ADDENDUM #2

RFP #2018-02

Approved Equal and/or Clarification Requests

1. ORT will accept corrosion resistance periods of between 7 and 10 years and mileages between 250,000 and 500,000 miles.

2. ORT will accept powder coated mild steel cage structures made from 14 gauge and 16 gauge steel.

3. ORT will accept vehicles meeting Docket 90 Recommended Fire Safety Practices for the engine compartment and seating. All other portions of the vehicle will meet FMVSS 302 standards.

4. ORT will accept vehicles with front tow hooks in lieu of attachments for a front tow bar.

5. ORT will accept 5/8” Wolmanized pressure treated plywood as an alternate for the subfloor.

6. ORT will accept a vinyl step edging on platforms in lieu of stainless steel trim.

7. ORT will accept surface mounted license plates.

8. ORT will accept batteries being located within the engine compartment.

9. ORT will accept color reinforced fiberglass panel (2.0mm) as interior walls.

10. ORT will accept the interior of the bus meeting FMVSS 302.

11. ORT will accept varying heights of coolant sight glass and reservoir fill above 48 inches.

12. ORT will accept standard twist caps on engine oil and radiator fill tubes.

13. ORT will accept nonmagnetic type hex head drain plugs for all lubricant sumps.

14. ORT will accept fuel tanks made of 12 gauge Aluminized Steel with a primer finish.

15. ORT will accept the ZF independent front suspension.

16. ORT will accept the ZF rear axle.

17. ORT will accept an axle warranty of 3 years/75,000 miles.

18. ORT will accept the electronically actuated engine cooling system manufactured by Greyson.

19. ORT will accept 3” round interior lights located in the transition panels. The functions may be All-on or All-on with door.

20. ORT will accept up to a 3 piece windshield.

21. ORT will accept an operator’s window with a lower slider and non-egress.

22. ORT will accept 3/16” tempered glass for the operator’s window.

23. ORT will accept side windows with double upper sliders.
24. ORT will accept the operating instructions for the egress window as a decal fixed to the window.
25. ORT will accept 3/16” tempered glass for the side windows.
26. ORT will accept the Safe Fleet exterior mirrors that are 9”x13”. The Safe Fleet mirrors will be remotely operated, heated and contain side-mount turn signals.
27. ORT will accept a non-ducted air delivery system for the A/C.
28. ORT will accept reinforced fiberglass panel with a thickness of 2.0mm for the interior ceiling.
29. ORT will accept polystyrene wall and roof insulation of 1.5” that meet FMVSS 302.
30. ORT will accept the Braun RA300 Bi-Fold ramp as an alternative.
31. ORT will accept door and ramp controls on either the left or right side of the dash, as proposed in the Main Dash Layout.
32. ORT will accept the windshield washer system as proposed with a wet arm design.
33. ORT will accept the proposed washer fluid reservoir fill location inside the bus, behind an access door location on the front dash as proposed.
34. ORT will accept the World Wide Group 31 batteries as proposed.
35. ORT will accept standard flooded batteries in lieu of absorbent glass mat (AGM) batteries. Such as the World Wide Group 31 batteries proposed.
ORT RFP #2018-02
Request for Approved Equals

1. The bus flooring, sides, roof, understructure, axle suspension components shall resist corrosion or deterioration from atmospheric conditions and road salts for a period of 10 years or 500,000 miles whichever comes first. (Page 60)
   Please except the Spirit of Equess with a corrosion resistance period of 7 years 250,000 miles.

2. The vehicle shall be constructed using only stainless steel or other approved inherently corrosion-resistant materials and fasteners of sufficient type and quality to minimize deterioration over the specified period. The structure shall not require corrosion-preventive coatings or after-treatments to be applied either during construction or throughout the service life of the vehicle.
   All materials that are not inherently corrosion resistant shall be protected with corrosion-resistant coatings. All joints and connections of dissimilar metals shall be corrosion-resistant and shall be protected from galvanic corrosion. Representative samples of all materials and connections shall withstand a 2-week (336-hour) salt spray test in accordance with ASTM Procedure B-117 with no structural detrimental effects to normally visible surfaces, and no weight loss of over 1 percent. (Page 60)
   Please except a steel cage structure made from 14ga and 16ga mild steel tubes with a black powder coat finish. See that attached Steel Cage spec.

3. The passenger and engine compartments shall be separated by a bulkhead(s) that shall, by incorporation of fireproof materials in its construction, be a firewall. The engine compartment shall include areas where the engine and exhaust systems are housed including the muffler, if mounted above the horizontal shelf. This firewall shall preclude propagation of an engine compartment fire into the passenger compartment and shall be in accordance with the Recommended Fire Safety Practices defined in FTA Docket 90, dated October 20, 1993. Only necessary openings shall be allowed in the firewall, and these shall be fireproofed. Any passage ways for the climate control system air shall be separated from the engine compartment by fireproof material. Piping through the bulkhead shall have copper, brass, or fireproof fittings sealed at the firewall with copper or steel piping on the forward side. Wiring may pass through the bulkhead only if connectors or other means are provided to prevent or retard fire propagation through the firewall. Engine access panels in the firewall shall be fabricated of fireproof material and secured with fireproof fasteners. These panels, their fasteners, and the firewall shall be constructed and reinforced to minimize warping of the panels during a fire that will compromise the integrity of the firewall. (Page 60)
   Please except the Spirit of Equess meeting Docket 90 in the engine compartment and the seating. The rest of the vehicle will meet FMVSS 302 standards.

4. The front towing devices shall allow attachment of adapters for a rigid tow bar and shall permit lifting and towing of the bus, at curb weight, until the front wheels are clear of the ground. (Page 61)
Please except the Spirit of Equess with front tow hooks only. The vehicle is not design for use of front tow bar.

5. The floor shall consist of the subfloor and the floor covering. The floor, as assembled, including the sealer, attachments and covering shall be waterproof, non-hygroscopic, and resistant to mold growth. The subfloor may be composite flooring material that will provide a minimum 150 pound weight savings per bus to the standard 5/8" marine plywood subfloor product. The composite material shall be waterproof and will not rot, warp, mildew, allow mold growth, split, soften or delaminate, will accept standard tooling and hardware, cannot be damaged by insects and should last the life of the bus. (Page 62)

   Please except 5/8" Wolmanized pressure treated plywood for the subfloor.
   Brochure attached.

6. The operator's platform height shall not exceed 12 inches. Trim shall be provided along top edges of platforms unless integral nosing is provided. Except where otherwise indicated, covering of platform surfaces and risers shall be same material as specified for floor covering. Trim installed along edges of platforms shall be constructed of stainless steel. (Page 64)

   Please except a vinyl step edging all platforms. The drivers platform with be grey and the platforms in the passenger area will be yellow.

   **Driver Platform**
   **Passenger Area Platforms**

7. Provisions shall be made to recess mount standard size U.S. license plates per SAE J686 on the front and rear of the bus. These provisions may recess the license plates so that they can be cleaned by automatic bus washing equipment without being caught by the brushes. License plates shall be mounted at the lower center or lower street side of the bus and shall not allow a toehold or handhold for unauthorized riders.

   Please except front and rear license plates to be surface mounted.

8. Batteries shall be securely mounted on a stainless steel or equivalent tray that can accommodate the size and weight of the batteries. The battery tray shall pull out easily and properly support the batteries while they are being serviced. The tray shall allow each battery cell to be easily serviced and filled. A locking device shall retain the
battery tray in the stowed position. A decal showing battery diagram and voltage shall be attached to the interior side of each battery compartment door. The battery compartment or enclosure shall be vented and self-draining. It shall be accessible only from outside the bus. Batteries shall not be located within the engine compartment. All components within the battery compartment, and the compartment itself, shall be protected from damage or corrosion from the electrolyte and gases emitted by the battery, and from snow, slush, salt spray, mud, etc. generated from environmental conditions outside the vehicle. The inside surface of the battery compartment's access door shall be electrically insulated, as required, to prevent the battery terminals from shorting on the door if the door is damaged in an accident or if a battery comes loose. (Page 64)

Please except the batteries being located in the engine compartment. The batteries are fixed mounted with a removable top to gain access to the cabling. The box is three sided with the front and rear open for ventilation.

9. An anti-graffiti/vandalism surface treatment for interior surfaces shall be provided. Affected interior components shall either be impregnated with a manufactured surface treatment or shall have received application of post-manufactured anti-graffiti coating that facilitates to removal of permanent markers using regular cleaners and detergents without permanent damage or color change to the affected areas. (Page 66)

Please except the interior walls with a single piece light grey in color reinforced fiberglass panel (RFP) 2.0mm thick.

10. Interior side trim panels shall be constructed of a high pressure laminate material or similar. They are not to be wood or wood byproduct material. If provided, the operator's barrier shall be smoke color acrylic type material. Panels shall be easily replaceable and tamper-resistant. They shall be reinforced, as necessary, to resist vandalism and other rigors of transit bus service. Individual trim panels and parts shall be interchangeable to the extent practicable. Untrimmed areas shall be painted and finished. All materials shall comply with the Recommended Fire Safety Practices defined in FTA Docket 90, dated October 20, 1993.

Please except the interior of the bus meeting FMVSS 302. The seats will meet Docket 90.
11. A sight glass to determine satisfactory engine coolant level shall be provided and shall be accessible by opening the engine compartment door. A spring-loaded, push button type valve to safely release pressure or vacuum in the cooling system shall be provided with both it and the water filler no more than 48 inches above the ground and both shall be accessible through the same access door. (Page 69)
Please except the sight glass on the engine coolant higher than 48" above the ground. The design for the electric cooling pack will not allow for the coolant reservoir to be any low. The coolant reservoir has 2 sight glasses 1 for cold fill and 1 for hot fill. The engine coolant reservoir fill is located 92" above the ground due to the high mounted electric cooling fans.

12. Engine oil and the radiator filler caps shall be hinged to the filler neck and closed with spring pressure or positive locks. All fluid fill locations shall be properly labeled to help ensure correct fluid is added and all fillers shall be easily accessible with standard funnels, pour spouts, and automatic dispensing equipment. (Page 70)
Please except standard twist on filler caps for engine oil (OEM Cummins) and radiator fill.
13. All lubricant sumps shall be fitted with magnetic-type, external, hex head, self-sealing drain plugs. Please except nonmagnetic-type hex head drain plugs for all lubricant sumps.

14. The fuel tank(s) shall be made of corrosion resistant stainless steel or other durable and inert material and shall be securely mounted to the bus to prevent movement during bus maneuvers, but shall be capable of being removed and reinstalled by a mechanic for cleaning or replacement in 1.5 hours or less. Please except the fuel being made from 12ga Aluminized Steel with a black primer finish. The tank is located in the rear engine compartment above the rear axle out of the elements.

15. The front axle shall be a Meritor or equal solid beam, non-driving with a load rating sufficient for the bus loaded to GVWR and shall be equipped with oil lubricated front wheel bearings and seals. All friction points on the front axle shall be equipped with replaceable bushings or inserts and lubrication fittings easily accessible from a pit or hoist. Please except a ZF Independent front suspension with a GAWR of 9,492lbs. See attached brochure.

16. The bus shall be driven by a single heavy-duty Meritor or equal axle at the rear with a load rating sufficient for the bus loaded to GVWR. Transfer of gear noise to the bus interior shall be minimized. The drive axle shall be designed to operate for not less than 300,000 miles on the design operating profile without replacement or major repairs. Please except a ZF rear axle with 4 air bag suspension and a GAWR of 13,208lbs. See attached brochure.

17. The drive shaft shall be guarded to prevent it striking the floor of the coach or the ground in the event of a tube or universal joint failure. Drive shaft universal joint should be clamp type, serviceable to yoke. Both front and rear axle shall have a five (5) year warranty. Please except an axle warranty of 3 years 75,000 miles.

18. The electronically actuated cooling fan shall be a hybrid cooling fan system such as the EMP or approved equal.
Please except an electronically actuated engine cooling system manufactured by Greyson. This is our standard engine cooling package. See attached brochure.

Street Side Fan Pack  Curb Side Fan Pack

19. The passenger interior lighting system shall be DINEX LED lighting system or equal. (Page 80)

Please except the Spirit of Equess with our standard interior lighting package. The lights are 3" round and located in the transition panels. The 30' vehicle will have 10 lights and the 35' vehicles will have 12 lights. The light functions are as follows. All-On or All-On w/Door.

20. The windshield shall be a one-piece windshield and easily replaceable by removing zip-locks from the windshield retaining moldings. (Page 83)

Please except a three piece windshield (top, left, and right) with the pieces being bonded in place.

21. The operator's side window shall be the sliding type, requiring only the rear half of sash to latch upon closing and shall open sufficiently to permit the seated operator to easily

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adjust the street side outside reaview mirror. When in an open position, the window shall not rattle or close during braking. The entire assembly shall be hinged and have a single release for Emergency Egress. This window section shall slide in tracks or channels designed to last the service life of the bus. The operator's side window shall not be bonded in place and shall be easily replaceable. The glazing material shall have a single density tint. (Page 83)

Please except an operator's window with lower slider and non-egress.

22. The operator's side window glazing material shall have a 1/4 inch nominal thickness laminated safety glass conforming to the requirements of ANSI Z26.1 Test Grouping 2 and the Recommended Practices defined in SAE J673. (Page 84)

Please except an operator's window with 3/16" tempered glass.

23. Each openable side window shall incorporate an upper transom portion. The transom shall be between 25 and 35 percent of the total window area. The lower portion of the window shall be fixed. The transom portion shall be hinged along the lower edge and open inward (Page 84)

Please except the side with double upper sliders with the opening of 7"x36".
24. Emergency exit and window operation instructions must be a metal plate and a fixed to the bus sidewall. The instruction must be in both English and Spanish and be mounted within six inches of the emergency handle. (Page 84)

   Please except the egress window operation instructions decal fixed to the window.

25. Side windows glazing material shall have ¼-inch nominal thickness laminated safety glass. The material shall conform to applicable requirements of ANSI Z26.1 and the Recommended Practices defined in SAE J673. (Page 84)

   Please except the side widows with 3/16” thick tempered glass.

26. The bus shall be equipped with 8” x 15” 2/1 split view or equal corrosion-resistant, outside rearview mirror on each side of the bus. The upper part of the mirror is flat and the lower portion is convex. (Page 84)

   Please except the exterior mirrors from Safe Fleet that are 9”x13”. The Mirrors are heated and remote with side mounted turn signals.

27. The HVAC unit(s) for the main passenger area shall be the Thermo-King SLR series or equal incorporating a bus through-the-roof, top-mount design. The determining factor for the SLR 65 or 75 and the number of units per bus shall be determined based upon the manufacturer’s recommendation for the bus size. (Page 89)

   Please clarify on the type of A/C system desired. The SLR 65 or 75 is a free blow system, but the spec seems to be calling out a ducted system.
28. Ceiling panels shall be white melamine-type material suitable for exterior skin painted and finished to exterior quality. (Page 93)
   Please except our standard 1 piece interior ceiling panel made from reinforced fiberglass panel (FRP) that is 2.0mm thick. All interior panels are light grey in color.

29. Any insulation material used between the inner and outer panels shall be sealed or self-sealing to minimize entry and/or retention of moisture. Insulation properties shall be unimpaired during the service life of the bus. Any insulation material used inside the engine compartment shall not absorb or retain oils or water and shall be designed to prevent casual damage that may occur during maintenance operations. All insulation materials shall comply with the Recommended Fire Safety Practices defined in FTA Docket 90, dated October 20, 1993. (Page 93)
   Please except our 1.5” polystyrene walls and roof insulation material that meets FMVSS 302. The insulation value of the walls and roof is R7.

30. The ramp shall be a, simple hinged, fold over type design. The weight of the wheelchair loading system shall not exceed 200lb. The ramp shall be equipped with a finish flange that permits the installer to trim out the ramp to vehicle floor interface with a simple lap joint. The wheelchair loading system including all pumps, motors and hydraulics, must be completely self-contained and be replaceable within 60 minutes by a mechanic. (Page 98)
   Please except a Braun RA300 bi-fold ramp with 1000lbs weight limit. The ramp is electric over hydraulic and in a self-contained cartridge. See attached brochure.

31. Doors shall be operated by a single control, conveniently located and operable in a horizontal plane by the operator's left hand. The kneeling ramp control shall also be located close to the door control so that it too can be operated by the Operator's left hand. The setting of these controls shall be easily determined by position and touch. (Page 104)
   Please except the door and ramp controls located on the right side of the dash. See attached Dash diagrams.
   Main Dash Layout
32. The windshield washer system shall be a dry arm design to deposit washing fluid on the windshield and, when used with the wipers, shall evenly and completely wet the entire wiped area. If powered by compressed air, all fluid shall be purged from the lines after each use of the washers.

Please except a windshield washer system with the use of wet arms. In order to get the wipe zone clean the system needs to be a wet arm application.

33. The windshield washer system shall have a minimum 2-gallon reservoir, located for easy refilling from outside of the bus and protected from freezing.

Please except the windshield washer fluid reservoir fill inside the bus behind an access door location on the front dash.
34. Two – 8D batteries, or approved equal shall be provided. Each battery shall have a minimum of 1150 cold cranking amps at 0° F. The batteries shall be designed and installed to withstand the operating environment. Batteries shall be tested not more than 3 days prior to bus shipment.

Please except 2 World Wide group 31 CCA950 Batteries

35. Except as interrupted by the master battery switch, battery and starter wiring shall be continuous cables with connections secured by bolted terminals; and shall conform to specification requirements of SAE Standard J1127 -Type SGT or SGX and SAE Recommended Practice J541.

Ultra-capacitors (super capacitors) shall be used in conjunction with the AGM batteries to provide effective power storage and to ensure successful engine starting. Ultra-capacitor technology is to be used for cranking applications and then employing AGM battery technology to manage auxiliary loads.

Please clarify if you want AMG or standard batteries, as earlier in the spec it calls for 8D batteries.