

PROPOSAL SUMMARY SHEET

2017- 21 PASSENGER PARATRANSIT SHUTTLE BUS

Project Name

Business Name: Midwest Transit Equipment, Inc.

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<u>PURCHASE</u>	
GRAND TOTAL PURCHASE PRICE:	\$ <u>59,523.00</u>

ADDITIONAL INFORMATION

YEAR 2017 FORD

MAKE STARCRAFT

MODEL ALLSTAR

Delivery will be complete within 90 calendar days from receipt of chassis.

The above price is based on the attached Technical Specifications.

TECHNICAL SPECIFICATIONS

DESCRIPTION:

This Exhibit describes a new Starcraft AllStar model mid-sized transit bus (the "Bus"), which will be used to transport passengers in both rural and urban areas. The Bus will be of a "Steel Cage" type construction for sidewalls, rear walls, and roof. The Bus body is to be mounted on a Ford RV Cutaway chassis, E-450 series with the "Shuttle Bus Prep Package (Ford Option 47B)" included. The commercial cutaway series are not acceptable. All Bidders must comply with each requirement listed.

The Bus shall be of substantial and durable construction in all respect, with particular attention given to features, which will provide the safest possible Bus for transporting people. **If a Bidder takes any exception to the Technical Specifications listed in this Exhibit B, Bidder must indicate on page 11 of this ITB each exception and shall explain the reason for each exception taken.**

DETAILED SPECIFICATIONS:

Materials

All materials used in conversion of the Bus shall conform in all respects to American Society of Testing Materials, Society of Automotive Engineers or similar association standards.

Capacity

Bus must be able to accommodate the following loads:

1. With no wheelchairs on board, 21 seated passengers plus driver.
2. With two wheelchairs on board, 16 seated passengers plus driver.

DIMENSIONS:

Description	Requirements
Overall exterior length	315" maximum
Overall Exterior width (ex. mirrors)	96" maximum
Overall height	117" maximum
Interior head room	80" minimum
Interior width (seat level)	93" minimum
Aisle width	17" minimum
Ground to first step	11.5" maximum

CHASSIS EQUIPMENT:

Description	Requirements
Model year/make	2017 or newer Ford E450 Super Duty cutaway
Wheelbase	190" minimum
G.V.W.R.	14,500# minimum
Engine	6.8L V-10 gasoline engine
Transmission	Automatic w/overdrive
Rear axle ratio	4.10:1
Axle ratings	Front 5,000# min Rear 9,500# min
Steering	Power
Brakes	Power disc, antilock
Shocks	Heavy duty front and rear
Batteries	Dual Heavy Duty 78 amp
Alternator	225 amp
Bumper front	Chrome front, 11 gage steel black painted rear w/wrap around corners
Horns	Dual
Tires	6=LT225/75R 16E radials, bsw, A/S spare tire to match
Wheels	White painted steel, 16"x6", 4 hand hole
Fuel capacity	55 gallons minimum
Radiator	Heavy duty largest capacity available
Gages	Oil pressure, fuel, Amp meter, temperature
Drive shaft guards	Two (2)
Wipers	Intermittent
Air bag	Drivers side
Steering features	Tilt wheel w/cruise control

VEHICLE BODY:

Body, General Construction

The body structure shall be built as an integral unit. All joints and corners where stress concentration may occur shall be adequately reinforced to carry required loads and withstand road shock. The bus body shall be certified by an independent testing agency to meet the requirements of Federal Motor Vehicle Safety Standard Number 220 (School Bus Rollover Protection). Certification of compliance with these tests shall be provided with the submission of this bid. Failure to submit this data may render your bid unresponsive.

Body Structural Framing

- A. The vehicle body structure must incorporate an integral, fixture-welded steel body framing for floor, front, rear, sidewalls and roof. Fastening of floor to roof and roof to sidewalls by means other than welding is not acceptable. Any method of construction that is accomplished without welding or that result in a configuration that is unable to meet the quality and structural integrity as defined above is not acceptable. The purchaser will be the final judge as to the acceptability of the proposed construction.
- B. The vehicle body structure must incorporate a full jig-welded steel body framing for floor, front, rear, sidewalls, and roof body construction. Any construction method utilizing fiberglass or plastic as primary support in stress bearing wall sections is not acceptable and will not be considered. The body shall incorporate steel structure as the primary load-bearing mechanism.
- C. The sidewall structure shall be 18 GA custom formed steel "C" channel with bends wall bows. Wall bows shall be incorporated with and welded to lateral members of 16 ga. X 1" x 1" formed "C" channel and/or 16 ga x 1" x 1" steel tubing. The exterior sidewall panels shall be fiberglass (FRP) bonded to structural luan. The sidewall and roof shall be joined at the roof gutter above the windows. All panels

shall be installed so that they will shed water, that is, the leading panel shall be lapped over the following panel and in no case shall the sealing of the panels be dependent on caulking alone. Side panels below the floor line shall be aluminum or fiberglass and easily removable for service and repair. The roof structural support members shall be the equivalent of 18 GA steel formed hat section roof bows, 1-1/2" by 3-1/2". Roof bows shall be incorporated with and welded to lateral members of 16 ga. 1" x 1" steel tubing. Exterior roof panel shall be FRP type material.

- D. The bus body will be essentially a steel cage after components are welded together. The mounting track for the passenger seats will be welded to both the side-wall steel frame and to the steel sub-floor. Any other method of attaching the seat track to the bus body is not acceptable.
- E. Side wall and rear wall shall be insulated with 1" thick and roof with 1 1/2" thick polystyrene insulation panels that are cut to fit all interior wall and roof cavities.
- F. The structural steel shall be treated with anti-corrosion material after the entire framing structure is welded together.
- G. The body shall be bolted through the sub-floor structure to the chassis frame and utilize rubber isolating mount pads. No part of the body may be welded directly to the chassis frame structure.
- H. A front cap constructed of fiberglass shall close in the front end of the body.
- I. The exterior sidewall of the bus shall be smooth. There shall be no exposed fasteners on the exterior of the bus.
- J. All nuts, bolts, clips, washers, clamps and like fasteners shall be zinc or cadmium plated, or zinc chromate coated to prevent corrosion.
- K. Wheel housings shall be of one-piece steel construction, 14 GA minimum. Wheel housings are to be constructed and adequately reinforced to prevent deflection. Ample clearance shall be provided for tires in their maximum jounce position according to the chassis manufacturer.
- L. Access doors shall be provided where necessary to service transmission, engine, radiator, battery, and air conditioning components.
- M. The entire body frame under structure shall be fully undercoated according to the chassis manufacturer guidelines. The joints of floor and walls or any voids shall be sealed with non-flammable resin-type material after manufacturing of the body and interior items are installed in the bus.
- N. Any bright metal exterior trim shall be stainless steel, polished aluminum, or chrome plated.
- O. Water channeling rain gutters shall be installed over all door and window openings.
- P. A Radio ground plane for two way radio antenna installation shall be provided under roof. Ground plane shall have an interior access cover and flexible conduit that shall have a wire or rope pull ready for use to pull coaxial cable thru. Coaxial cable pull to terminate on the right side of the engine cover.

INTERIOR:

Interior walls shall be grey fiberglass material. All interior trim pads and cab liner are to be grey vinyl. Headliner in passenger area shall be grey cloth.

MIRRORS:

Shall consist of two (2) RV style exterior mirrors that consist of a large flat glass mirror and a convex spot mirror. Convex is to be incorporated into the mirror head. Mirrors are to be heated and remote operated.

PASSENGER ENTRANCE DOOR:

- A. The entry door shall be fully encompassed by an integrally welded steel door surround. The complete door surround frame shall be a matrix of 1" x 1" 16 ga. and .75" x .75" 11 ga. steel tubing and will incorporate the step well, and be installed in the body as a single unit. The step well and header plate shall be a minimum of 11 GA steel. The door shall have a full clear opening width of at least 29" and a full height of at least eighty inches (80").
- B. The entry door shall be a two-leaf, outward opening type, electric operated, and controlled from the driver's seat.
- C. Full-length glass shall be provided on the entry door for full visibility.
- D. At the meeting edges of each door leaf, a rubber seal shall be installed so that the edges form a tight overlapping seal when closed.

- E. A 1-1/4" stainless steel grab bar (stanchion) shall be securely fastened to both sides of the interior of the doorway parallel to the steps to assist passengers in entering or exiting the vehicle.
- F. An exterior key switch shall be mounted to the front side of the entrance door to allow entrance without having to go through the driver's door or have the vehicle running.

FLOOR STRUCTURE:

The floor covering shall be Gerflor Sirius Anthrasite grey. The floor covering shall be butt jointed and securely cemented to the plywood floor with a waterproof adhesive. The floor sub-structure shall be covered with minimum 5/8" CD exterior grade plywood with sealed edges. Step edges shall have bright white nosing. A white standee line shall also be provided.

WINDOWS:

- A. The windshield is to be a one-piece design. Windshield shall be laminated tinted safety glass.
- B. The driver's window shall be capable of opening. This window shall be tempered or laminated safety glass.
- C. The side passenger windows shall be transit type, as opposed to the school bus type. It is desired to maintain a transit type appearance, and school bus type windows will not be accepted. The passenger windows shall be certified by an independent testing agency to be in compliance with FMVSS 217 (Bus Window Retention and Release). Certification of compliance with FMVSS 217 shall be provided with submission of this bid. Failure to submit this certification will render your bid unresponsive. Passenger windows must be capable of opening to ensure ventilation. Windows shall be an upper T-Sliding design with dark tinting.
- D. Hinged emergency escape windows must be provided on each side of the bus. In addition, a rear hinged emergency escape window must be provided. Emergency windows must be clearly labeled and operating instructions must be clearly visible.
- E. All egress windows shall be identified with a red light that is illuminated during vehicle operation. All passenger windows must be safety glass with an AS-3 marking. Windows are to be dark tinted to a maximum of 31% light transmission. All passenger windows shall be installed in black powder coated or anodized aluminum frames, or an equivalent. Each side window shall be a minimum of 36" tall by 36" wide, except where the floor plan desired requires the use of one smaller (filler) window on each side.

LIGHTING:

INTERIOR:

- A. All interior lights to be LED.
- B. Shall consist of one (1) step well light to illuminate entrance area adequately when door is opened and one (1) drivers courtesy light that activates when drivers door is opened or with head light switch.
- C. Passenger cabin area lights shall offer sufficient interior light levels to allow for safe passenger movement. Said lights shall be mounted above side windows at roof line. These lights shall activate when the entrance door is open or with a separate interior switch located by the driver.
- D. An exterior LED light, that meets ADA requirements, shall be mounted in the body skirt by the front entrance door. This too shall activate when door is opened.

EXTERIOR:

- A. Shall consist of OEM chassis standard front cab light configuration.
- B. Body shall have five (5) amber clearance lamps on the front and five (5) red on the rear in ICC configuration.
- C. All marker lights shall be LED.
- D. Rear of bus shall have an LED license plate lamp, two LED (2) 4" round tail/stop lamps, two (2) 4" round white back up lamps and two LED (2) 4" round amber turn signals.
- E. Tail/stop, backup and turn signal lamps shall be the types that are totally sealed and throw-a-way style. Lamps shall be installed in a manner that is aesthetically pleasing and in combination form. School bus type lamps are not acceptable.

- F. Vehicle shall have an LED high mount center stop lamp located above the window.
- G. Vehicle shall have mid ship LED amber turn marker lights.

DRIVERS CONSOLE:

A separate drivers console shall be included for the purpose of accommodating all switches that are installed by body manufacturer. These shall include, but are not limited to, electric door switch, heater switch, air conditioning controls, interior passenger lights switch and lift power switch. This console is to be located in a manner to allow for easy use by driver. Console shall be mounted in an overhead panel located above windshield and angled towards driver. All switches installed by body manufacturer shall be rocker style. Only exception is regarding rear air conditioning switches which shall be those supplied by the air conditioning manufacture.

WIRING:

All wiring shall follow a uniform code of color, and be function coded to allow with ease the identity of individual wires throughout the vehicle. There shall be two (2) fuse/relay boxes. One shall be chassis OEM installed and shall not be altered in any way. The other shall be for body and components as installed by body manufacturer. This junction box shall be installed on the interior of vehicle. An electrical wiring diagram shall be supplied with the vehicle for all body components.

AIR CONDITIONING:

Shall consist of chassis OEM dash air conditioning and body manufacturer installed rear air conditioning. Capacity shall be a minimum of 68,000 BTU's. System shall incorporate a three (3) fan skirt mounted condenser. Dual compressors are required. Evaporator shall be installed in the rear of the vehicle above the rear window. Bidder shall submit information on make and type of air conditioning proposed along with wiring/plumbing diagrams with bid.

HEATING:

Shall consist of chassis OEM dash heater/defroster and one rear floor or seat mounted heater with a minimum of 65,000 BTU's. An exterior mounted shut off valve shall be supplied for the rear heater.

STANCHIONS AND HAND RAILS:

Bus shall have a vertical and horizontal stanchion with modesty panel mounted behind the entrance door. There shall also be a right and left entrance hand rail at step area. These hand rails shall be mounted in a manner that allows passengers to grasp throughout the accent or decent of the vehicle. In other words they shall follow the incline of the steps. A stanchion/modesty panel shall also be installed to the rear of the driver's seat. Two (2) overhead standee rails are required.

SEATS:

ALL:

- A. **ALL SEATS, WITH THE EXCEPTION OF THE FOLD/FLIP SEATS, SHALL BE MOUNTED TO TRACK SEATING RAILS.**
- B. Two (2) 24" seat belt extenders shall be provided and work with all seat belts.
- C. All seats shall be covered with level #4 Repel materials. Colors to be 189 Icon Blue.
- D. All seat positions shall have retractable seat belts that meet all FMVSS requirements.
- E. Black padded seat back assist rails shall be provided at aisle seats (9). Not required on rear row seats.

DRIVER: Shall be high back reclining bucket seat with right arm rest.

PASSENGERS:

- A. Bus shall be able to accommodate 21 passengers with no wheelchairs on board.

- B. Permanent seats shall be individual mid high back bucket style shall have a minimum width each of 17", minimum cushion depth of 16". Top of seat cushion shall be 18" above floor with top of seat back a minimum of 38" above floor.
- C. All aisle side seats shall be equipped with hard rubber covered flip armrests and seat back assist rails
- D. There shall be eight (8) fixed mid high double seats.
- E. There shall also be two (2) 34" mid hi forward facing fold a way seats mounted in the left rear of the bus and one (1) single flip seat mounted against rear wall next to the lift. These seats shall fold down whenever there are no wheelchairs on board. See attached Exhibit C for a floor plan showing the Village's desired layout.

REVERSE ALARM:

Bus shall be equipped with a reverse alarm that activates when the transmission is put in reverse operation.

PARATRANSIT EQUIPMENT:

LIFT: Bus shall have a Braun Century NCL954IB3454 1,000# lift that meets all ADA and FMVSS403 and 404 requirements. Lift shall be mounted in right rear corner of bus. An additional leaf spring in right rear shall be added to OEM springs. Lift shall be equipped with a transmission/parking brake interlock that prohibits vehicle from moving if lift doors are open. Lift interlock shall also incorporate a fast idle system. Interlock/fast idle system shall be manufactured by Intermotive products.

LIFT DOORS: Shall be of double panel construction. Each panel shall have a security latch with at least one of these panels to have a handle with a key lock cylinder for the purpose of locking and securing the bus. Each door panel shall have a window that is the same height as the side passenger's windows and shall be installed at the same height as the passenger windows. Each door panel shall have heavy duty gas filled shocks to hold doors open. Lift doors shall meet the minimum requirements of ADA regarding clear opening height and width as it applies to buses in excess of 22 feet. An audible and visual alarm system shall be installed in drivers area to alert driver of lift door open.

LIFT LIGHTS: An interior LED light shall be mounted above the lift door as well as one (1) exterior LED lift light which shall be mounted in the skirt of the bus and centered below the lift doors. Illumination requirements of these lights shall meet ADA requirements. These lights shall activate when the lift doors are opened and shall be independent of vehicle driving lamps.

MOBILITY AID/PASSENGER RESTRAINT BELT SYSTEMS: Shall be manufactured by Q-Straint, model "QRT auto retracting type, and be the "L" style and consist of four (4) straps that secure wheelchairs in place and a combination lap/shoulder harness for wheelchair passenger. These securement systems must meet all ADA requirements. Tracks in floor must be flush mounted. Bus shall be able to accommodate two (2) wheelchairs. Provide two (2) TDSS "L" track under seat storage systems on the two fold a way seats.

PRIORITY DECALS: Decals indicating that wheelchair positions are reserved for those with mobility aid devices as well as one set of forward facing seats that are reserved for passengers with disabilities shall be installed. These decals are to meet all ADA requirements.

STORAGE COMPARTMENT: A storage compartment with lock located in the nose cone of the bus above the front windshield shall be supplied. This compartment shall have adequate space and incorporate at least half the width of the front nose cone area.

SPARE TIRE:

Matching, ready for use spare tire and a carrier shall be provided. Carrier shall be mounted under rear of body.

RADIO:

An AM/FM CD radio w/4 speakers shall be supplied. Radio shall be mounted in OEM chassis location in dash.

SEATING FLOOR PLAN

This Exhibit is a floor plan showing the Village's desired seating layout. Bidders must provide a copy of Bidder's proposed floor plan.

