Part 665), a copy of the 7 year – 200,000 mile Test Report on the Bus Model must be provided by the **Bus Testing Facility in Altoona, PA.**

20. INSPECTION

20.1 The agency reserves the right to inspect all material and workmanship at all times during the progress of the work.

20.2 Final inspection and acceptance of the vehicles covered by these specifications shall be made by the agency.

21. CIVIL RIGHTS AND MINORITY BUSINESS ENTERPRISES

The successful bidder shall comply with the regulations of U.S. Department of Transportation relative to non-discrimination in federally assisted programs of the Department of Transportation (Title 49, Code of Federal Regulations, and Parts 21) which will be incorporated by reference and made a part of all contracts.

NUMBERING AND LETTERING

Bus shall be numbered, striped, and lettered to match existing fleet as closely as possible. Information will be provided to successful bidder.

22. REQUEST FOR APPROVED EQUALS

Requests for approved equals or any exception to specifications should be included on the bid form with appropriate documentation to show that the substituted item is an appropriate equal.

23. NON-RESTRICTIVE CLAUSE

When brand names, trade names or manufacturer's name or catalogue numbers appear in the specifications, it is intended to establish a performance standard. The manufacturer may request

to substitute a similar product as specified in the above paragraph.

24. DELIVERY

Based on reasonable production time and with due consideration to unforeseen circumstances, THE AGENCY shall expect that delivery on the units covered by these specifications will be made **within (180) days** of placement of purchase order. If foregoing time of delivery cannot be met, indicate as an exception on submitted bids with projected time of delivery. For bid purposes, all vehicles shall be delivered F.O.B. KPTA Agency's address in KY.

25. CERTIFICATION

The following certifications are required:

25.1 Certification of compliance with all applicable Federal Motor Vehicle Safety Standards, including Numbers 101, 102, 103, 104, 105, 106, 107, 108, 111, 112, 113, 116, 119, 120, 124, 127, 205, 207, 208, 209, 210, 212, 213, 217, 219, 220, 221, 222, 301 and 302.

25.2 Certification that the buses offered have been designed, manufactured, assembled and tested for passenger service, and is suitable for extended service in heavy, stop-and-go traffic.

26. WARRANTY

26.1 The manufacturer shall state all terms, conditions, and limitations of the warranty. Terms, conditions, price, limitations of any optional, extended warranties shall be stated, including local agents responsible for service.

26.2 The minimum warranty for chassis mechanical components shall be 24 months or unlimited miles with no deductible. This warranty shall fully pay for defective workmanship, materials and labor costs.

All other warranties apply.